National Défense
Defence nationale

A-CR-CCP-801/PF-001

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE INSTRUCTIONAL GUIDES

(ENGLISH)

(Supersedes A-CR-CCP-801/PF-001 dated 2015-09-01)

Cette publication est disponible en français sous le numéro A-CR-CCP-801/PF-002.

Issued on Authority of the Chief of the Defence Staff

Canada

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FOREWORD AND PREFACE

1. **Issuing Authority.** This Instructional Guide (IG) A-CR-CCP-801/PF-001 was developed under the authority of the Director Cadets and Junior Canadian Rangers, and issued on the authority of the Chief of Defence Staff.

2. **Development.** Development of this IG was in accordance with the performance oriented concept of training outlined in the A-P9-050 Series, *Canadian Forces Individual Training and Education System*, with modifications to meet the needs of the Canadian Cadet Organization.

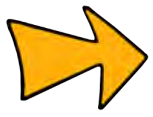
3. **Purpose of the IG.** The IG is to be used by Royal Canadian Air Cadet Squadrons in conjunction with other resources to conduct the Proficiency Level One Program. The IG provides instructors with the base means from which to deliver training. Individual IGs are to be reviewed in conjunction with the Lesson Specifications (LSs) found in Chapter 4 of A-CR-CCP-801/PG-001, *Royal Canadian Air Cadet Proficiency Level One Qualification Standard and Plan*, before instructing, so that each instructor can adequately plan for and prepare each lesson. Instructors may be required to develop instructional materials to support training in addition to any that may be provided, eg, posters, videos, handouts, models, etc, supplemental to training control and support documents. Training, learning and support materials (TLSM) may be available for download from www.cadets.ca or by distribution through the RCSU. Suggested instructional activities are included in most IGs to maximize learning and fun. Instructors are also encouraged to modify and / or enhance the activities, as long as they continue to contribute to enabling objective achievement.

4. **Use of the IG.** Throughout these instructional guides, a series of information boxes are used to highlight information; they include:

Note to the Instructor.

Key information to pass along to cadets.

Refer to the following CF regulations and policies.



Points of interest or special instructions the instructor should pass along to cadets.

5. **Suggested Changes.** Suggested changes to this document may be sent directly to cadettraining@canada.ca.

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CHAPTER 1

PO X01 – PARTICIPATE IN CITIZENSHIP ACTIVITIES

COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

CITIZENSHIP

SECTION 1

EO MX01.01A – PARTICIPATE IN A CITIZENSHIP TOUR

Total Time:	One session (3 periods) = 90 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO. REFER TO THE LESSON SPECIFICATION LOCATED IN A-CR-CCP-801/PG-001, *ROYAL CANADIAN AIR CADETS PROFICIENCY LEVEL ONE QUALIFICATION STANDARD AND PLAN*.

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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

CITIZENSHIP

SECTION 2

EO MX01.01B – ATTEND A PRESENTATION BY A COMMUNITY ORGANIZATION

Total Time:	One session (3 periods) = 90 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO. REFER TO THE LESSON SPECIFICATION LOCATED IN A-CR-CCP-801/PG-001, *ROYAL CANADIAN AIR CADETS PROFICIENCY LEVEL ONE QUALIFICATION STANDARD AND PLAN*.

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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

CITIZENSHIP

SECTION 3

EO MX01.01C – ATTEND A PRESENTATION BY A CITIZEN-OF-INTEREST

Total Time:	One session (3 periods) = 90 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO. REFER TO THE LESSON SPECIFICATION LOCATED IN A-CR-CCP-801/PG-001, *ROYAL CANADIAN AIR CADETS PROFICIENCY LEVEL ONE QUALIFICATION STANDARD AND PLAN*.

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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

CITIZENSHIP

SECTION 4

EO MX01.01D – PARTICIPATE IN THE CANADIAN CITIZENSHIP CHALLENGE

Total Time:	One session (3 periods) = 90 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO. REFER TO THE LESSON SPECIFICATION LOCATED IN A-CR-CCP-801/PG-001, *ROYAL CANADIAN AIR CADETS PROFICIENCY LEVEL ONE QUALIFICATION STANDARD AND PLAN*.

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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

CITIZENSHIP

SECTION 5

EO MX01.01E – HOST A CITIZENSHIP CEREMONY

Total Time:	One session (3 periods) = 90 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO. REFER TO THE LESSON SPECIFICATION LOCATED IN A-CR-CCP-801/PG-001, *ROYAL CANADIAN AIR CADETS PROFICIENCY LEVEL ONE QUALIFICATION STANDARD AND PLAN*.

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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

SECTION 6

EO MX01.01F – PARTICIPATE IN AN ELECTION

Total Time: One session = 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

This IG supports EO MX01.01F (Participate in an Election) located in A-CR-CCP-801/PG-001, *Royal Canadian Air Cadets Proficiency Level One Qualification Standard and Plan*, Chapter 4.

In coordination with the appropriate authority, select a decision or appointment to be made democratically by the corps / squadron, such as the inventory of the canteen, the cadet representative to the officer cadre, or the destination for a year-end trip.

Complete a process with the appropriate authority to select up to four candidates for the election or up to four options for the referendum (unless it is a yes / no question). Referendum options selected should have wide support throughout the corps / squadron, ensuring that campaign teams are equally motivated and that cadets must decide between compelling options.

Arrange for and brief two assistant instructors to conduct simultaneous activities with groups of cadets.

Prepare the required resources:

- materials required for the roles and processes described in the Guide for Election Officials located at Annex B for each polling station (one station per 20 cadets), to include:
    - two copies of the Guide for Election Officials located at Annex B,
    - one box with a slot or opening in the top, to act as a ballot box,
    - sufficient tape to seal the ballot box,
    - one presentation board, or cut open box, to act as a voting screen,
    - two pencils,
    - one ruler,
    - one 8.5” by 11” envelope, marked “Spoiled Ballots,” and
    - materials located at Annex C (Referendum) or Annex D (Election), to include:
        - 23 ballots,
        - one copy of the Official Statement of the Vote form,
        - one copy of the Tally Sheet;

- flipchart paper or other method of displaying the reflection questions included in Annex A;
- materials for creating campaign items, including flipchart paper, markers, and flagging tape; and
- a nominal roll of all cadets to act as the list of electors.

To make a more realistic simulation, resources, such as a ballot box, voting screen, and seals, may be ordered from Elections Canada (elections.ca) at 1-800-463-6868.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A practical activity was chosen for this lesson as a fun and interactive way to build on the cadets' knowledge of citizenship.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this session the cadets shall have participated in a democratic process.

IMPORTANCE

It is important for cadets to participate in an election as part of being a good citizen is having an appreciation for and awareness of the democratic process.

ACTIVITY

1. Divide the cadets into three groups. Phase One / Green Star / Proficiency Level One and Phase Two / Red Star / Proficiency Level Two cadets will form "the electorate," Phase Three / Silver Star / Proficiency Level Three cadets will form "the campaigners," and Phase Four / Gold Star / Proficiency Level Four cadets will form "the election officials." A ratio of 15 cadets per three campaigners and per two election officials is ideal.

The grouping of cadets may be modified to meet individual corps / squadron requirements. For example, cadets may be moved between groups, despite their phase / star / proficiency level, to meet the 15 : 3 : 2 ratio. If there are not enough cadets to form all three groups, adult staff may be used to fill the role of campaigners.

2. Conduct the election as per the Election Instructions located at Annex A.

In this election, the instructor will be filling the role of Returning Officer, the official in charge of ensuring the election is carried out properly and providing materials.

CONCLUSION

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

It is important for cadets to participate in an election, as part of being a good citizen is having an appreciation for and awareness of the democratic process.

INSTRUCTOR NOTES / REMARKS

There are numerous potential leadership opportunities for cadets when conducting an election session, such as:

- Phase Three / Silver Star / Proficiency Level Three, Phase Four / Gold Star / Proficiency Level Four, and Phase Five / Master Cadet / Proficiency Level Five cadets may complete leadership assignments, such as leading a campaign team, in accordance with POs 303 (Perform the Role of a Team Leader), 403 (Act as a Team Leader), and 503 (Lead Cadet Activities); and
- Phase Five / Master Cadet / Proficiency Level Five cadets may plan, prepare and conduct the session as a leadership project in accordance with PO 503 (Lead Cadet Activities).

Two assistant instructors are required for this lesson.

REFERENCES

Elections Canada. (2010). *Canada at the Polls!* Retrieved March 13, 2013, from http://elections.ca/content.aspx?section=vot&dir=yth/stu/gui&document=index&lang=e.

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ELECTION INSTRUCTIONS

<table>
<tr><th colspan="2">STEP 1: PREPARATION</th><th>TIME: 25 MIN</th></tr>
<tr><th>ELECTORATE (YEARS 1 & 2)</th><th>CAMPAIGNERS (YEAR 3)</th><th>ELECTION OFFICIALS (YEAR 4)</th></tr>
<tr>
<td>Conduct an activity to stimulate an interest in democratic decision making, such as participating in:
• a presentation by a guest speaker as per MX01.01B (Attend a presentation by a Community Organization) or MX01.01C (Attend a Presentation by a Citizen-of-Interest), such as an Elections Canada official, a former political candidate, or a former campaign worker;
• related Heritage Minutes video activities as per EO MX01.01G (Participate in Heritage Minutes Video Activities), such as Nellie McClung, Responsible Government or Baldwin & LaFontaine; and
• relevant learning stations as per EO MX01.01H (Participate in Citizenship Learning Stations).</td>
<td>Prepare the campaigners to present their positions to the corps / squadron by:
1. forming one campaign team per candidate and assigning candidates to those teams if an election is being conducted, forming two teams and assigning “yes” and “no” positions if a referendum is to be conducted on a yes / no question, allowing the cadets to form teams for their desired option if a referendum is to be conducted on an open-ended question;
2. having the teams form a platform, including details on their option or candidate and points on why the candidate or option is the most desirable; and
3. having the teams plan a campaign, including a presentation to the electorate.</td>
<td>Prepare the election officials to fill their role, by:
1. grouping the cadets into teams of two, one cadet filling the role of Deputy Returning Officer and the other Poll Clerk;
2. reviewing the roles and administering the oaths of office as per the Guide for Election Officials located at Annex B;
3. reviewing the importance for strict impartiality by election officials — while they may have a position on the election / referendum, they must appear to be completely neutral (eg, they may not discuss the election / referendum, support a candidate or campaign, or otherwise allow for their preference to be known) — thereby helping to ensure that electors and campaigners have faith in the process and outcome;
4. assigning a portion of the corps / squadron to each station by name (eg, A–H at Polling Station 1, I–M at Polling Station 2, etc.), providing the appropriate nominal roll to each station, and labeling the ballot box appropriately, if there is a need for more than one polling station; and
5. having the cadets begin to set up polling stations as per the Guide for Election Officials located at Annex B.</td>
</tr>
<tr><th colspan="2">STEP 2: CAMPAIGN</th><th>TIME: 20 MIN</th></tr>
<tr><th>ELECTORATE (YEARS 1 & 2)</th><th>CAMPAIGNERS (YEAR 3)</th><th>ELECTION OFFICIALS (YEAR 4)</th></tr>
<tr><td colspan="3">Have the campaign teams present their platforms to the corps / squadron, allowing equal time for each. Campaign teams may also distribute materials or methods of identifying their supporters, such as coloured flagging tape or signs.

Election officials will observe the campaign activities, but, as discussed above, may not participate nor show support for any campaign.</td></tr>
</table>

STEP 3: VOTE		TIME: 15 MIN
ELECTORATE (YEARS 1 & 2)	**CAMPAIGNERS (YEAR 3)**	**ELECTION OFFICIALS (YEAR 4)**
Have the cadets filling the role of election officials administer the polling station for the corps / squadron as per the Guide for Election Officials located at Annex B. Have the election officials vote just before opening the polling station to the corps / squadron. One representative from each campaign may act as a scrutineer after taking the required oath (administered by the Deputy Returning Officer as per the handout located at Annex B) by observing the administration of a polling station. Campaigners may also continue to lobby cadets not attending the polling station.		
STEP 4: TABULATION AND REFLECTION		**TIME: 15 MIN**
ELECTORATE (YEARS 1 & 2)	**CAMPAIGNERS (YEAR 3)**	**ELECTION OFFICIALS (YEAR 4)**
Prompt reflection on the process by posing the following questions to the group to bring about understanding of the variety of decision-making processes used by citizens during elections and of the importance of the secret ballot to fair elections: Q1. What did you base your decision on? Q2. What role did the campaigns play in your decision? Q3. How did you find the voting process? Q4. At one time, citizens voted by standing up in front of a big crowd and announcing who they were voting for. How might this have affected how people voted?	Conduct a group discussion to draw awareness to the following points: • campaign teams must present a united front, even if that means hiding their individual beliefs; • creating a platform requires compromise and is a blend of different beliefs; and • joining a campaign can be an interesting way to get involved in an election. **Suggested Questions:** Q1. What did you learn from the campaign process? Q2. Did you find it difficult to reach a collective platform? Q3. In supporting the campaign team, did you find that you ever had to express support for a position that you, personally, did not support? How did you feel about that? Q4. Do you plan to get involved in a campaign during the next election / referendum? Why or why not?	Tabulate the ballots as per the Guide for Election Officials located at Annex B;

STEP 5: RESULTS, DE-BRIEF, AND REFLECTION		TIME: 10 MIN
ELECTORATE (YEARS 1 & 2)	**CAMPAIGNERS (YEAR 3)**	**ELECTION OFFICIALS (YEAR 4)**
Announce the results and declare the candidate / option with the plurality (greatest number) of votes selected.		
Complete the following steps to debrief the cadets and link the election to Canadian elections: 1. provide time for the campaign team with a plurality to thank the electorate and the other campaign teams, 2. explain that this process is similar to that which is conducted to elect members of parliament, 3. identify the riding(s) relevant to the corps / squadron and the respective member(s) of parliament, and 4. note that all Canadian citizens age 18 or over may participate in those elections.		Conduct a discussion to bring out the following points: 1. election officials, like public servants more generally, must give up some of their rights in order to maintain the impartiality of democratic processes; and 2. election officials play a key role in ensuring the fairness of elections by following a set of clear procedures that allow for results to be verified and trusted. **Suggested Questions:** Q1. What did you observe about the election process? Q2. How did you feel about remaining impartial throughout the election? Q3. Would you be interested in performing this role again? Why or why not?

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GUIDE FOR ELECTION OFFICIALS

OATH OF OFFICE

This oath will be administered by the Returning Officer to the DRO and PC before they begin performing their duties.

I solemnly affirm that:

– I am a member of _____ (give the name of the corps / squadron);

– I will act faithfully without partiality, fear, favour or affection and in every respect according to the law;

– at the polling station, I will maintain the secrecy of the vote.

ROLE DESCRIPTION AND CHECKLIST FOR THE DEPUTY RETURNING OFFICER

❑ Take the required oath as per the note box above.

Prepare the Polling Station

With the Poll Clerk, the Deputy Returning Officer shall:

❑ set up the polling station with the necessary materials as per Figure A-1;

❑ count the ballots provided by the Returning Officer;

❑ enter the number of ballots provided into the appropriate place on the Official Record of the Vote; and

❑ place their initials on the back of all ballots.

LAYOUT OF A POLLING STATION

Figure A-1 demonstrates a suggested layout for a polling station. The table for the campaign representatives is not required. If supplies permit, all material may be placed on a single table.

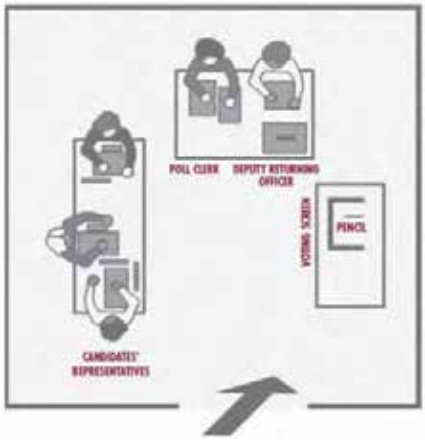

Figure A-1 Layout of a Polling Station

Administer the Voting Process

To open the polling station, the DRO shall:

❑ Administer the following oath to campaign representatives: *I solemnly affirm that: I will maintain the secrecy of the vote; I will not interfere with the marking of a ballot by any voter nor ask any voter how they are about to vote or have voted; and I will not induce a voter to show a marked ballot to any person*; and

❑ show all present that the ballot box is empty and seal it.

When an elector comes to vote, the DRO shall:

- ensure the DRO's initials are placed on the ballot paper, fold it twice as per Figure A-2, and present it to the elector with instructions to: go behind the voting screen, mark the circle opposite their choice (or, if using a write-in ballot, write their choice in the space provided), and return it folded the same way;
- check that the DRO's initials are on the ballot returned by the elector and return it to the elector with instructions to place it in the ballot box;
- if an elector indicates they have made a mistake, receive the spoiled ballot, place it in the envelope of spoiled ballots, and issue a new ballot to the elector;
- if an elector requires assistance to vote, provide assistance in such a way that the privacy of the vote is maintained (eg, instead of asking "who would you like to vote for?" ask the voter to point or write down the name of the person) and that it is done within full view of the Poll Clerk; and
- after voting, make sure the poll clerk places "V," for voted, next to the elector's name on the voters' list.

Figure A-2 Folding a Ballot

Count the Votes

After voting is completed, counting of the ballots will commence. Only the DRO may handle ballots. The DRO shall:

- empty the contents of the ballot box onto the table;
- one by one, check each ballot for their initials, unfold, call out the name of the candidate or option that has been marked, and show the ballot to the candidates' representatives and to the poll clerk, who records the votes on a tally sheet;
- if a ballot does not clearly reflect a voter's intention or includes identifying information (eg, name or initials), declare that ballot rejected;
- place the ballots in piles, one for each candidate or option, with separate piles for rejected or spoiled ballots; and
- once counting is completed, complete the official statement of the vote.

ACCEPTABLE BALLOTS		UNACCEPTABLE (REJECTED) BALLOTS
Ballots marked with cross (X) or other symbol		Ballots not supplied by the Deputy Returning Officer (initials not present on back)
Ballots marked with a pencil or pen different than which was provided		Ballots not marked
Ballots where the mark leaves the circle		Ballots with a mark in the circle for more than one candidate (including if candidates appear to be ranked)
Ballots where the circle has been completely, or partially, shaded in		Ballots marked or written on by an elector in such a way that the elector could be identified
For write-in ballots, ballots with only part of the option as long as it is possible to determine the intended option		Ballots not marked in any of the circles

ROLE DESCRIPTION AND CHECKLIST FOR THE POLL CLERK

- ❑ Take the required oath as per the note box above.

Open the Polling Station

The Poll Clerk (PC) shall assist the DRO in setting up the polling station as per above.

Administer the Voting Process

After assisting the DRO in opening the polling station, the PC will process electors. When an elector comes to vote, the PC shall:

- ❑ have the elector state their name and division / platoon / flight;
- ❑ locate the elector's name on the list and draw a line through the entry; and
- ❑ once the elector has exercised their right to vote, place a V for "voted" next to the elector's name on the list.

Count the Votes

After voting has concluded, the PC shall:

- ❑ keep a tally of the votes cast as the DRO calls out the candidate or option selected using the tally sheet;
- ❑ report the total votes cast to the DRO; and
- ❑ assist the DRO in completing the Official Record of the Vote.

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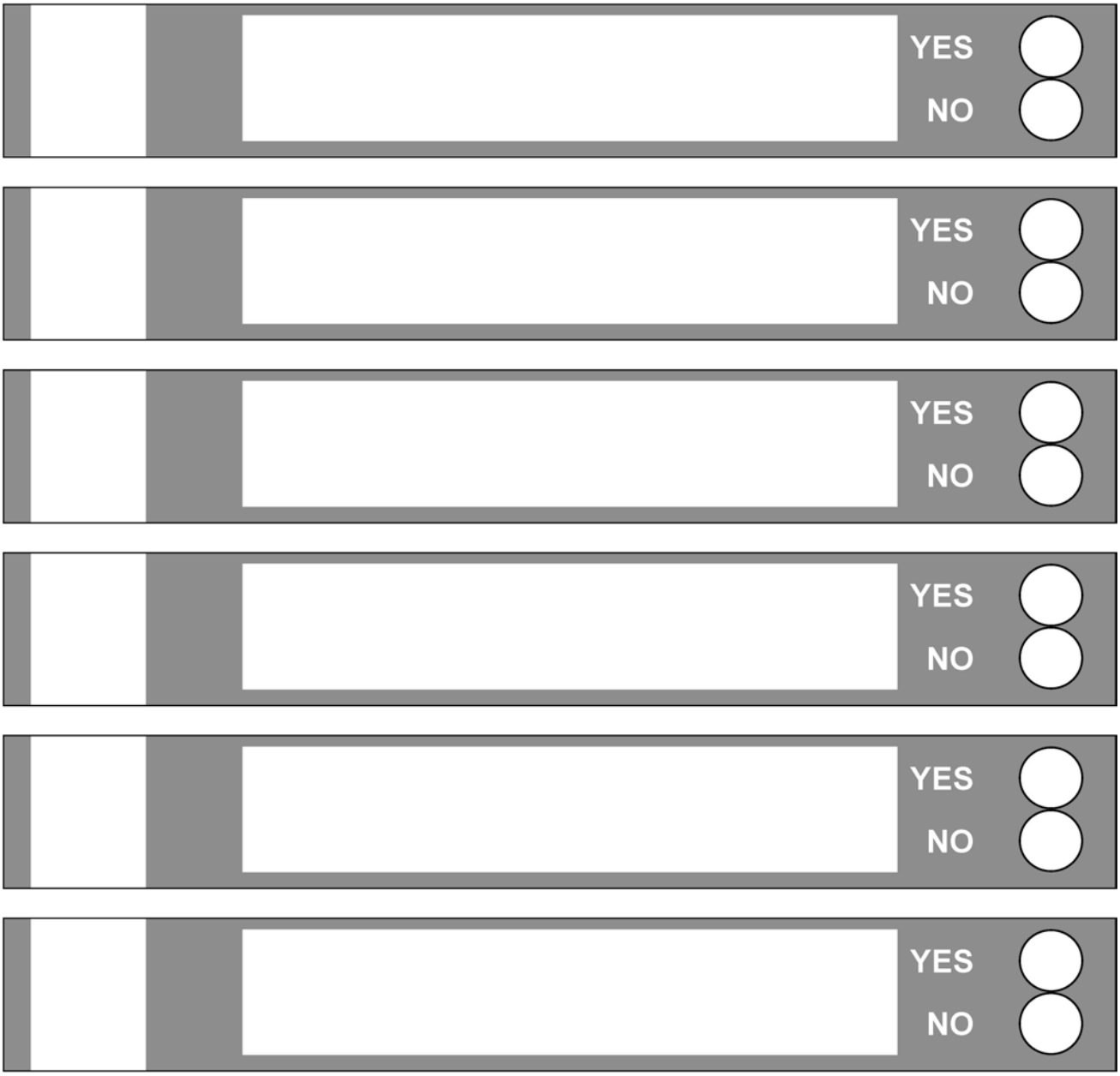
MATERIALS FOR A REFERENDUM

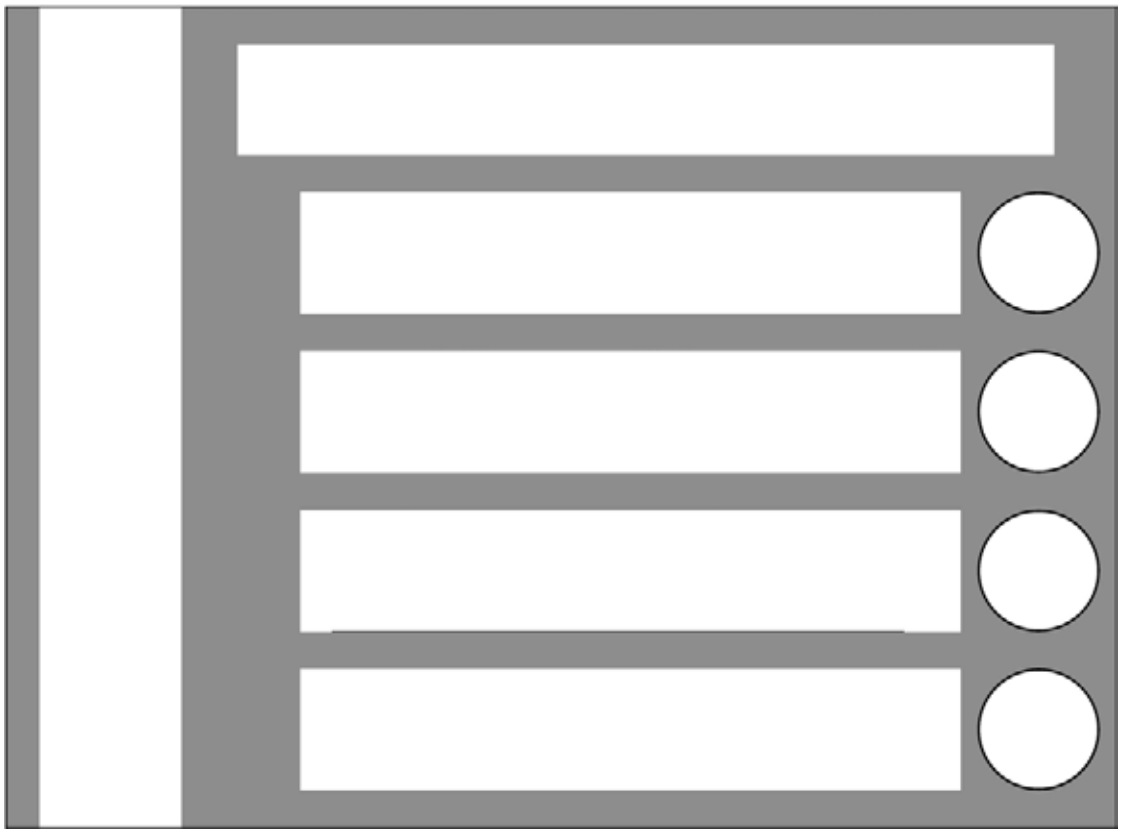
If you are conducting an election, to select a candidate for a position, see the materials at Annex D.

Ballot for a Referendum with a “Yes” or “No” Question



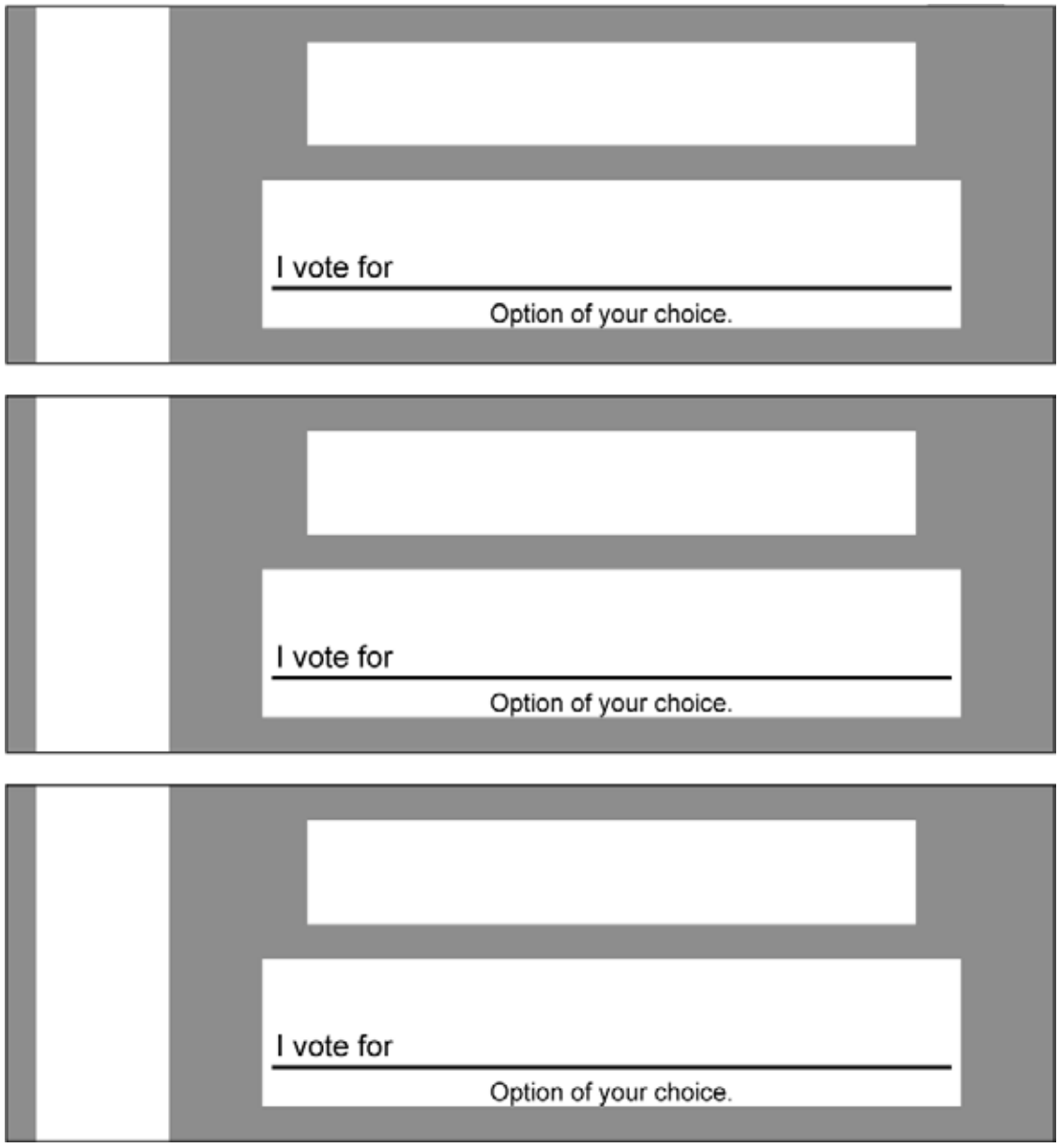
Ballot for a Referendum with Options

Before reproducing the ballots, cut out the ballot, write in the question and options, and, if necessary, cut to modify the ballot for two or three options.



Write-in Ballot for a Referendum

If time does not permit for sufficient ballots to be prepared, a write-in ballot may be used. Post a list of options at the polling station and on the back of the voting screen, and provide the ballot below to electors.



Referendum Tally Sheet

	OPTION					OPTION					OPTION					OPTION					OPTION					
5																										**5**
10																										**10**
15																										**15**
20																										**20**
25																										**25**
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90																										**90**
95																										**95**
100																										**100**
105																										**105**
110																										**110**
115																										**115**

Official Statement of the Referendum Vote

Polling Station: _____ Date: _____
(Name or number)

OPTIONS (same order as on ballot)	NUMBER OF VOTES

VALID VOTES CAST

REJECTED BALLOTS +

TOTAL VOTES CAST =

SPOILED BALLOTS

UNUSED BALLOTS +

TOTAL BALLOTS NOT USED TO VOTE =

+

GRAND TOTAL (SUM OF TOTALS)		BALLOTS RECEIVED FROM RETURNING OFFICER
=	⟺	

GRAND TOTAL OF THE COUNT MUST EQUAL THE NUMBER OF BALLOTS RECEIVED FROM THE RETURNING OFFICER

_____ _____
Signature of Deputy Returning Officer ***Signature of Poll Clerk***

_____ _____
Signature of Campaign Representative *Signature of Campaign Representative*

_____ _____
Signature of Campaign Representative *Signature of Campaign Representative*

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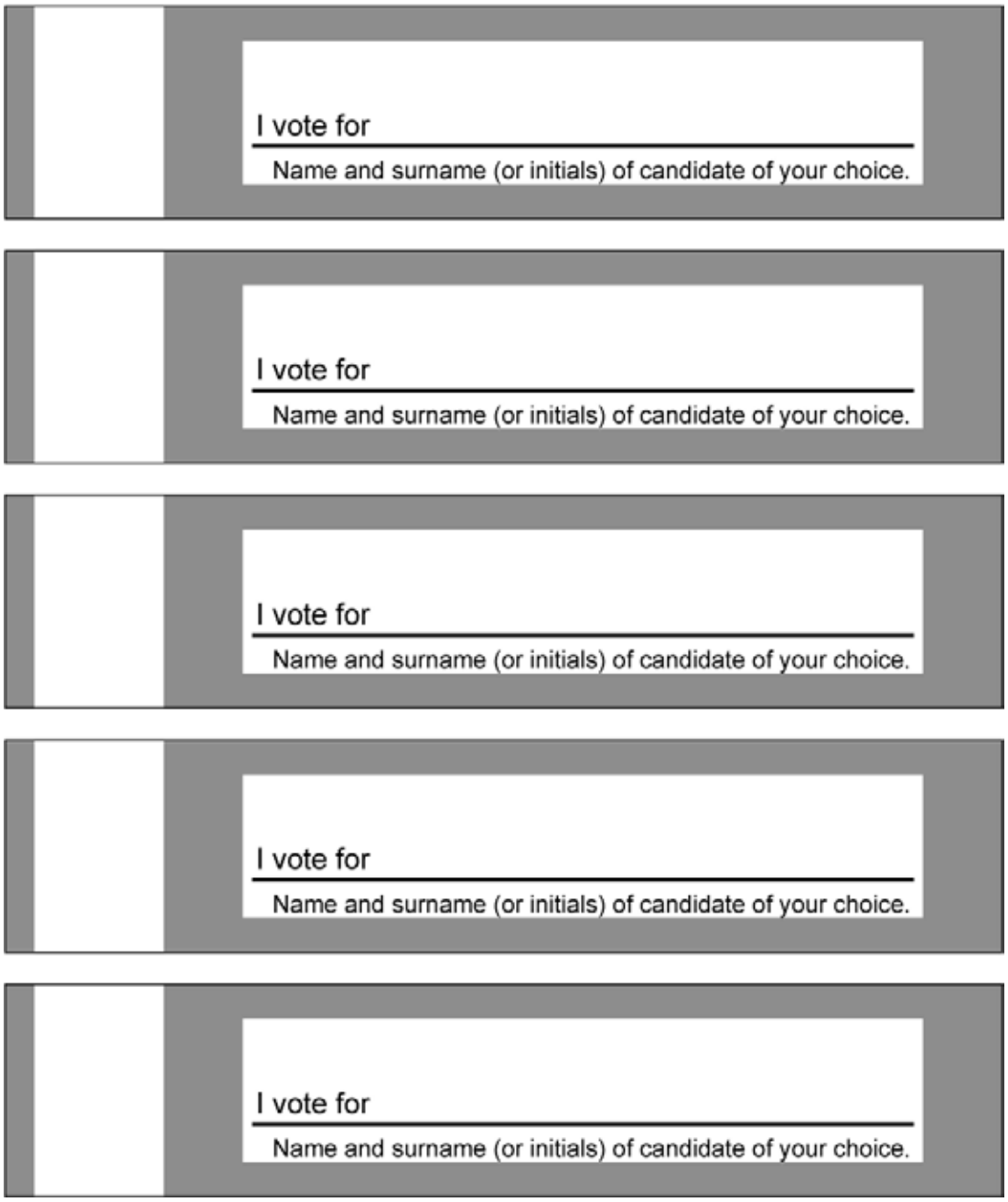
MATERIALS FOR AN ELECTION

Ballot for an Election

Before reproducing, cut out the ballot, write in the candidate names, and, if necessary, cut to modify the ballot for two or three options.

Write-in Ballot for an Election

If time does not permit for sufficient ballots to be prepared a write-in ballot may be used. Post a list of options at the polling station and on the back of the voting screen and provide the ballot below to electors.



Election Tally Sheet

	CANDIDATE					CANDIDATE					CANDIDATE					CANDIDATE					CANDIDATE					
5																									**5**
10																									**10**
15																									**15**
20																									**20**
25																									**25**
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85																									**85**
90																									**90**
95																									**95**
100																									**100**
105																									**105**
110																									**110**
115																									**115**

Official Statement of the Election Vote

Polling Station: _____ Date: _____
(Name or number)

CANDIDATES (same order as on ballot)	NUMBER OF VOTES

VALID VOTES CAST

REJECTED BALLOTS +

TOTAL VOTES CAST =

SPOILED BALLOTS

UNUSED BALLOTS +

TOTAL BALLOTS NOT USED TO VOTE =

+

GRAND TOTAL (SUM OF TOTALS)		BALLOTS RECEIVED FROM RETURNING OFFICER
=	⟺	

GRAND TOTAL OF THE COUNT MUST EQUAL THE NUMBER OF BALLOTS RECEIVED FROM THE RETURNING OFFICER

_____ _____
Signature of Deputy Returning Officer ***Signature of Poll Clerk***

_____ _____
Signature of Campaign Representative *Signature of Campaign Representative*

_____ _____
Signature of Campaign Representative *Signature of Campaign Representative*

COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

SECTION 7

EO MX01.01G – PARTICIPATE IN HERITAGE MINUTES VIDEO ACTIVITIES

Total Time: One session = 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

This IG supports EO MX01.01G (Participate in Heritage Minutes Video Activities) located in A-CR-CCP-801/PG-001, *Royal Canadian Air Cadets Proficiency Level One Qualification Standard and Plan*, Chapter 4.

Select Heritage Minutes videos, and plan and prepare activities.

Heritage Minutes videos can be viewed on the Internet or purchased on DVD at www.historica-dominion.ca > VIDEO > HERITAGE MINUTES.

Example videos and accompanying activities are located at Annexes A–G.

In addition to the suggested Heritage Minutes video activities attached, activity leaders may choose their own Heritage Minutes videos and create their own interactive, challenging and fun activities. The suggested activities may be adapted as required.

For certain Heritage Minutes, the Historica-Dominion Institute provides activities that may be used by the activity leader. For example: www.historica-dominion.ca > VIDEO > HERITAGE MINUTES > BLUENOSE > LEARNING RESOURCES includes classroom tools for intermediate (Cadet Program Years 1 and 2) and secondary (Cadet Program Years 3 and 4).

Gather background information on the content of the selected videos so you are prepared to provide context to the cadets and answer any of their questions. Background information is available at www.historica-dominion.ca > VIDEO > HERITAGE MINUTES.

Gather the required resources:

- method to display the video (eg, television, DVD player, tablet, laptop),
- videos, and
- any other resources required as per selected activity.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An in-class activity was chosen for this lesson as it is a fun and interactive way to build on the cadets' knowledge of citizenship.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this session the cadets shall have participated in Heritage Minutes video activities.

IMPORTANCE

It is important for cadets to participate in Heritage Minutes video activities as part of being a good citizen is having an appreciation for Canadian historical figures and significant events.

ACTIVITY

1. Play the selected video or series of videos with a similar theme.
2. Conduct an activity in which the cadet will further explore the topic introduced in the video(s).

CONCLUSION

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

It is important for cadets to participate in Heritage Minutes video activities as part of being a good citizen and having an appreciation for Canadian historical figures and significant events.

INSTRUCTOR NOTES / REMARKS

There are numerous potential leadership opportunities for cadets when conducting a Heritage Minutes video activities session:

- Phase Five / Master Cadet / Proficiency Level Five cadets may plan, prepare and conduct the session as a leadership project IAW PO 503 (Lead Cadet Activities); and
- Phase Three / Silver Star / Proficiency Level Three, Phase Four / Gold Star / Proficiency Level Four, and Phase Five / Master Cadet / Proficiency Levels Five cadets may complete leadership assignments, such as leading a Heritage Minutes video activity, IAW POs 303 (Perform the Role of a Team Leader), 403 (Act as a Team Leader), and 503 (Lead Cadet Activities).

REFERENCES

Historica Dominion Institute. *Heritage Minutes Videos*. Retrieved March 15, 2013, from https://www.historica-dominion.ca/content/video

SUGGESTED HERITAGE MINUTES VIDEO ACTIVITIES: GENERAL

GENERAL INTRODUCTORY ACTIVITIES

Brainstorm. As a large group or in smaller groups, have the cadets list what they know about the video topic (eg, inukshuk). If the video topic is not well-known, prepare questions that may help stimulate the cadets' thinking (eg, Who first used inukshuk? Where are the Inuit from? Which territory's flag shows an inukshuk? What were inukshuk used for?). If conducted as a large group, write down key words in a thought web as the cadets brainstorm.

Think – Pair – Share. Have the cadets individually think about and list what they know about the video topic (eg, Winnie the Pooh). Have the cadets share what they know about the video topic with a partner. Invite the cadets to share what they learned from their partner with the larger group.

KWL Chart. Have the cadets complete a chart with three columns:

- what they **K**now about the video topic (eg, maple syrup),
- what they **W**ant to know about the video topic, and
- what they have **L**earned about the video topic (to be completed after watching the video as part of the follow-up activity).

GENERAL FOLLOW-UP ACTIVITIES

Highlights. Have the cadets individually list the three most interesting or surprising things they learned from watching the video. Have the cadets share and discuss these highlights with a partner or in small groups. If time permits, invite cadets to share highlights with the larger group.

Cadets' Questions. Have the cadets write a question they have after watching the video. In other words, what more would they like to learn about this topic? Answer the cadets' questions or challenge them to find out the answer to their own question prior to the next session.

Activity Leader's Questions. Have the cadets respond to thought-provoking questions about the video topic. For example, if the video topic is the Avro Arrow, questions could include: What do you think the government's primary reasons were for cancelling the Arrow program? Do you agree / disagree with Prime Minister Diefenbaker's decision to cancel the Arrow program? What other technologies are recognized as being Canadian in origin, or associated with Canada?

Learning Stations. The video may be a short introductory video to stimulate the cadets' interests as part of a more comprehensive activity, such as learning stations. For more guidance on how to conduct learning stations refer to EO MX01.01G (Participate in Citizenship Learning Stations).

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SUGGESTED ACTIVITY: *FLAGS* VIDEO

ACTIVITY: CREATE YOUR OWN FLAG

TIME: 30 min

TRAINING LEVEL: 1–2

PRE-ACTIVITY INSTRUCTIONS:

Gather the required resources:

- Flag template located at Appendix 1,
- Pens / pencils, and
- Markers / coloured pencils.

ACTIVITY INSTRUCTIONS:

1. Show the cadets the *Flags* Heritage Minutes video.
2. Divide the cadets into teams of three or four.
3. Distribute copies of the “Design Your Own Flag” template located at Appendix 1 and markers / coloured pencils to each team.
4. Have each team choose whether their flag will represent their municipality, province or country.
5. Give the teams 15 min to create their own flag. Tell the cadets the design and colour of the flags must reflect team consensus.
6. Give each team 2–3 min to present their flag, describe its features and explain their design choice to the rest of the teams. If there are four or more teams, pair them and have the cadets present their flag to another team.
7. Give the cadets 5 min to reflect / discuss the challenges of forming a consensus. Suggested questions for discussion include:
   (a) What was the process your team used to reach a consensus?
   (b) How easy / difficult was it for your team to reach a consensus regarding the design / creation of your flag?
   (c) In the end, did all of the team members agree?
8. Display the flags at the corps / squadron for all to enjoy.

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DESIGN YOUR OWN FLAG

Use the template below to create your own flag. Your flag should reflect group consensus and can represent a nation, province or municipality.

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SUGGESTED ACTIVITIES: *SAM STEELE* VIDEO

ACTIVITY: "I WANT TO BE A CANADIAN"

TIME: 15 min

TRAINING LEVEL: 1–4

PRE-ACTIVITY INSTRUCTIONS:

Gather the required resources:

- Flipchart paper,
- Pens / pencils, and
- Markers.

ACTIVITY INSTRUCTIONS:

1. Show the cadets the *Sam Steele* Heritage Minutes video.
2. Divide the cadets into teams of three or four.
3. Distribute flipchart paper, pens / pencils and markers to each team.
4. Give the teams 5 min to brainstorm and compile a list of characteristics and attributes that they feel exemplify the Canadian spirit.
5. Give each team 2–3 min to present and explain their list to the other groups.
6. After all of the teams have presented, have the cadets compare the lists to identify common characteristics and compile a master list.
7. Display the master list for the rest of the corps / squadron to see.

SUGGESTED ACTIVITIES: *SAM STEELE* VIDEO

ACTIVITY: ENTRANCE TO CANADA EXAM

TIME: 15 min

TRAINING LEVEL: 1–4

PRE-ACTIVITY INSTRUCTIONS:

Gather the required resources:

- Entrance to Canada Exam located at Appendix 1, and
- Pens / pencils.

ACTIVITY INSTRUCTIONS:

1. Show the cadets the *Sam Steele* Heritage Minutes video.
2. In this role-play, the instructor will play “Sam Steele” and the cadets will play groups of people attempting to get into Canada.
3. Divide the cadets into teams of three or four to answer the questions in a role-play.
4. Have the cadets take the “Entrance to Canada Exam” administered by Sam Steele and answer ten of the questions correctly in order to “gain entry into Canada.”
5. Alternatively, have the cadets complete the written exam individually and hand them in to be marked by “Sam Steele.”

You may portray “Sam Steele” as a role-play in a realistic fashion, which could include wearing a Mountie uniform.

ENTRANCE TO CANADA EXAM

Congratulations! You have just arrived at the US – Canada border. In order to gain entrance, you must correctly answer 10 of the questions below:

Q1. **Canada is made up of five distinct regions. Name three of them.**
A. Atlantic, Central, Prairie, West Coast, Northern.

Q2. **What are the two official sports of Canada?**
A. Hockey and lacrosse.

Q3. **What is Canada's motto?**
A. English - From sea to sea, French - D'un océan à l'autre, Latin - A Mari Usque Ad Mare.

Q4. **Does Canada hold sovereignty over the North Pole?**
A. No.

Q5. **What is the floral emblem of Canada?**
A. Maple leaf.

Q6. **What is the national animal of Canada?**
A. The beaver.

Q7. **The Canadian Coat of Arms has two animals holding up the shield. What are the two animals?**
A. A lion and a unicorn.

Q8. **What are the three orders of government in Canada?**
A. Federal, provincial / territorial, and municipal.

Q9. **Who is Canada's Head of State?**
A. The Monarch.

Q10. **What is Canada's system of government called?**
A. Parliamentary democracy and constitutional monarchy.

Q11. **How are members of Parliament chosen?**
A. Elected by Canadian citizens.

Q12. **Name six responsibilities of citizenship.**
A. Vote, help others, care for our heritage and environment, obey Canada's laws, respect the rights of others, and eliminate injustice.

Q13. **How is the Prime Minster chosen?**
A. The leader of the party with the most elected representatives becomes the Prime Minister.

Q14. **What are the three main groups of Aboriginal peoples?**
A. First Nations, Métis and Inuit.

Q15. **What are the two official languages of Canada?**
A. French and English.

Q16. **What do you call the Sovereign's representative in the provinces?**
A. Lieutenant-Governor.

Q17. **What does confederation mean?**

A. Joining of provinces to make a new country.

Q18. **What does it mean to say Canada is a constitutional monarchy?**

A. Canada's Head of State is a hereditary sovereign (Queen or King) who reigns in accordance with the constitution.

Q19. **What is the meaning of the Remembrance Day poppy?**

A. To remember the sacrifice of Canadians who have served or died in wars up to the present day.

Q20. **When is Canada Day and what does it celebrate?**

A. The anniversary of Confederation - July 1st of each year.

SUGGESTED ACTIVITY: *NELLIE MCCLUNG* VIDEO

ACTIVITY: THE RIGHT TO VOTE

TIME: 30 min

TRAINING LEVEL: 1–2

PRE-ACTIVITY INSTRUCTIONS:

Gather the required resources:

- Flipchart paper,
- Pens / pencils, and
- Markers.

ACTIVITY INSTRUCTIONS:

1. Show the cadets the *Nellie McClung* Heritage Minutes video.
2. Divide the cadets into teams of three or four.
3. Distribute flipchart paper and markers to each group.
4. Give the teams 10 min to brainstorm and compile a list of reasons why it is important for all Canadian citizens to have the right to vote.
5. Give each team 2–3 min to present and justify their list to the rest of the teams.
6. After all of the teams have presented, have the cadets compare the lists to identify common reasons and compile a master list.
7. Give the cadets 5 min to discuss other voting issues. Suggested questions for discussion can include:
   (a) Should a Canadian citizen ever lose the right to vote?
   (b) Should prisoners be allowed to vote?
8. Display the master list for the corps / squadron to see.

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SUGGESTED ACTIVITIES: *AVRO ARROW* VIDEO

ACTIVITY: "CANADIAN OR NOT" GAME

TIME: 30 min

TRAINING LEVEL: 1–4

PRE-ACTIVITY INSTRUCTIONS:

- Gather the required resources:
  - "Canadian or NOT" flashcards at Appendix 1 (1 set per team),
  - Flipchart paper,
  - Pens / pencils, and
  - Markers.
- Photocopy the "Canadian or NOT" flashcards and cut them into individual cards.

Powerpoint slides can also be created to represent the flashcards. Feel free to create additional cards.

ACTIVITY INSTRUCTIONS :

1. Show the cadets the *Avro Arrow* Heritage Minutes video.
2. Divide the cadets into teams of three or four.
3. Select 15 items from the Canadian list and 10 items from the "Not" list to create flashcards or slideshow questions.
4. Show the cadets flashcards with the name / picture of either a Canadian invention or foreign invention.
5. Allow the teams time to discuss briefly and decide if the invention being displayed is "Canadian or NOT." Have an instructor / cadet keep score.
6. Repeat Steps 4 and 5 until all 25 flashcards have been seen by the cadets.
7. Declare the team with the most points at the end of the 25 cards the "Great Canadian Know-it-Alls."

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CANADIAN OR NOT?

Select 15 items from the Canadian list and 10 items from the "Not" list to create flashcards or slideshow questions. Feel free to add your own items.

CANADIAN	NOT
Blue Box 	**Bar Code** 
Zipper 	**Electric Blanket** 

CANADIAN	NOT
Anti-G suit 	**Glider** 
Blackberry 	**DNA Sequencing** 
Paint Roller 	**Eyeglasses** 

CANADIAN	NOT
Heart Pacemaker 	**Artificial Heart** 
Universal Standard Time 	**Aspirin** 
Prosthetic Hand 	**Safety Pin** 

CANADIAN	NOT
Insulin 	**Matchstick** 
Robertson Screw 	**Paperclip** 
Pablum 	**Pencil** 

CANADIAN	NOT
Pealess Whistle 	**Tetra Pak** 
Lightbulb 	**Pencil Sharpener** 
Electric Wheelchair 	**Stethoscope** 

CANADIAN	NOT
CADPAT 	**Gore Tex** 
Goalie Mask 	
Plexiglass 	

CANADIAN	NOT
Alkaline Battery 	
Egg Carton 	
Garbage Bag 	

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SUGGESTED ACTIVITIES: *GREY OWL* VIDEO

ACTIVITY: WHY MOVE TO CANADA?

TIME: 30 min

TRAINING LEVEL: 1–4

PRE-ACTIVITY INSTRUCTIONS:

Gather the required resources:

- Flipchart paper,
- Pens / pencils, and
- Markers.

ACTIVITY INSTRUCTIONS:

1. Show the cadets the *Grey Owl* Heritage Minutes video.
2. Divide the cadets into teams of three or four.
3. Distribute flipchart paper and markers to each team.
4. Give the teams 15 min to brainstorm and answer the following question: "*What is it about Canada that makes people from all over the world decide to move here and become citizens?*"
5. Give each team 2–3 min to present their answers to the rest of the teams.
6. After all of the teams have presented, have the cadets compare the answers to compile a master list.
7. Display the master list for the rest of the corps / squadron to see.

SUGGESTED ACTIVITIES: *GREY OWL* VIDEO

ACTIVITY: "LET'S MARKET CANADA"

TIME: 60 min

TRAINING LEVEL: 3–4

PRE-ACTIVITY INSTRUCTIONS:

Gather the required resources:

- Canada: "The" Place to Live! fact-sheet template located at Appendix 1,
- Flipchart paper,
- Pens / pencils, and
- Markers.

ACTIVITY INSTRUCTIONS:

1. Show the cadets the *Grey Owl* Heritage Minutes video.
2. Divide the cadets into teams of three or four.
3. Distribute flipchart paper, markers and fact-sheet template to each team.
4. Give the teams 35 min to create a marketing campaign to sell Canada around the world, including a poster, a slogan and a fact-sheet of reasons why Canada is "the place to live."
5. Give each team 5 min to present their campaign to the rest of the teams.
6. Declare the team with the most convincing campaign the "Canadian Marketeers."
7. Display campaign materials for the rest of the corps / squadron to enjoy.

CANADA

“The” Place to Live!

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SUGGESTED ACTIVITY: HERITAGE MINUTES VIDEO

ACTIVITY: STORYBOARD / DIY HERITAGE MINUTES VIDEO

TIME: 60 min

TRAINING LEVEL: 1–4

PRE-ACTIVITY INSTRUCTIONS:

Gather the required resources:

- Storyboard template located at Appendix 1,
- Pens / pencils,
- Markers, and
- Video recording devices, if available.

ACTIVITY INSTRUCTIONS:

1. Show the cadets two or three of the Heritage Minutes videos.
2. Divide the cadets into teams of three or four.
3. Distribute copies of the Heritage Minutes video template and pencils to each team.
4. Have each team choose a prominent Canadian figure, event or symbol to be the subject of their own one-minute Heritage Minutes video.
5. Give the teams 20 min to brainstorm their own concept for a one-minute “Heritage Minutes” video and create a basic script / stick figure storyboard using the template provided.
6. If resources allow, have the teams record their videos in addition to creating a storyboard. A variety of devices can be used, such as cell phones, digital cameras, or video cameras.
7. Give each team 2–3 min to explain their concept and present their storyboard / video to the rest of the teams.
8. The corps / squadron Commanding Officer may authorize exceptional videos to be uploaded to corps / squadron websites / Youtube channels or shown at Annual Ceremonial Reviews, Mess Dinners, etc.

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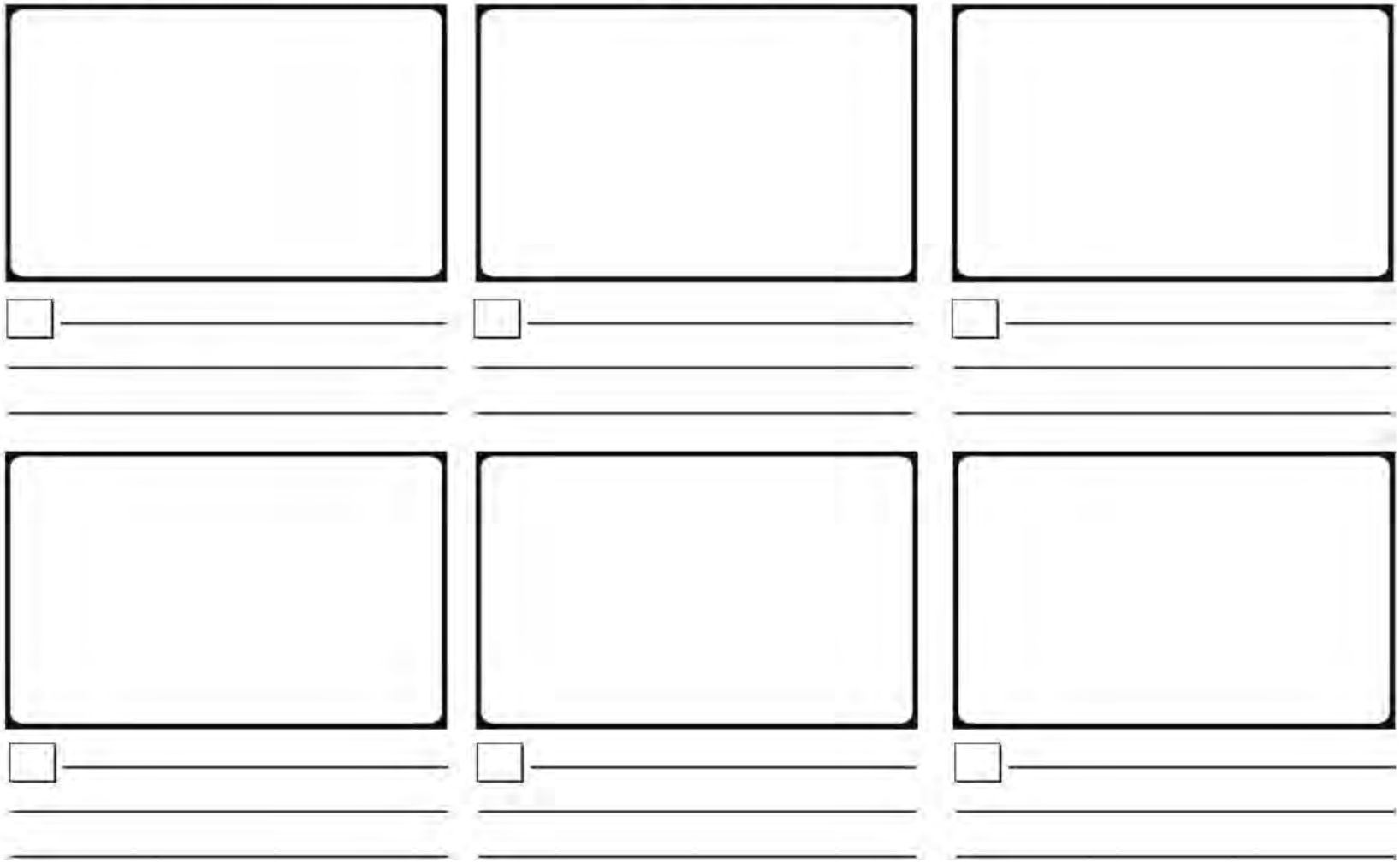
HERITAGE MINUTES VIDEO
STORYBOARD TEMPLATE

Name of Project: _____ Group Members: _____



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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

CADETS CANADA

SECTION 8

EO MX01.01H – PARTICIPATE IN CITIZENSHIP LEARNING STATIONS

Total Time: One session (3 periods) = 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

This IG supports EO MX01.01H (Participate in Citizenship Learning Stations) located in A-CR-CCP-801/PG-001, *Royal Canadian Air Cadets Proficiency Level One Qualification Standard and Plan*, Chapter 4.

Select learning stations, and plan and prepare activities. Learning station activities are located at Annexes A–M.

				Time		Trg Lvl	
Learning Station	**Annex**	**Self-Directed**	**Instructor Directed**	**15 min**	**30 min**	**1-2**	**3-4**
Rights and Responsibilities of Canadian Citizens	A	X	X	X		X	X
Great Canadian Trivia Game	B	X	X	X		X	X
History of Canada in 30 Min or Less	C		X		X	X	X
Canadian Contributions: Parking Spaces	D	X	X		X	X	
Canadian Contributions: Great Canadians	E	X	X		X		X
How Canadians Govern Themselves	F		X		X	X	X
Elections	G		X	X		X	X
Canadian Justice System	H	X	X		X	X	X
Canadian Symbols: Treasure Hunt	I		X		X	X	
Canadian Symbols: Coat of Arms	J	X	X		X		X
Canada's Economy	K	X			X	X	X
Canada's Regions: Symbols Map	L	X	X		X	X	
Canada's Regions: Worksheet	M	X			X		X

In addition to the suggested activities at Annexes A–M, instructors may choose to create their own interactive, challenging and fun activities.

Gather the required resources for the selected activities, as well as a stop watch or other timer. Some learning stations require assistant instructors.

PRE-LESSON ASSIGNMENT

Nil.

INTRODUCTION

APPROACH

An in-class activity was chosen for this lesson as it is a fun and interactive way to build on the cadets' knowledge of citizenship.

REVIEW

Nil.

OBJECTIVES

By the end of this session the cadets shall have gained an understanding of citizenship topics covered in the selected learning stations.

IMPORTANCE

It is important for cadets to understand our national history, government, identity and values in order to help them become responsible citizens and members of their communities.

ACTIVITY

1. Divide the cadets into teams of four.
2. Arrange a system of rotation for groups to move through the stations. Explain the procedure for moving from one station to the next, the time allotted for each station and the signal to switch.
3. Assign each team to their first learning station.
4. Supervise and provide guidance where necessary.

CONCLUSION

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

It is important for cadets to participate in citizenship learning stations to develop an understanding of their roles and history as Canadian citizens.

INSTRUCTOR NOTES / REMARKS

There are numerous potential leadership opportunities for cadets when conducting these learning stations:

- Phase Five / Master Cadet / Proficiency Level Five cadets may plan, prepare and conduct the learning stations activity as a leadership project IAW PO 503 (Lead Cadet Activities); and
- Phase Three / Silver Star / Proficiency Level Three, Phase Four / Gold Star / Proficiency Level Four, and Phase Five / Master Cadet / Proficiency Levels Five cadets may complete leadership assignments, such as leading or supervising individual learning stations, IAW POs 303 (Perform the Role of a Team Leader), 403 (Act as a Team Leader), and 503 (Lead Cadet Activities).

REFERENCES

Citizenship and Immigration Canada. (2012). *Discover Canada: The rights and responsibilities of Citizenship*. Retrieved March 12, 2013 from http://www.cic.gc.ca/english/pdf/pub/discover.pdf

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RIGHTS AND RESPONSIBILITIES OF CITIZENS

OBJECTIVE: The aim of this learning station is to familiarize cadets with the rights and responsibilities of Canadian citizens, and have them consider their connection to those rights and responsibilities.

TIME: 15 min

TRAINING LEVEL: 1-4

PRE-ACTIVITY INSTRUCTIONS:

- This activity may be assigned an instructor or be self-directed by the cadets.
- Provide a quiet space with a table and seating for all team members.
- Gather the required resources:
  - Rights and Responsibilities instruction sheet at Appendix 1 (1 copy),
  - Rights and Responsibilities of Canadian Citizens handout at Appendix 2 (enough for each team),
  - Citizens' Wall sheet at Appendix 3 (1 copy),
  - Flipchart and markers, and
  - Masking tape.
- Print the Rights and Responsibilities of Canadian Citizens handouts and place on the table.
- Post the Rights and Responsibilities instruction sheet on the wall or tape it to the table.
- Leave a separate area on the wall – The Citizens' Wall – for teams to post their finished lists of rights and responsibilities next to the Citizens' Wall sheet (ideally, this space should be away from the table and on the way to the next station).

ACTIVITY INSTRUCTIONS:

Have the cadets read and follow the Rights and Responsibilities instruction sheet.

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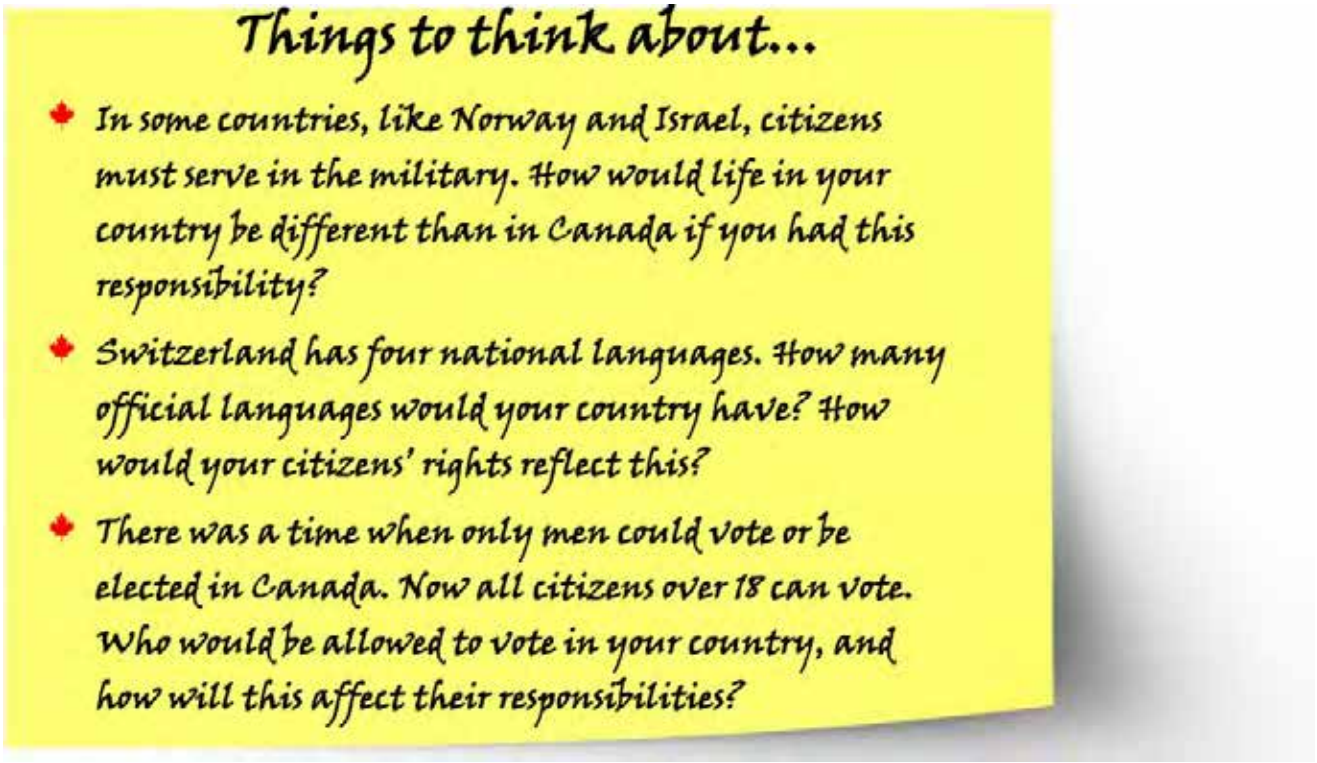
INSTRUCTIONS:

RIGHTS AND RESPONSIBILITIES

Congratulations! You have just founded your own new country. Your first order of business is to decide what rights and freedoms your citizens will enjoy and what their responsibilities will be.

1. Read the rights and responsibilities of Canadian citizens.
2. Discuss. Will your country have the same rights and responsibilities? Why or why not?
3. Brainstorm ideas and write the list of Rights and Responsibilities for your country on the flipchart.
4. Add your list to the Citizens' Wall, and take a moment to compare your list to other teams' and discuss.



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RIGHTS AND RESPONSIBILITIES
OF CANADIAN CITIZENS

Rights and Freedoms

Canadians are free to: follow the religion of their choice; hold and express their own opinions; assemble peacefully in support of a cause; and make or join groups that promote a common interest. In 1982, the Constitution of Canada was amended to include the Canadian Charter of Rights and Freedoms, which explains our fundamental freedoms and sets out additional rights. Some of these are:

- **Equality – the law protects everyone equally and does not discriminate against anyone.**
- **Mobility – you are allowed to live anywhere in Canada, and to leave the country if you wish.**
- **Democratic – once you turn 18, you have the right to vote and run for political office.**
- **Legal – if you are accused of a crime, you are presumed innocent unless proven guilty and have a right to be represented by a lawyer in a court of law. You are also allowed to have an interpreter during court proceedings.**
- **Language – the Canadian government gives English and French equal rights and privileges, and you can communicate with them in either official language.**

If any Canadian feels that their rights have been violated, they are allowed to address that violation in court.

Responsibilities

Rights always come with responsibilities. Some of your responsibilities as a Canadian are to:

- **Understand and obey the law**
- **Allow other Canadians to enjoy their rights and freedoms**
- **Vote and to participate in the democratic political system**
- **Appreciate and help preserve Canada's environment and multicultural heritage**
- **Be an active and helpful member of the community**

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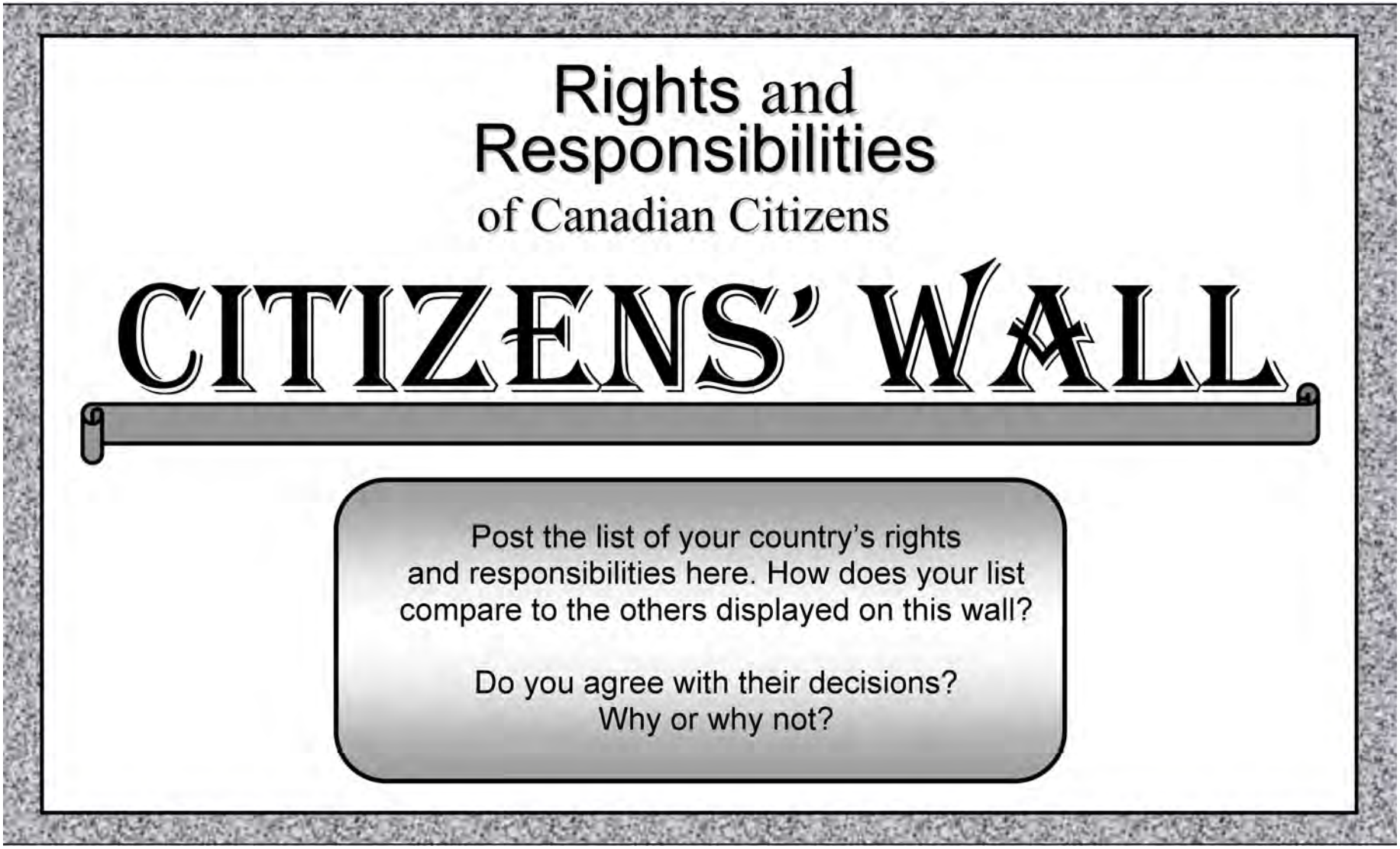
Rights and
Responsibilities
of Canadian Citizens
CITIZENS' WALL
Post the list of your country's rights and responsibilities here. How does your list compare to the others displayed on this wall?
Do you agree with their decisions? Why or why not?

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THE GREAT CANADIAN TRIVIA GAME

OBJECTIVE: The aim of this learning station is to familiarize cadets with Canadian history and culture.

TIME: 15 min

TRAINING LEVEL: 1-4

PRE-ACTIVITY INSTRUCTIONS:

- This activity may be assigned an instructor or be self-directed by the cadets.
- Gather the required resources:
  - Great Canadian Trivia Game Instruction sheet located at Appendix 1 (1 copy),
  - Great Canadian Trivia Game game cards located at Appendix 2 (one set), and
  - Paper and pens or markers for the cadets to make score sheets.
- Print, cut and fold trivia cards so that the answer (with the picture) is hidden on the inside—if available, card stock will work well.
- Set up this learning station in an area where the players will not disrupt other cadets—it may be a noisy game.
- Set up seating for all players.
- Place trivia cards in a bowl, hat, helmet, etc. for players to draw from.
- Post the instruction sheet somewhere visible.
- Material for additional trivia questions may be found at www.101things.ca and www.thecanadianencyclopedia.com.

ACTIVITY INSTRUCTIONS:

Have cadets read and follow the instruction sheet.

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WELCOME TO THE GREAT CANADIAN TRIVIA GAME!

It's time to test your knowledge of Canadian history and culture! Here's how to play the game:

1. Divide your team in two. One half will be playing against the other.
2. Make a score sheet for your game on the paper provided.
3. Choose a side to go first. A member of the opposing side will get to ask the question.
4. Draw a question card. You can open it, but don't show anyone the answer inside. Read the question on the outside, followed by the multiple choice options.
5. If the side guessing gets the question wrong, the other side can steal by getting the right answer (but the person asking can't help them!). Go back and forth between the teams until the correct answer is found.
6. Once someone says the correct answer, open the card and read the inside to the team. You can show the picture, too.
7. Record correct answers on the score sheet. Basic cards are worth 1 point, Intermediate 2 points and Expert 3 points.
8. Know all the answers? Make up some Canadian trivia questions of your own and see if the other team can answer them!

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The Village. Early European explorers may have believed the Iroquois word "Kanata," which refers to any settlement, was the name of the country. However it came about, the name represents Canada as a welcoming community of neighbours.

Fold

Fold

Cut

Aboriginal peoples. One of Canada's most famous artists is painter Norval Morrisseau, called Copper Thunderbird, whose work reflects his aboriginal heritage.

The Underground Railroad brought fleeing slaves safely to Canada, and many of them decided to settle here. Mary Ann Shadd Cary, whose parents were part of the Underground Railroad, became an activist for African-Canadian rights and Canada's first female publisher.

Charlottetown, P.E.I. Interestingly, P.E.I. didn't become part of Canada with New Brunswick, Nova Scotia, Ontario and Quebec in 1867, but joined later in 1873. The bridge that connects N.B. and P.E.I. is called the Confederation Bridge in honour of Charlottetown's role in the birth of the country.

Basic

The word "Canada" most likely comes from a First Nations word that means:

a) The river
b) The village
c) The maple tree
d) The place with snow

Basic

The First Nations, Inuit and Metis, descendents of the first people to live in this country, are Canada's…

a) Aboriginal peoples
b) Founding fathers
c) Official culture
d) National peoples

Basic

Upper Canada was the first British colony to work to abolish slavery. Many former slaves escaped to Canada from the U.S. through a network called the:

a) Trans-Canada Trail
b) Anti-Slavery Network
c) Underground Railroad
d) Canadian Red Cross

Basic

Canada officially became a country on July 1, 1867, but it was a long process. The first conference about confederation was in 1864. Where was it held?

a) Ottawa, Ont.
b) Halifax, N.S.
c) Montreal, Que.
d) Charlottetown, P.E.I.

Vikings. These Icelandic explorers established a settlement in what is now known as L'Anse aux Meadows, Newfoundland and Labrador, over a thousand years ago.

Fold

Fold

Cut

Louis Riel was eventually executed for treason for his role in armed uprisings against the government, but he is regarded by many Canadians as a defender of Métis rights. The government established the province of Manitoba and the North West Mounted Police (now the RCMP) in response to Riel's rebellion.

Laura Secord lived in American-occupied territory that is now part of Ontario. The information she passed on helped the British defeat the Americans. Laura Secord Chocolates was named in her honour on the 100th anniversary of her trek.

Acadians. Many present-day Acadians live in New Brunswick, Canada's only bilingual province. The word "Cajun" comes from Acadians who moved to Louisiana after losing their homes to the British in the 1770s.

Acadian Flag

Intermediate

Many Canadians are descended from European immigrants. But who were the very first Europeans to visit North America?

a) The French
b) The English
c) The Vikings
d) The Russians

Intermediate

The Métis are a distinct Canadian culture with both Aboriginal and European ancestry. Which Métis leader started a rebellion that resulted in the formation of both Manitoba and the RCMP?

a) William Lyon Mackenzie
b) Louis Riel
c) Laura Secord
d) Sir Isaac Brock

Intermediate

In the War of 1812, the United States tried to invade Upper Canada. Which Canadian heroine traveled 30 km to warn the British army of an impending American attack?

a) Jeanne Mance
b) Mary Ann (Shadd) Carey
c) Laura Secord
d) Florence Nightingale

Intermediate

The descendents of French colonists who settled the Atlantic provinces in the 1600s are called...

a) Acadians
b) Quebecois
c) Métis
d) Haligonians

Fold

Dominion Day, because Canada's official name was the Dominion of Canada. The term came from a section of the Bible that described "dominion from sea to sea and from the river to the ends of the earth," and was chosen because it reflected the image of a strong, united Canada.

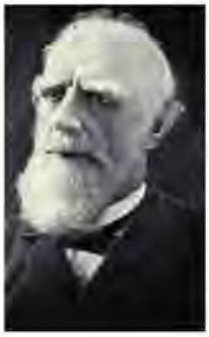
Fold

Cut

Loyalists were American colonists still loyal to Britain. They settled in Canada, and many Canadian communities and institutions now bear the word "loyalist" in their names. Though an independent country, Canada remains part of the Commonwealth.

Scotland. Many Canadians' ancestors came from Scotland and Ireland. Nova Scotia actually means "New Scotland." Canada's culture is influenced by the cultures of the people who make up our country, and the military in particular keeps many Scottish traditions.

Lord Strathcona was also a great supporter of Cadets, and Banff, Canada's first national park, was named after his birthplace in Scotland. The railroad was actually built by Chinese and European immigrants, often under terrible conditions. Banff was founded after some of these railroad workers discovered beautiful hot springs in the Rocky Mountains of Alberta.



Expert

On July 1, we celebrate Canada Day, but prior to 1982, it had a different name. What was it originally called?

a) Independence Day
b) Confederation Day
c) Dominion Day
d) Happy Birthday Canada

Expert

During the American Revolution, Canada became a safe haven for supporters of the British. What were they called?

a) Monarchists
b) Loyalists
c) Rebels
d) Pacifists

Expert

Canada's first Prime Minister was Sir John Alexander Macdonald, one of the Fathers of Confederation. Where was he born?

a) Scotland
b) Canada
c) England
d) The United States

Expert

The Canadian Pacific Railway (CPR) was completed in 1885. The director of CPR was Donald Smith, otherwise known as:

a) Lord Beaverbrook
b) Lord Strathcona
c) The Duke of Edinburgh
d) Lord Durham

Fold

Astronauts. Marc Garneau became the first Canadian in space in 1984. Canada has contributed personnel and technology to many space missions. The "Canadarm" mechanical arms mounted on space shuttles and the International Space Station were designed and built in Canada.

Fold

Cut

British Columbia. Terry Fox started his "Marathon of Hope" in Newfoundland, running the equivalent of a marathon each day with a prosthetic leg. Though he was never able to reach his goal, Canadians across the country run to raise money for cancer research each year in his memory.

Asia. Chinese languages are among the most commonly spoken at home by Canadians. Every year, communities all over the country celebrate Chinese New Year and other Asian traditions.

Dr. Emily Stowe was also the first woman to practice medicine in Canada. Thanks to her efforts and those of other suffragettes, women gained the right to vote starting in 1916.

Roberta Bondar, Marc Garneau and Chris Hadfield are the names of Canadian….

a) Inventors
b) Astronauts
c) Prime Ministers
d) Archaeologists

Terry Fox was a young man who began a cross-Canada run to raise money for cancer research. What province was he from?

a) Newfoundland and Labrador
b) Ontario
c) British Columbia
d) Saskatchewan

Immigrants have come to Canada from all over the world, but since the 1970s, most new Canadians come from one particular area. Where is it?

a) Africa
b) Asia
c) Europe
d) South America

At one time, only adult men who owned property were allowed to vote. The movement to give women a vote was led by:

a) Dr. Emily Stowe
b) Jean Chretien
c) Laura Secord
d) The province of Manitoba

HISTORY OF CANADA IN 30 MIN OR LESS

OBJECTIVE: The aim of this learning station is to familiarize cadets with some key events in Canadian history.

TIME: 30 min

TRAINING LEVEL: 1–4

PRE-ACTIVITY INSTRUCTIONS:

- Assign an instructor to this activity.
- Provide an area large enough for all team members with a table and ample wall space to display cards. Ideally, this space should be away from the table and on the way to the next station.
- Gather the required resources:
  - History of Canada in 30 Min or Less timeline cards at Appendix 1 (1 set per team),
  - History of Canada in 30 Min or Less answer key at Appendix 2, and
  - Masking tape.
- Print a set of the History of Canada in 30 Min or Less timeline cards for each team. Cut them into individual cards and place them on the table.
- Post the History of Canada in 30 Min or Less activity instruction sheet on the wall or tape it to the table.

ACTIVITY INSTRUCTIONS:

1. Divide the cadets into two teams.
2. Give the teams 15 min to arrange their timeline cards in chronological order and post them on the wall using the masking tape.
3. Check the answer key to determine if each team's timeline is arranged correctly.
4. If there is enough time remaining in the activity, give the cadets the chance to adjust the order of their cards.
5. Declare the team with the most events in the correct order the "Canadian History Buffs."

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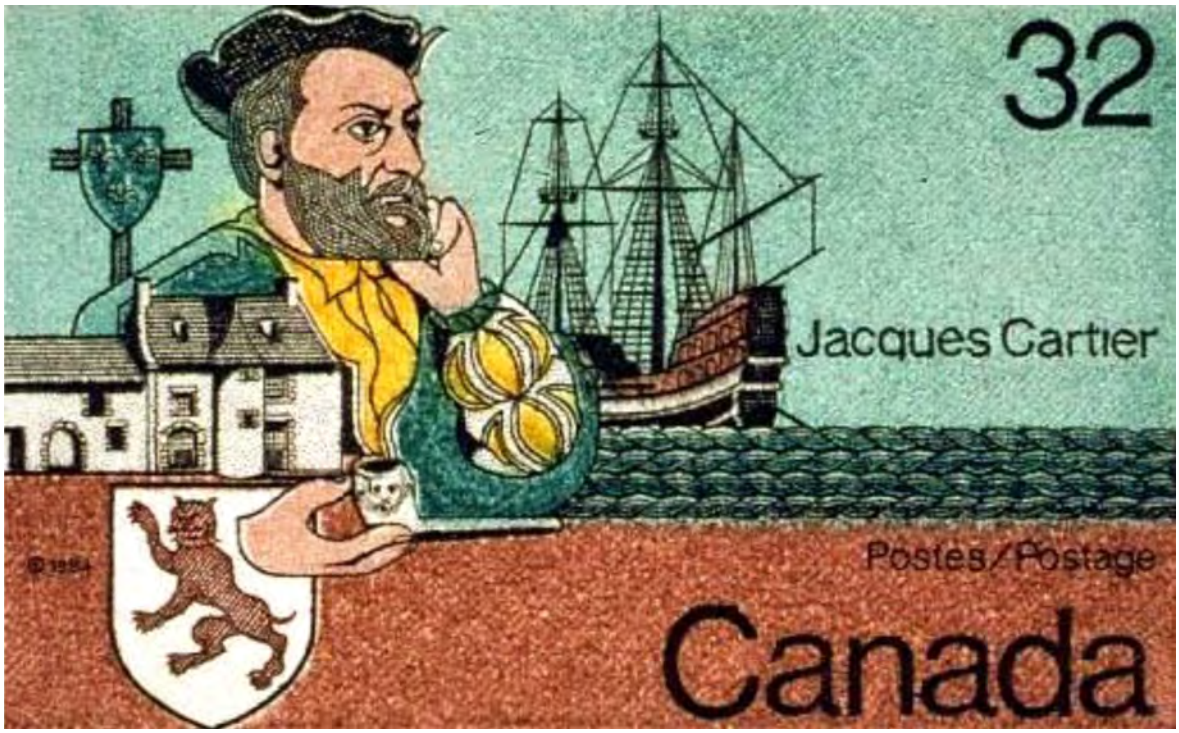
HISTORY OF CANADA

IN 30 MINUTES OR LESS

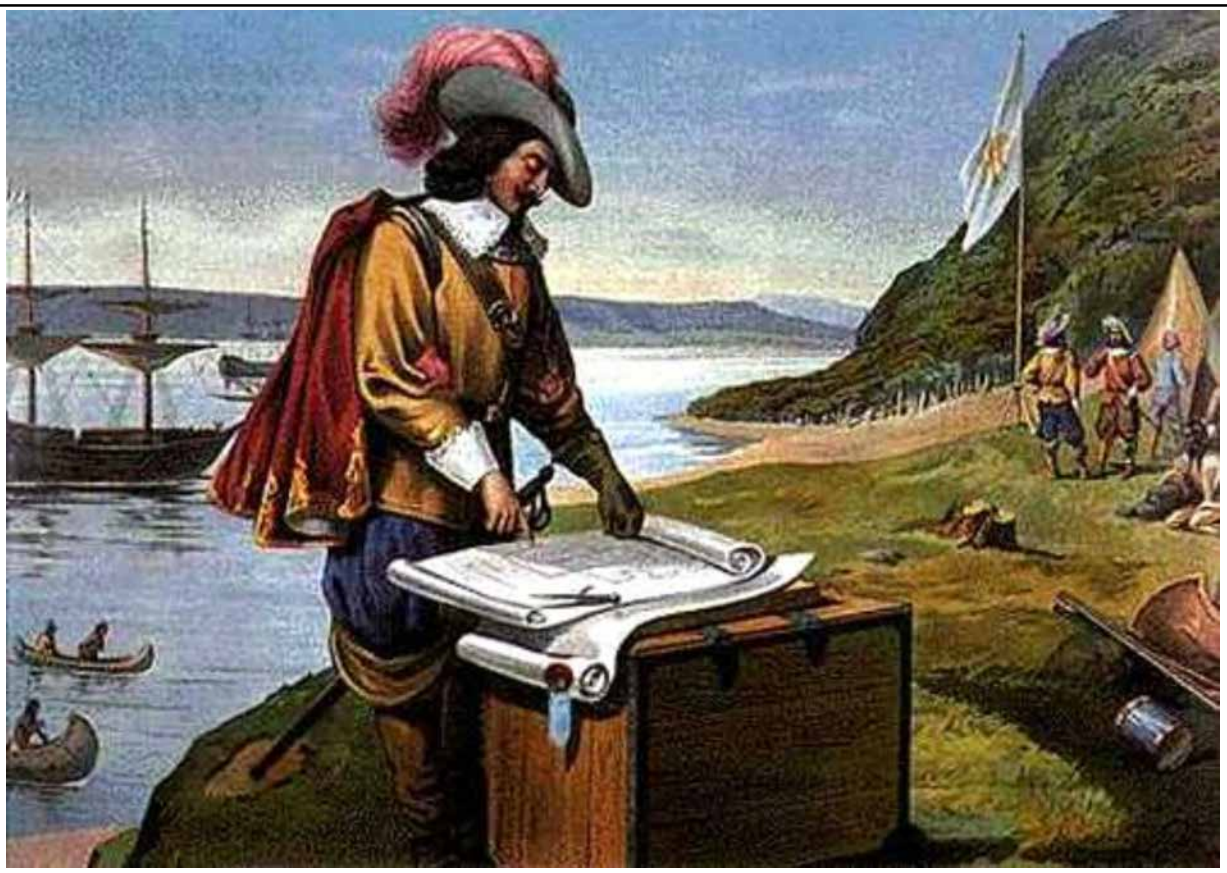
Prehistoric hunters cross over into Canada from Asia

Leif Ericsson leads a Viking expedition to the New World

John Cabot reaches Newfoundland



Jacques Cartier first explores the St. Lawrence region



Samuel de Champlain establishes a French colony at Quebec City

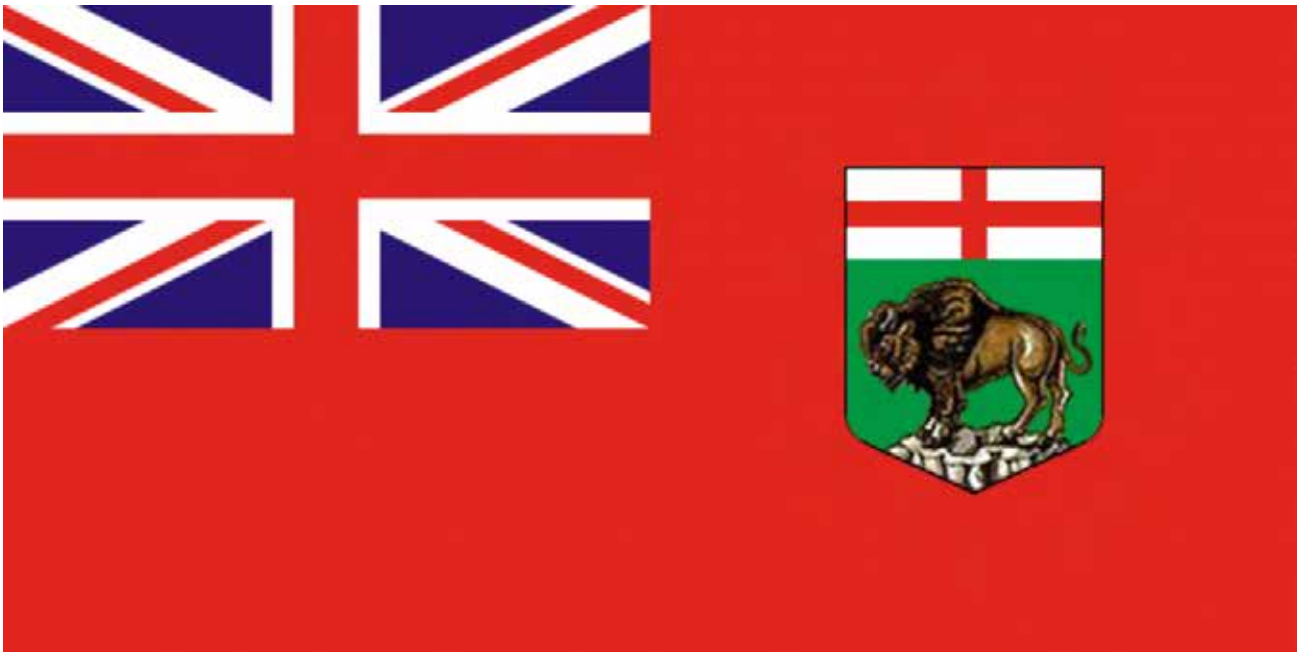
Hudson's Bay Company is formed

Expulsion of the Acadians

Battle of the Plains of Abraham: Quebec City is captured

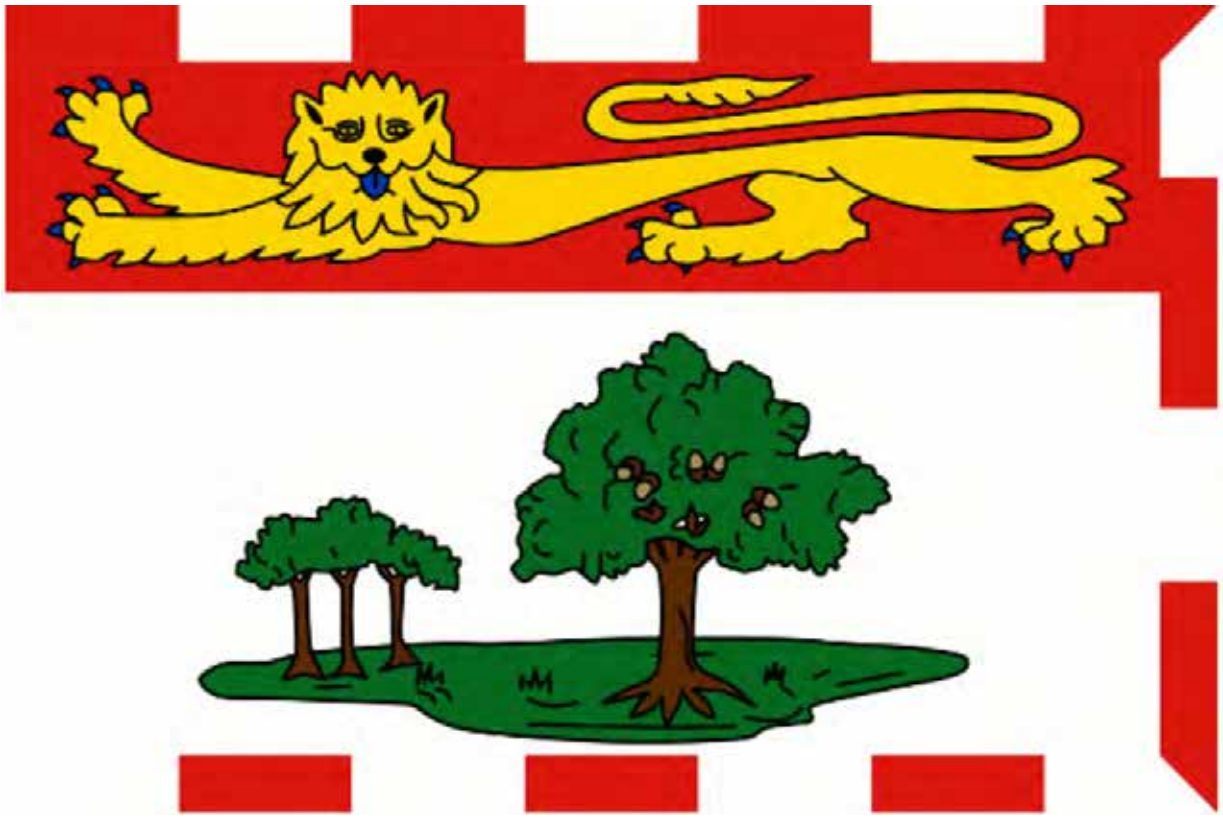
War of 1812: U.S. invades Canada

Confederation (first four provinces: Quebec, Ontario, N.S., and N.B.)



Province of Manitoba is created

British Columbia joins Canada



Prince Edward Island joins Canada

Canadian Pacific Railway is completed

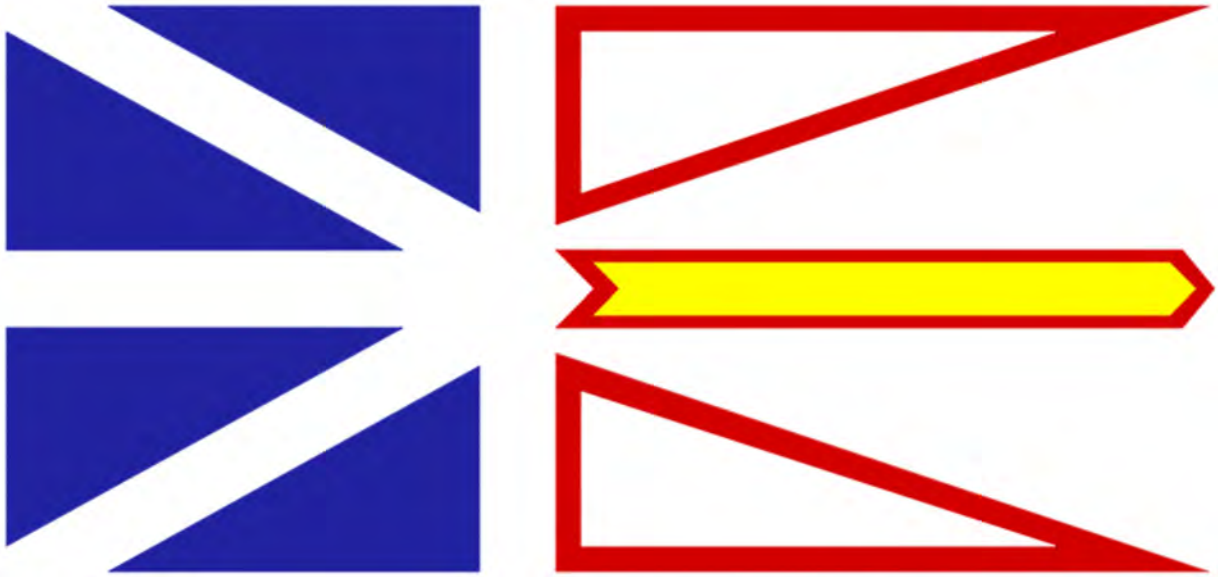
The provinces of Alberta and Saskatchewan are created

World War I

Women win the vote in Manitoba, Saskatchewan, and Alberta

The Great Depression

World War II



Newfoundland joins Canada

Korean War

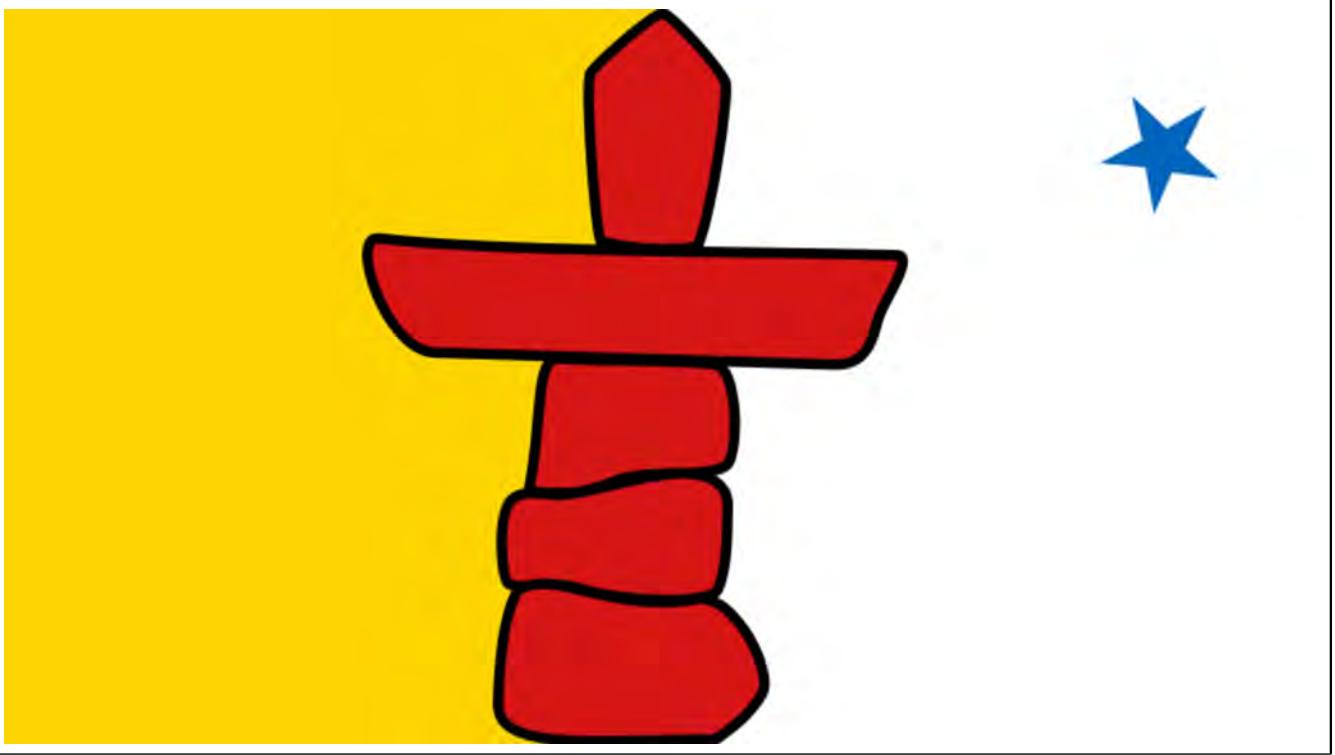
St. Lawrence Seaway (major transportation route) officially opens

Native Canadians win the right to vote

Canada gets its own flag

October Crisis: political kidnappings, Ottawa suspends civil rights

Constitution comes home — with a Charter of Rights and Freedoms



The new Arctic territory of Nunavut is created

HISTORY OF CANADA

IN 30 MINUTES OR LESS

ANSWER KEY

DATE	EVENT
30,000–10,000 BC	Prehistoric hunters cross over into Canada from Asia
circa 1000 AD	Leif Ericsson leads a Viking expedition to the New World
1497	John Cabot reaches Newfoundland
1534	Jacques Cartier first explores the St. Lawrence region
1608	Samuel de Champlain establishes a French colony at Quebec City
1670	Hudson’s Bay Company is formed
1755	Expulsion of the Acadians
1759	Battle of the Plains of Abraham: Quebec City is captured
1812–14	War of 1812: U.S. invades Canada
1867	Confederation (first four provinces: Québec, Ontario, N.S., and N.B.)
1870	Province of Manitoba is created
1871, 1873	B.C. and P.E.I. join Canada
1885	Canadian Pacific Railway is completed
1905	The provinces of Alberta and Saskatchewan are created
1914–18	World War I
1916	Women win the vote in Manitoba, Saskatchewan, and Alberta
1939–45	World War II
1949	Newfoundland joins Canada
1950–53	Korean War
1959	St. Lawrence Seaway officially opens
1960	Native Canadians given the right to vote
1965	Canada gets its own flag
1970	October Crisis, Ottawa suspends civil rights
1982	Constitution comes home — Charter of Rights and Freedoms

DATE	EVENT
1999	The new Arctic territory of Nunavut is created

CANADIAN CONTRIBUTIONS: PARKING SPACES

OBJECTIVE: The aim of this learning station is to familiarize cadets with some key Canadians' contributions to the nation and consider what their contribution may be.

TIME: 30 min

TRAINING LEVEL: 1–2

PRE-ACTIVITY INSTRUCTIONS:

- This activity may be assigned an instructor or be self-directed by the cadets.
- Set up a quiet space with a table and seating for all team members.
- Gather the required resources:
  - Parking Spaces Instructions sheet located at Appendix 1 (1 copy),
  - Parking Spaces Answers and Facts sheet located at Appendix 2 (1 copy),
  - Vehicle and Parking Spaces game cards sheets located at Appendix 3 (1 copy), (game cards may be printed on card stock for better durability),
  - Flipchart paper and markers, and
  - Masking tape.
- Cut out game cards, and cut a parking slot on the dotted line in each parking space card. Game cards may be laminated for repeated use.
- Post the Parking Spaces Answers and Facts sheet and the Parking Spaces Instructions sheet on the wall, so that the answers are covered by the instructions.

ACTIVITY INSTRUCTIONS:

Have the cadets read and follow the Parking Spaces Instructions sheet.

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PARKING SPACES
INSTRUCTIONS

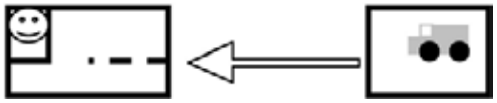
Part 1: Great Canadians

Some famous Canadians are going for familiarization rides with the cadets!

However, the drivers, pilots and commanders of these vehicles only have a description of the passengers they're supposed to be picking up, not the passenger's name.

Your mission: Help the drivers find their passengers by matching each vehicle to the correct person.

1. Working as a team, read each vehicle card and try to find the person the card describes. Be careful – some of them are tricky!
2. Remember that gliders can only "park" at the airport, G-wagons at the armoury (with the flag) and ORCA sea training vessels at the jetty.
3. When you figure out which vehicle goes where, "park" the vehicle card next to the corresponding person by sliding it into the slot on the parking space card, like this:



4. Once you're satisfied with all your matches, lift this sheet to check your answers and find out some cool facts about the people in this game! No cheating! ☺)

Part 2: What's your contribution?

You don't have to be a best-selling writer, a rock star or a scientist to be a good global citizen.

1. As a group, discuss what each member of your team could contribute to your community, your country or the world.
2. Your contribution could be something big, like changing government policy for the better, or something smaller like volunteering in the community.
3. Write each team member's name on the flip chart, and put their contribution next to it. Remember to take each person's skills, talents and interests into consideration!

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PARKING SPACES
ANSWERS AND FACTS

1 – H: Marshall MacLuhan
***Cool Canadian Fact*:** MacLuhan also predicted the Internet years before it was developed!

2 – A: Emily Carr
***Cool Canadian Fact*:** Carr was one of our first female artists, and is often associated with the famous Group of Seven who pioneered art in Canada.

3 – F: William Shatner
***Cool Canadian Fact*:** Besides acting, Shatner is also a musician, author and film director.

4 – I: Arthur Lipsett
***Cool Canadian Fact*:** The number of Princess Leia's cell in the first *Star Wars* movie, 21-87, came from the name of a short film by Lipsett. Lucas also credits Lipsett with the term "the force."

5 – J: The Montreal Royals
***Cool Canadian Fact*:** Robinson was so beloved by Montreal baseball fans that a cheering crowd of them once followed him and his wife all the way from the ball field to the train station!

6 – E: Dr. David Suzuki
Cool Canadian Fact: Besides hosting TV and radio shows, Suzuki has written over 50 books – 15 of them for children!

7 – L: Glenn Gould
***Cool Canadian Fact*:** Along with winning three Juno awards and five Grammy awards, Gould was made a Companion of the Order of Canada, but declined the honour because he felt he was too young to receive it.

8 – B: Cirque du Soleil
***Cool Canadian Fact*:** Performers come from all over the world to join Cirque du Soleil, which employs people from over 40 different countries.

9 – C: Dr. Frederick Banting
***Cool Canadian Fact*:** Banting was knighted by King George V in recognition of his work… so he is actually *Sir* Dr. Frederick Banting!

10 – G: Jacques Plante
***Cool Canadian Fact*:** When Plante was the goaltender for the Montreal Canadiens, they won the Stanley Cup five times in a row.

11 – D: Romeo Dallaire
Cool Canadian Fact: Dallaire has received many honours for his humanitarian work. As one of Canada's great heroes, he helped carry the Canadian flag at the 2010 Olympic games.

12 – K: Margaret Atwood
***Cool Canadian Fact*:** Among her many awards and accomplishments, Atwood holds an honourary degree from the Royal Military College of Canada.

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5

Your passengers gave great African-American athlete Jackie Robinson his start by breaking the “colour barrier” and making him a member of their club.

6

Your passenger is an environmentalist and scholar known around the world, especially for hosting a science TV show seen in over 40 countries!

7

Your passenger has been called one of the most celebrated musicians of the 20th century, being especially well-known for interpretations of Bach on piano.

9

Your passenger is a Nobel Prize-winning Canadian scientist who discovered insulin, changing the lives of people all over the world who suffer from diabetes.

8

Your passengers are a team of internationally-famous entertainers, a group originally started by two former street performers from Montreal.

10

Your passenger is an innovator who changed our national winter sport forever, by inventing a mask to protect goal tenders from injury.

1 Your passenger is a communications philosopher who revolutionized the way people think about the media. This person coined the terms “Global Village” and “Channel Surfing.”

3

Your passenger is a Canadian actor known all over the world, especially for boldly going “where no one has gone before.”

2

Your passenger is a great artist and writer, best known for highly-stylized paintings of Aboriginal symbols and the Canadian wilderness.

4

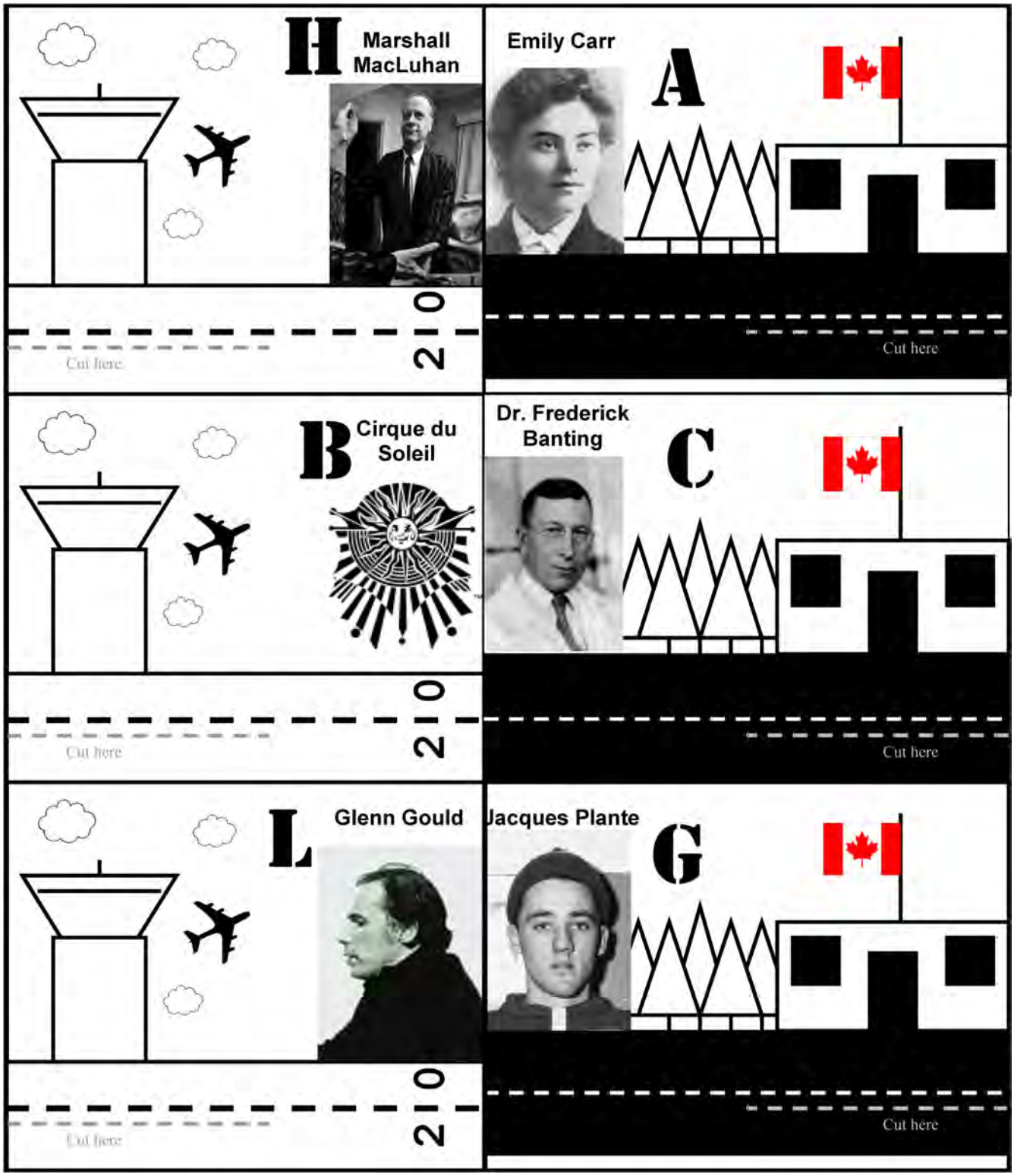
Your passenger is a film maker who once worked for the National Film Board of Canada. *Star Wars* creator George Lucas says this person was one of his greatest influences!

11

Once a general in the Canadian Armed Forces, your passenger has become an international advocate for human rights, as well as a senator and an author.

12

Your passenger is an award-winning Canadian novelist and poet, who draws attention to important issues through fictional stories.


H
Marshall MacLuhan
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Emily Carr
A
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B
Cirque du Soleil
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Dr. Frederick Banting
C
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L
Glenn Gould
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Jacques Plante
G
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Dr. David Suzuki

E

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I

Arthur Lipsett

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J

The Montreal Royals

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20

Romeo Dallaire

D

Cut here

K

Margaret Atwood

Cut here

William Shatner

F

Cut here

CANADIAN CONTRIBUTIONS: GREAT CANADIANS

OBJECTIVE: The aim of this learning station is to familiarize cadets with some key Canadians' contributions to the nation and consider what their contribution may be.

TIME: 30 min

TRAINING LEVEL: 3–4

PRE-ACTIVITY INSTRUCTIONS:

- This activity may be assigned an instructor or be self-directed by the cadets.
- Identify a quiet space with a table and seating for all team members.
- Gather the required resources:
  - Canadian Contributions Instructions sheet located at Appendix 1 (1 copy),
  - Canadian Contributors sheet located at Appendix 2 (1 per cadet), and
  - Flipchart paper and markers.
- Place the Canadian Contributors sheets on the table in a folder or envelope.
- Post the Canadian Contributions Instructions sheet next to the flipchart.

ACTIVITY INSTRUCTIONS:

Have the cadets read and follow the Canadian Contributors Instructions sheet.

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CANADIAN CONTRIBUTIONS

INSTRUCTIONS

Part 1: Great Canadians

Who are some Canadians who have made a difference in the world through their knowledge, abilities and dedication?

1. As a group, brainstorm to find the names of at least one Canadian who has made a major contribution having to do with each of the following:

- Sport
- Music
- Art
- Literature
- Science and Technology
- Philosophy and Ethics
- Human or Animal Rights

2. Write the name of each person on the flip chart paper, along with the contribution they have made.
3. When you finish, compare your list to the handout in the folder.

Part 2: What's your contribution?

You don't have to be a best-selling writer, a rock star or a scientist to be a good global citizen.

1. As a group, discuss what each member of your team could contribute to your community, your country or the world.
2. Your contribution could be something big, like changing government policy for the better, or something smaller like volunteering in the community.
3. Write each team member's name on the flip chart, and put their contribution next to it. Remember to take each person's skills, talents and interests into consideration!

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CANADIAN CONTRIBUTORS

Did any of these famous Canadians make your list? Which of the categories do their contributions fall into?

Emily Carr

One of Canada's first great female artists and writers, she was best known for her highly-stylized paintings of Aboriginal symbols and the Canadian wilderness. She was also associated with the pioneering Group of Seven artists.

Arthur Lipsett

A film maker for the National Film Board of Canada, he became one of *Star Wars* creator George Lucas's greatest ARTISTIC influences. The number of Princess Leia's cell in *Star Wars*, 21-87, is the name of a short film by Lipsett.

Romeo Dallaire

Once a general in the Canadian Armed Forces, he has become an international advocate for human rights recognized all over the world for his humanitarian work. He is also a senator and the author of several books.

Margaret Atwood

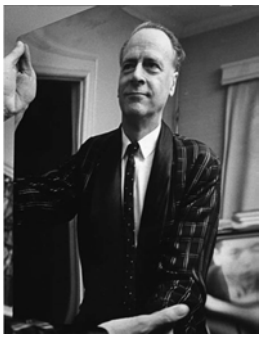
An award-winning Canadian novelist and poet, who often draws attention to important issues through her fictional stories. Among her many awards and honours, she holds an honorary degree from the Royal Military College of Canada.

Dr. David Suzuki

An active environmentalist, broadcaster and scholar known around the world, especially for hosting a science TV show, *The Nature of Things*, seen in over 40 countries. He is also the author of numerous books, many of them for children.

Glenn Gould

One of the most celebrated musicians of the 20th century, he was especially well-known for his interpretations of Bach on piano. Along with three Juno awards and five Grammys, he was made a companion of the Order of Canada, but declined because he felt he was too young for such an honour.



Marshall MacLuhan

A communications philosopher who revolutionized the way people think about the media. He coined the terms “Global Village” and “Channel Surfing,” and predicted the Internet decades before it came into being.

Sir Frederick Banting

A Nobel Prize-winning Canadian scientist, he discovered insulin. His work changed the lives of thousands of people around the world who suffer from diabetes. He was knighted by King George V in recognition of his discovery.

William Shatner

A Canadian actor, director, writer, musician and recording artist known worldwide, especially for his iconic role in the TV show *Star Trek*. He also played an animated opossum alongside fellow Canadian Avril Lavigne in *Over the Hedge*.

Jacques Plante

As a goaltender, he became an innovator who changed our national winter sport forever, by inventing a mask to protect goalies from injury. While he was playing for the Montreal Canadiens, they won the Stanley Cup five times in a row.

HOW CANADIANS GOVERN THEMSELVES

OBJECTIVE: The aim of this learning station is to familiarize cadets with the types of substantive issues debated by elected representatives.

TIME: 30 min

TRAINING LEVEL: 1–4

PRE-ACTIVITY INSTRUCTIONS:

- Assign an instructor to this activity.
- Find a resolution debated in the Parliament of Canada (a record of votes in Parliament is available at openparliament.ca > VOTES (openparliament.ca/bills/votes/) [disregard procedural votes and votes on bills]) that is appropriate for discussion by cadets, such as resolutions concerning national days or government priorities, taking into consideration:
  - the relevance of the motion to the cadets,
  - the complexity of the motion,
  - whether the motion is controversial enough to allow for motivated debate, and
  - the knowledge level of the cadets.
- If an appropriate motion is not available, select a resolution from the sample resolutions located at Appendix 1 or create your own.
- Gather the required resources:
  - a method of displaying the resolution (such as a whiteboard or flipchart), and
  - five chairs and two desks, arranged as per Figure F-1.

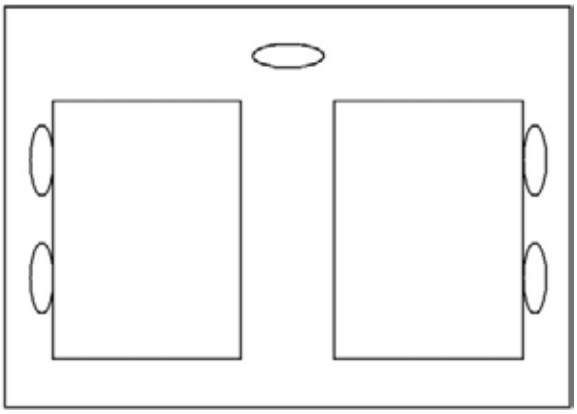


Figure F-1 Orientation of Training Space

ACTIVITY INSTRUCTIONS:

1. Explain to cadets that resolutions are a method the House of Commons can use to collectively express its opinion on a subject. Unlike bills, which, after completing the legislative process, become laws, adopted resolutions are not binding, but still provide an opportunity for substantive debate and can influence future policy. The non-binding nature of motions explains the wording ("That, in the opinion of the House, the government *should consider*").
2. Introduce the resolution to the cadets and ensure it is understood.
3. Designate half the team "in favour" of the resolution and half "opposed" to the resolution.
4. Give the cadets 7 min to brainstorm arguments for or against the motion and decide which cadet on their side will speak first and which second.
5. Starting with those in favour of the motion, give a cadet on each side 2 min to stand and present their arguments.
6. Starting with those in favour of the motion, give a cadet on each side 2 min to stand and rebut the other side's arguments or present new arguments.
7. Have the cadets vote on the motion through a voice vote (cadets may vote their conscience, rather than voting on the basis assigned earlier), by:
   (a) instructing those in favour to say "yea;"
   (b) instructing those opposed to say "nay;"
   (c) declaring the result; and
   (d) in the case of a tie, casting the deciding vote by voting in such a way as to support the status quo (opposing resolutions that implement change).
8. To develop an understanding of the different tensions on Members of Parliament, pose to the cadets the following questions:
   (a) What if you felt strongly about this issue, but a majority of your constituents felt another way. Would this affect how you voted? How?
   (b) In this simulation, you were asked to support a position you may not have agreed with. Similar situations occur for Members of Parliament. What if you felt strongly about this issue, but your party and colleagues had decided to take a different stand. Would this affect how you voted? How?
9. As time permits, have the cadets brainstorm resolutions they may move if they were Members of Parliament.

SAMPLE RESOLUTIONS

That, in the opinion of the House, the government should consider restoring the death penalty for the most heinous criminal offences.

That, in the opinion of the House, the government should consider making voting compulsory in Canada.

That, in the opinion of the House, the government should consider abolishing the monarchy.

That, in the opinion of the House, the government should consider acknowledging the inherent rights of animals.

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ELECTIONS

OBJECTIVE: The aim of this activity is to consider the roles of elected representatives and decide what priorities and characteristics the cadets, as constituents, would like the ideal candidate to hold.

TIME: 15 min

TRAINING LEVEL: 1–4

PRE-ACTIVITY INSTRUCTIONS:

- Assign an instructor to this activity.
- Prepare the worksheets for use by the cadets by filling in the title of provincial / territorial legislators; the name of the riding, constituency and municipality; and the title of the appropriate municipal representative.
- Post the following table for the cadets' reference as they complete the activity.

Government	Commonly Discussed Responsibilities	
Federal	• National Defence • Foreign Policy • Citizenship • Policing • Criminal Justice • International Trade	• Aboriginal Affairs • International Trade • Immigration (shared) • Agriculture (shared) • Environment (shared)
Provincial and Territorial	• Education • Health Care • Natural Resources • Highways • Policing (Ontario, Quebec)	• Aboriginal Affairs • International Trade • Immigration (shared) • Agriculture (shared) • Environment (shared)
Municipal	• Social and Community Health • Recycling Programs • Transportation and Utilities	• Snow Removal • Policing • Firefighting

- Gather the required resources:
  - One copy of the job postings worksheets located at Appendix 1 per team, and
  - A pencil and eraser for each team.

ACTIVITY INSTRUCTIONS:

1. Have the cadets select and complete two of the three job posting worksheets located at Appendix 1 (alternatively, if time permits, all three may be completed) by considering what skills / experience the elected representative requires and brainstorming concerns, ideas, and proposals they would like candidates to address in their election platforms.
2. Advise the cadets and ensure that completed postings are consistent with Canadian jurisdictional divisions (as per the table above) and are appropriate and realistic.
3. Discuss with cadets ways in which they may communicate with elected representatives in order to convey their concerns, priorities, and ideas, including writing a letter, signing a petition, and visiting the constituency office.

JOB POSTING FOR CANDIDATE FOR FEDERAL REPRESENTATIVE

SEEKING: CANDIDATES FOR MEMBER OF PARLIAMENT

THE CADETS OF _____ (CORPS / SQN) ARE SEEKING A MEMBER OF PARLIAMENT TO REPRESENT _____ (RIDING).

Required Education:	
Required Skills:	

IF THE CANDIDATE IS SUCCESSFUL IN THE ELECTION, THEY WILL HAVE NUMEROUS DUTIES, INCLUDING:

- Holding the federal government accountable for its work and approve its spending.
- Assisting constituents in using federal government programs, such as:
- Representing the constituents of _____ by bringing their concerns forward, such as:
- Proposing new laws, policies, and ideas, such as:

JOB POSTING FOR CANDIDATES FOR PROVINCIAL / TERRITORIAL REPRESENTATIVE

SEEKING: CANDIDATES FOR MEMBER OF _____

THE CADETS OF _____ (CORPS / SQN) ARE SEEKING A MEMBER OF _____ TO REPRESENT _____ (CONSTITUENCY).

Required Education:	
Required Skills:	

IF THE CANDIDATE IS SUCCESSFUL IN THE ELECTION, THEY WILL HAVE NUMEROUS DUTIES, INCLUDING:

- Holding the provincial/territorial government accountable for its work and approve its spending.
- Assisting constituents in using provincial/territorial government programs, such as:
- Representing the constituents of _____ by bringing their concerns forward, such as:
- Proposing new laws, policies, and ideas, such as:

JOB POSTING FOR CANDIDATES FOR MUNICIPAL REPRESENTATIVE

WANTED: CANDIDATES FOR

_____

THE CADETS OF _____ (CORPS / SQN) ARE SEEKING A _____ TO REPRESENT _____

Required Education:	
Required Skills:	

IF THE CANDIDATE IS SUCCESSFUL IN THE ELECTION, THEY WILL HAVE NUMEROUS DUTIES, INCLUDING:

- Approving the municipal budget and oversee municipal programs.
- Assisting constituents in using municipal government programs, such as:
- Representing the residents of _____ by bringing their concerns forward, such as:
- Proposing new by-laws, policies, and ideas, such as:

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CANADIAN JUSTICE SYSTEM

OBJECTIVE: The aim of this learning station is to familiarize cadets with key elements of the Canadian justice system, and have them consider the role of law and order in Canadian society.

TIME: 30 min

TRAINING LEVEL: 1–4

PRE-ACTIVITY INSTRUCTIONS:

- This activity may be assigned an instructor or be self-directed by the cadets.
- Provide an area large enough for all team members with a table.
- Gather the required resources:
  - The Canadian Justice System Instructions located at Appendix 1 (1 copy per team),
  - The Canadian Justice System – A Brief Overview handout located at Appendix 2 (1 copy per team),
  - Our New Laws template located at Appendix 3 (1 copy per team), and
  - Pens / pencils.
- Post the Canadian Justice System activity instruction sheet on the wall or tape it to the table.
- Place copies of the Canadian Justice System – A Brief Overview and Our New Laws template on the table along with the pens / pencils.

ACTIVITY INSTRUCTIONS:

Have the cadets read and follow the instruction sheet.

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THE CANADIAN JUSTICE SYSTEM

Instructions:

Congratulations! You have just founded your own country. One of the first orders of business is to decide what laws your citizens will be subject to and what consequences, if any, will be imposed when someone breaks the law.

1. Read the brief overview of the Canadian Justice System.
2. As a team, brainstorm answers to the following questions:
   - What laws will your country have?
   - Will they be the same as those in Canada? If not, why not?
   - Will your laws have consequences? If so, what will they be?
3. Create 5 laws and their consequences for your country and write them on the “Our New Laws” template. Your laws can fall under any category.

Things to Think About:

- What would happen in a country that didn’t have any laws?
- What would life be like in a country that had severe consequences for people that broke the law?
- Why should the law be different for minors and adults?

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THE CANADIAN JUSTICE SYSTEM

A brief overview…

- Understanding the law and the ideas and principles behind it is the responsibility of every Canadian citizen.
- Our justice system is based on a long heritage that advocates the rule of law, freedom under the law, democratic principles and due process.
- The Canadian justice system is founded on the presumption of innocence. This means that in criminal matters, everyone is presumed innocent until proven guilty.
- Canada is governed by an organized system of laws which are intended to provide order, ensure peace and guide our society.
- Canadian laws are created by elected representatives and reflect the values and beliefs of citizens.
- The law applies to ***everyone***, including lawyers, judges and police officers!
- Police ensure the safety of citizens and enforce the law. Canada has several types of police which includes municipal, provincial and federal police agencies.
- Canada has several types of courts which have been put in place to settle disputes (appeals, criminal, family, traffic, civil, small claims, etc.). The Supreme Court of Canada is the highest court in the country. The Federal Court of Canada deals with matters concerning the federal government.
- Lawyers provide advice and assistance on legal matters. If someone cannot afford to hire a lawyer, most communities offer free or low cost legal aid services.
- For more information on the Canadian Justice System, visit www.justice.gc.ca

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OUR NEW LAWS

Law 	Consequence 

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CANADIAN SYMBOLS: TREASURE HUNT

OBJECTIVE: The aim of this learning station is to familiarize cadets with key Canadian symbols.

TIME: 30 min

TRAINING LEVEL: 1–2

PRE-ACTIVITY INSTRUCTIONS:

- Assign an instructor to this learning station. Several assistant instructors may be assigned to help supervise and provide guidance if the cadets are spread out over a large area during the treasure hunt.
- Arrange the use of rooms and hallways around your facility so the cadets can move freely.
- Gather the required resources:
  - Treasure Hunt Set-Up Diagrams located at Appendix 1 (1 copy per instructor),
  - Treasure Hunt Instructions sheet located at Appendix 2 (1 copy),
  - Treasure Hunt Start Here sheet located at Appendix 3 (1 copy),
  - Treasure Hunt Clue sheets located at Appendix 4 (1 copy),
  - Treasure Hunt Secret Word handouts located at Appendix 5 (1 copy per cadet),
  - Treasure Hunt Secret Word Answer Key located at Appendix 6,
  - An orienteering map of your facility, if desired (1 copy per cadet),(this may need to be created),
  - A “treasure” for the cadets, such as canteen gift certificates, fruit, pencils, small hard candies, etc. (1 item per cadet),
  - A timing device such as a stopwatch, and
  - Masking tape.

The treasure hunt can be done either with or without an orienteering map. See an example orienteering map in the Treasure Hunt Set-Up Diagrams located at Appendix 1.

- Post the Canadian Symbols Treasure Hunt Instructions sheet and the Treasure Hunt Start Here sheet at the start point of the treasure hunt.
- If using an orienteering map:
  - Post the decoy clue sheet for each question within the same area as the Clue Sheet with the correct answer.
  - Mark the clue sheets on the map in the correct locations.
- If an orienteering map is not used:
  - Post the three sheets for the first clue (dog, horse and cow) within view of the starting point, but far enough away that the small type cannot be easily read. Place the three animal pictures a few metres apart.

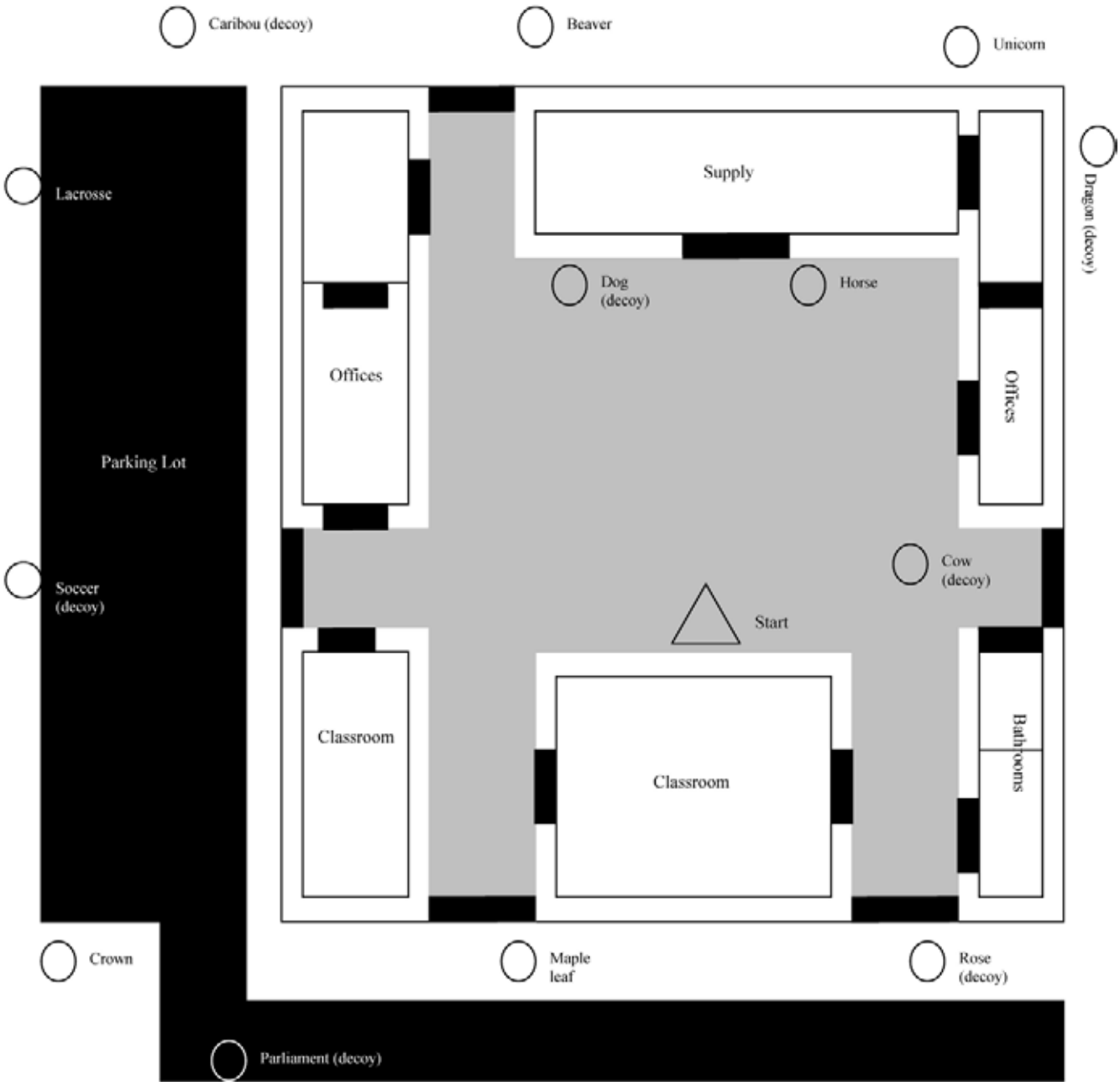
- Post the correct answer and the decoy clue for each question within view of the clue that leads to them, but again, far enough away that the picture is visible while the words are not. A chart showing the order of the clues is in the Treasure Hunt Set-Up Diagrams at Appendix 1).
- Provide the instructor at the finish point with a copy of the secret word (HEIRLOOM) and some treasure to distribute to teams as they finish.

ACTIVITY INSTRUCTIONS:

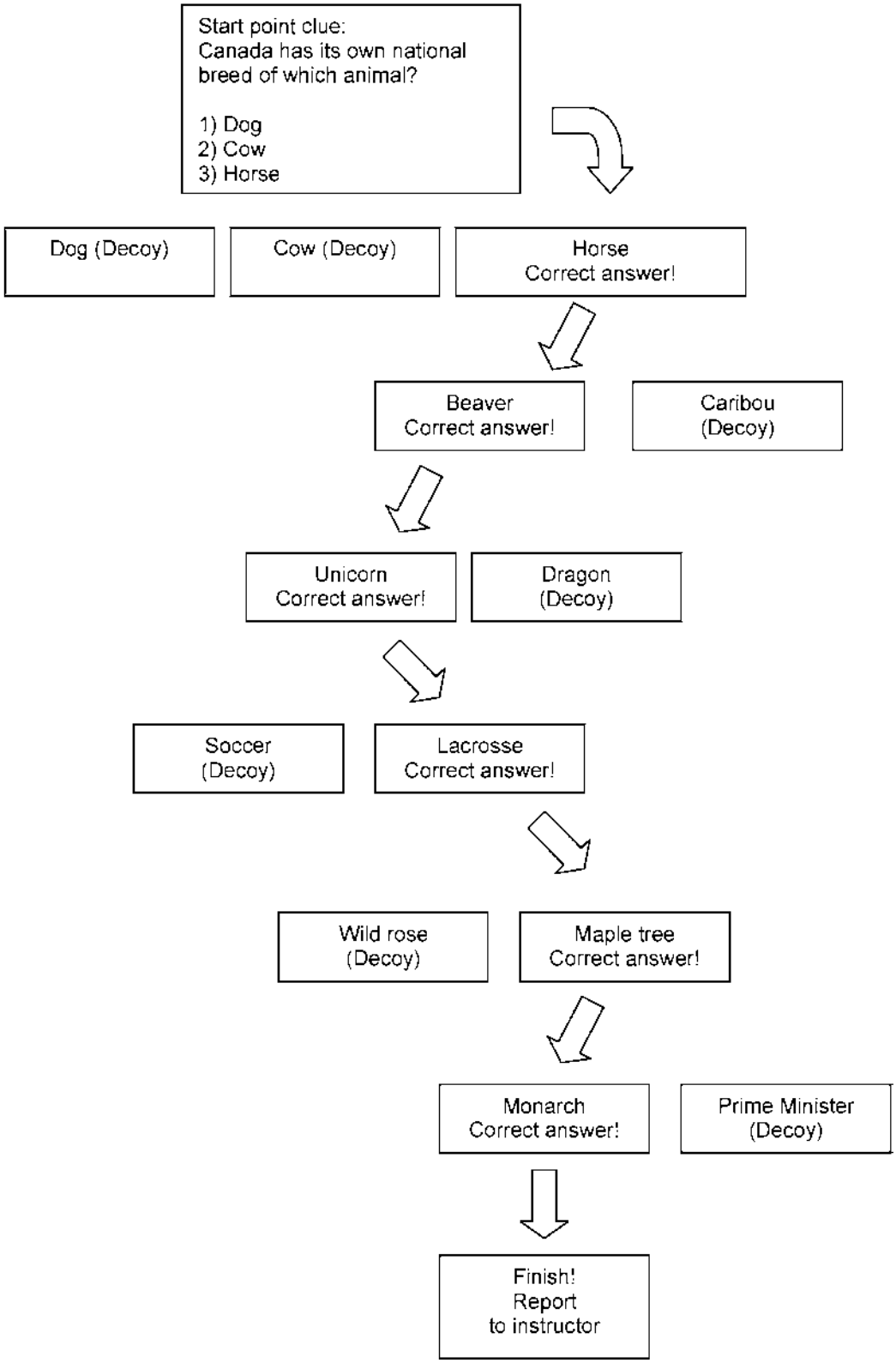
1. Brief the cadets on the treasure hunt and your expectations for their conduct while playing.
2. Distribute Treasure Hunt Secret Word handouts and orienteering maps (if applicable) to each cadet.
3. If multiple teams are playing at the same time, use the stopwatch to start teams on the treasure hunt at 30-second intervals.
4. Provide guidance and supervision as required during the game.
5. As cadets return, check that they have the correct secret word (HEIRLOOM) and, if so, distribute prizes. Each cadet who has completed the sheet gets a prize.
6. If time remains, discuss Canadian symbols with the cadets by asking the following questions:
   (a) What other national symbols can you think of?
   (b) Are there other things you think should represent Canada?

TREASURE HUNT SET-UP DIAGRAMS

Sample orienteering map of a cadet local headquarters training facility:



Canadian Symbols Treasure Hunt order of clues:



CANADIAN SYMBOLS

Treasure hunt!

Instructions

How well do you know your Canadian symbols? Put your knowledge to the test with this treasure hunt!

1. With your team, find each clue, read it, and guess the correct answer to the question.
2. Every correct answer gives you the next clue in the treasure hunt! But be careful—for every correct answer, there's also one that will lead you astray!
3. Record your answers on the Treasure Hunt handout—the letters in the bubbles spell the secret word when you write them in the spaces at the bottom.
4. When you have all the answers in the right order, take your sheets to the instructor to receive your treasure!

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CANADIAN SYMBOLS

Treasure hunt!

Start Here!

Here's your first clue:

Canada has its own unique national breed of this animal. Is it a:

1. Dog
2. Cow
3. Horse

Find the picture of the correct animal to receive your next clue!

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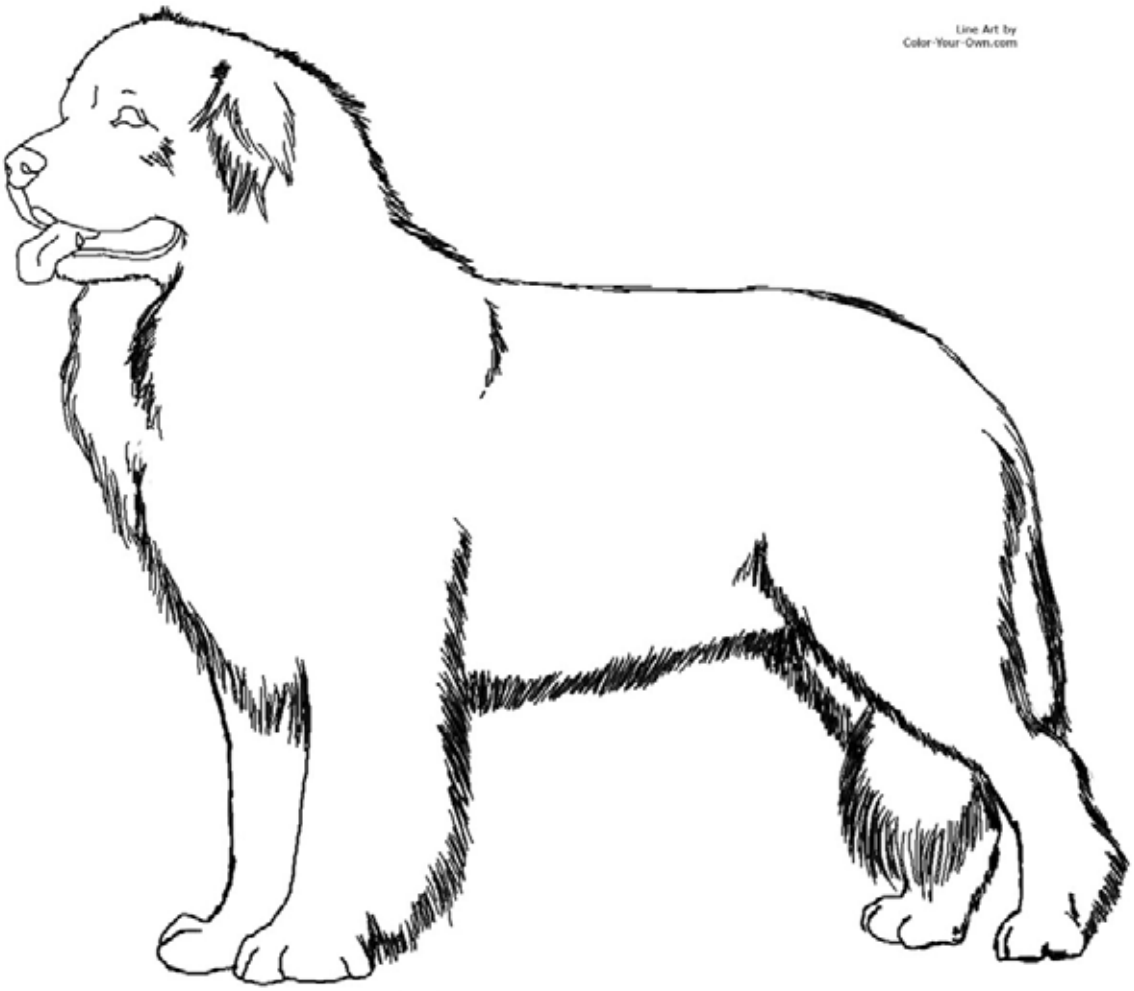


Dog

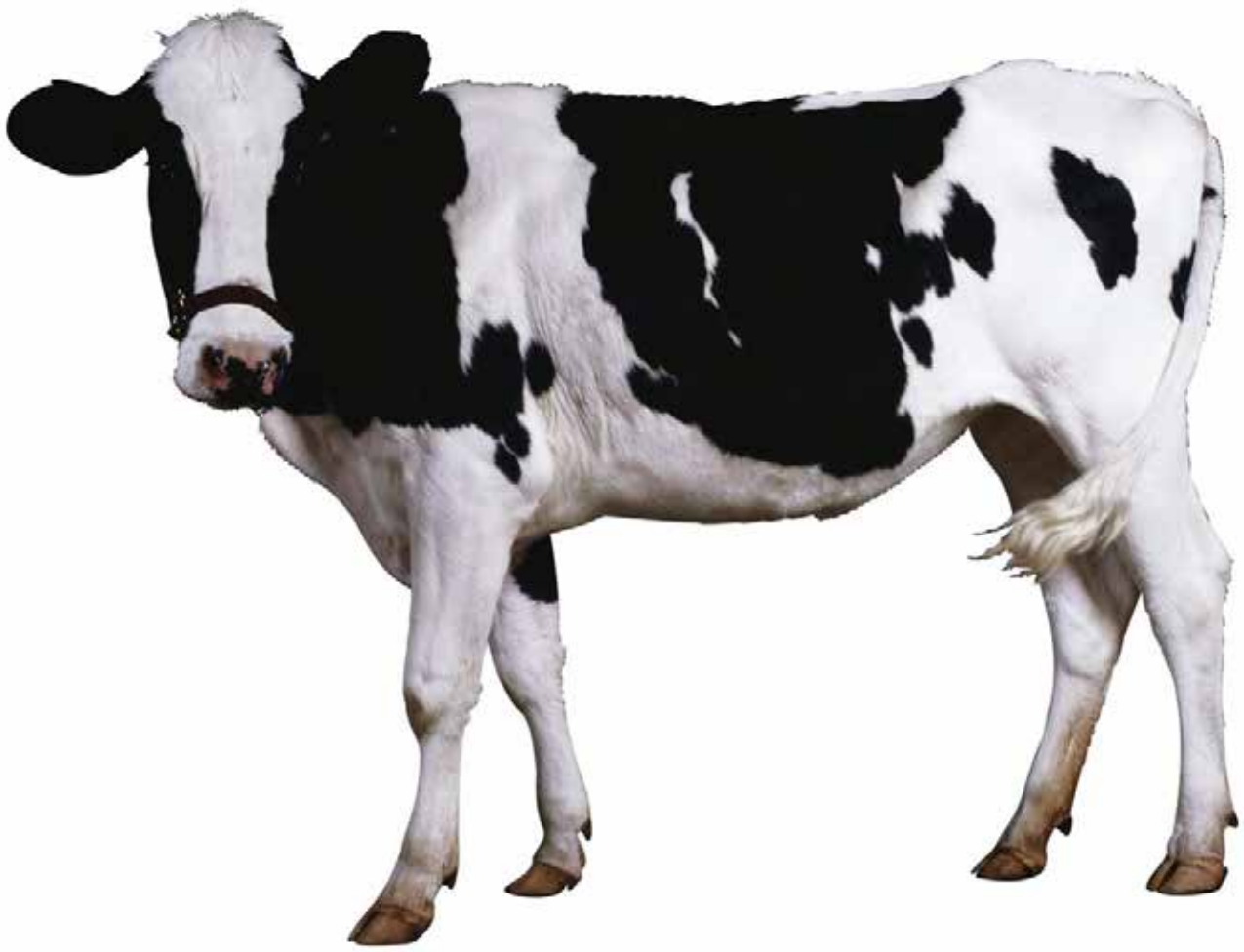
Sorry! There are several uniquely Canadian breeds of dogs, but we don't have a national breed. Keep trying!

Doggy dog:

Dog dog dog dog dog doggy dog dog dog dog dog doggy!
Dog, dog. Puppy. Doggy – dog dog. Dog, dog. Puppy. Doggy – dog dog. Dog doggy dog dog dog:

1. Dog
2. Doggy

Puppy dog dog doggy!



Cow

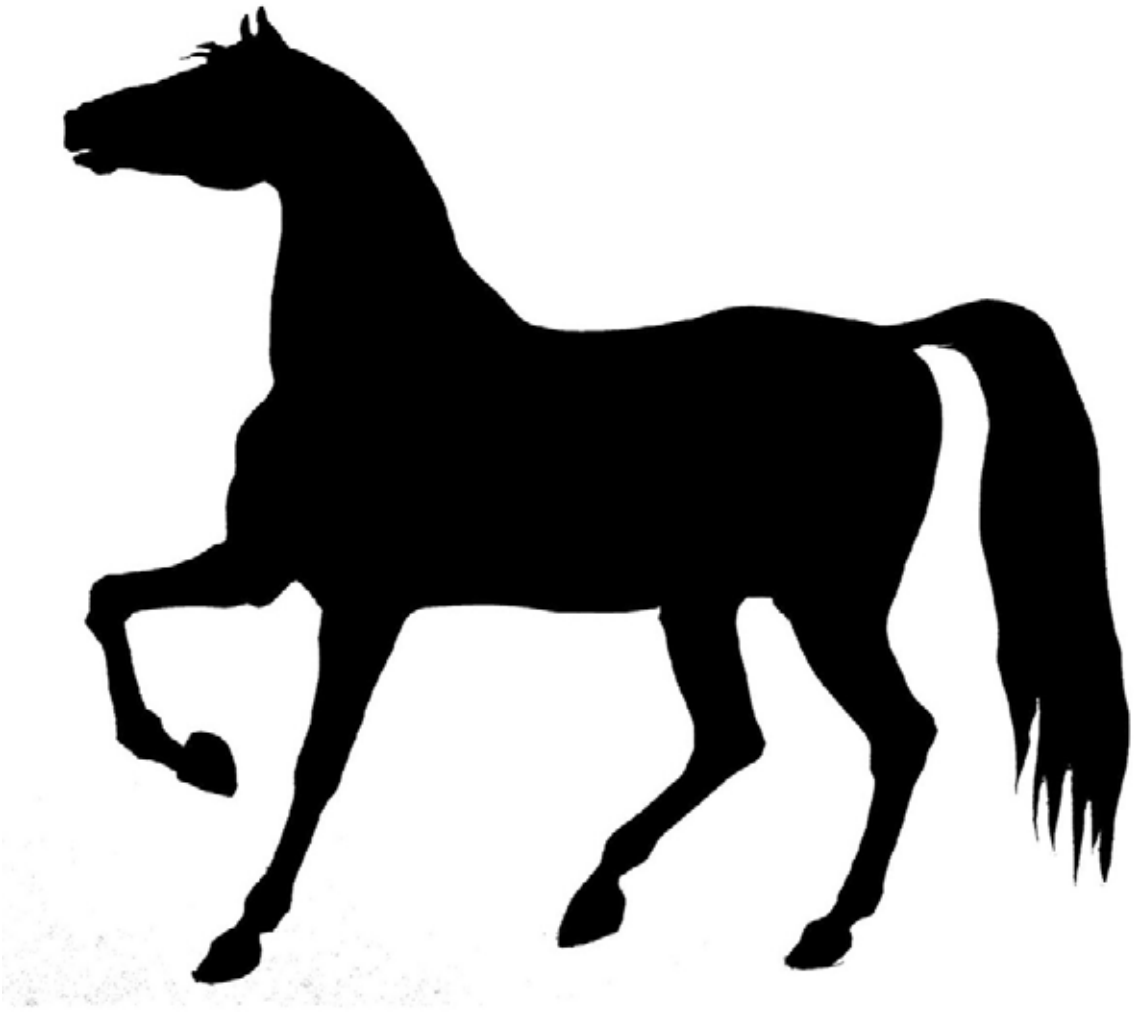
Sorry! Cows Ice Cream, based in Prince Edward Island, is a Canadian company, but there is no national breed of cow. Keep trying!

Moo cow bull:

Cow cow cow cow cowie. Cows cows cows bull cows!
Cow, cow. Moo. Cowie – cow bull:

1. cow
2. bull

Cowie cow bull cow moo!



Horse

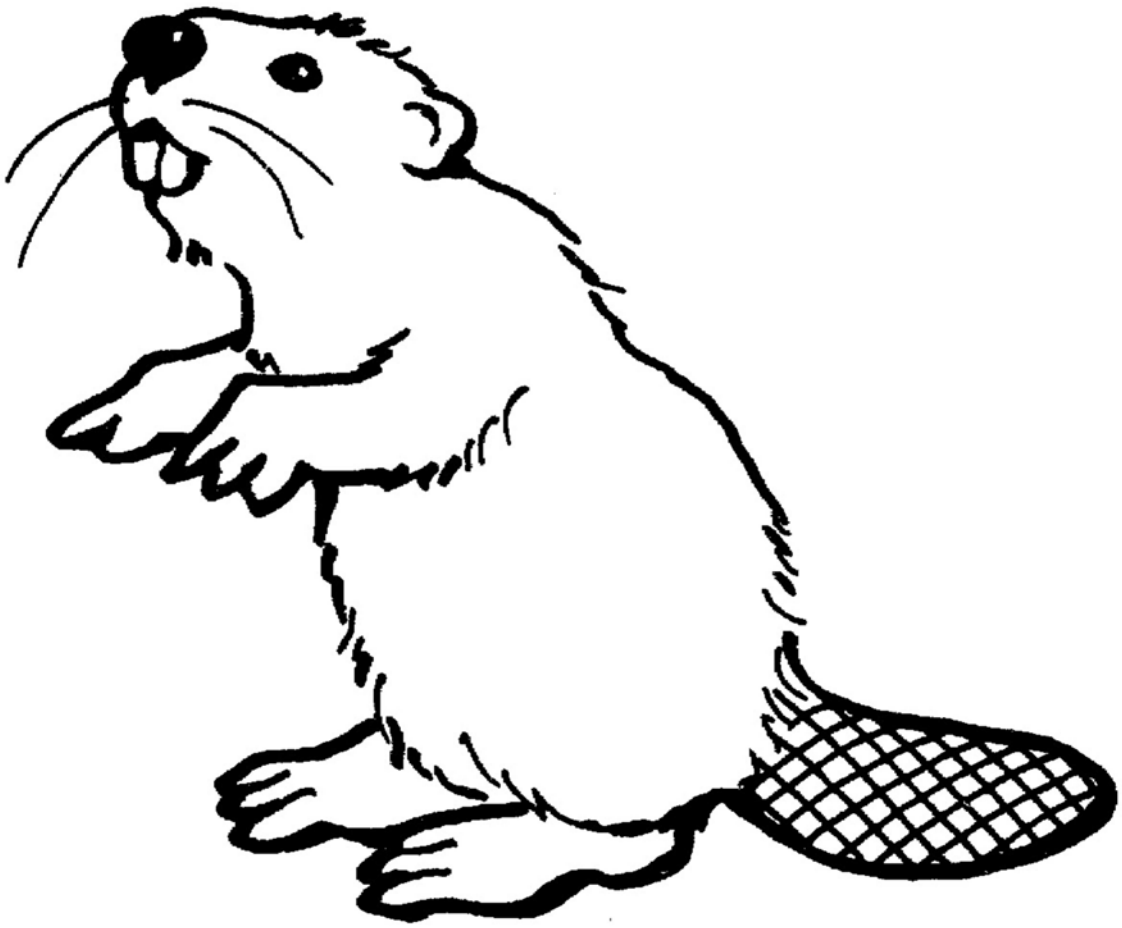
You got it! Our unique Canadian horses are known for their strength, resilience, intelligence and good temper. They can trace their lineage back to the Royal Stables of the King of France!

Next Clue:

The tradition of using the word “buck” to mean a dollar came from this symbolic Canadian animal, used in making hats, because the Hudson’s Bay Company would pay one “buck” (a special coin) for its hide. Is it a:

1. Caribou
2. Beaver

Find its picture to get another clue!



Beaver

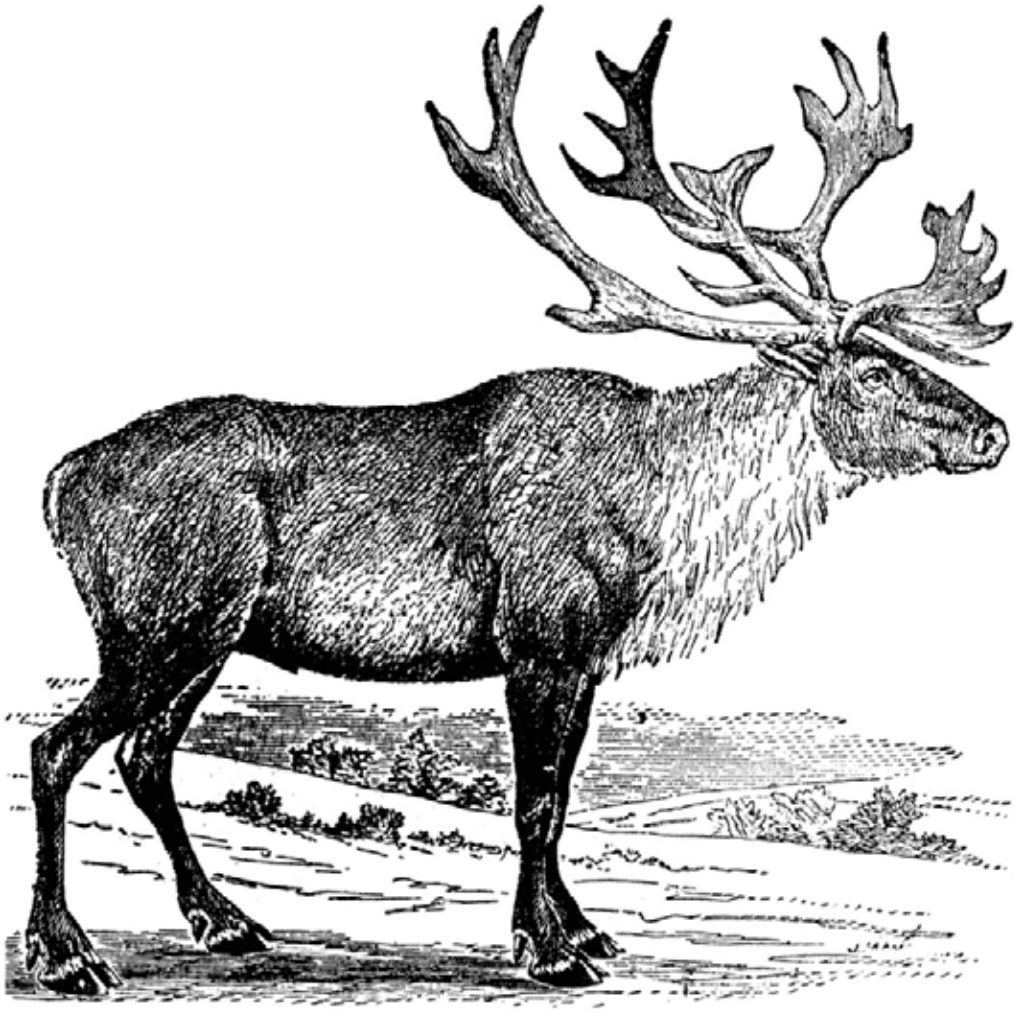
Way to go! Fur hats were all the rage in 18th-century Europe. Beavers also represent the hard-working, industrious and community-oriented spirit of Canadians.

Next Clue:

The Canadian coat of arms is supported by two animals, a golden lion which represents England, and this mythical creature that represents Scotland. Is it the:

1. Unicorn
2. Dragon

Find its picture to get another clue!



Caribou

Sorry! The caribou is considered a Canadian symbol, but it's not the one you're looking for. Keep trying!

Caribou caribou:

Caribou caribou caribou caribou caribou caribou caribou caribou caribou!
Caribou, caribou. Caribou. Caribou – caribou caribou :

1. Caribou
2. Caribou too

Caribou caribou caribou bou!

Great job! The unicorn on the coat of arms has a coronet around its neck with a broken chain. The broken chain symbolizes Canadians' resistance to oppression.

Next Clue:

Canada's national winter sport is hockey, but what is our national summer sport?

1. Soccer
2. Lacrosse

Find its picture to get another clue!

Dragon

Sorry, brave knights. There are no dragons in Canada—
if there were, they would melt all the snow. Keep trying!

Dragon dragon:

Dragon dragon dragon, dragon fire dragon – sparks. Dragon dragon.
Dragon-fire. Dragon, dragon dragon:

1. Fire
2. Scales

Dragon dragon scales!

Lacrosse

Correct! Lacrosse is a traditional Canadian Aboriginal sport that has been around for hundreds of years. Now it's played competitively all over the world.

Next Clue:

Which is Canada's national floral or arboreal emblem?

1. Maple tree
2. Wild rose

Find its picture to get another clue!

Soccer

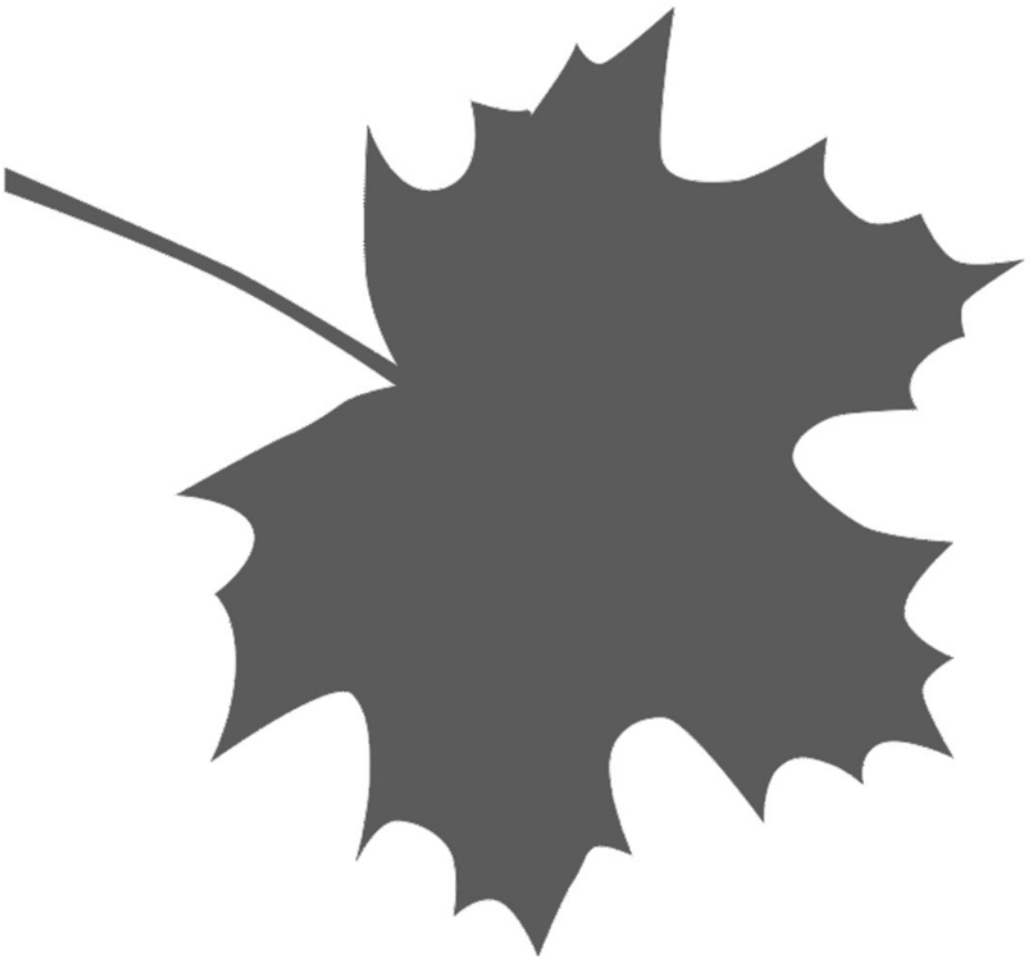
Sorry! Canada has some great soccer players, but it's not our national sport. Keep trying!

Soccer ball:

Soccer soccer soccer ball. Net ball. Soccer footie soccer soccer. Net, soccer ball net. Net ball soccer net:

1. soccer
2. footie

Soccer net soccer ball!



Maple Tree

Correct answer! People in Canada have been enjoying maple syrup for centuries, and the maple leaf has long been used as a symbol for our country. It officially became our arboreal emblem in 1996.

Next Clue:

Whenever you salute an officer, you are actually saluting the authority of this person.
Who is it?

1. Prime Minister of Canada
2. King or Queen of Canada

Find this person's symbol to finish the treasure hunt!

Prime Minister

Sorry! The Prime Minister is our national leader and representative in Ottawa, but officially the commission held by a Canadian Armed Forces officer comes from someone else. Saluting is a really old tradition!

Parliament parliament:

O Canada our home and native land, true patriot love, in all our son's command…
Parliament parliament house of commons:

1. Ottawa
2. Canada

O Canada Canada!

Monarch

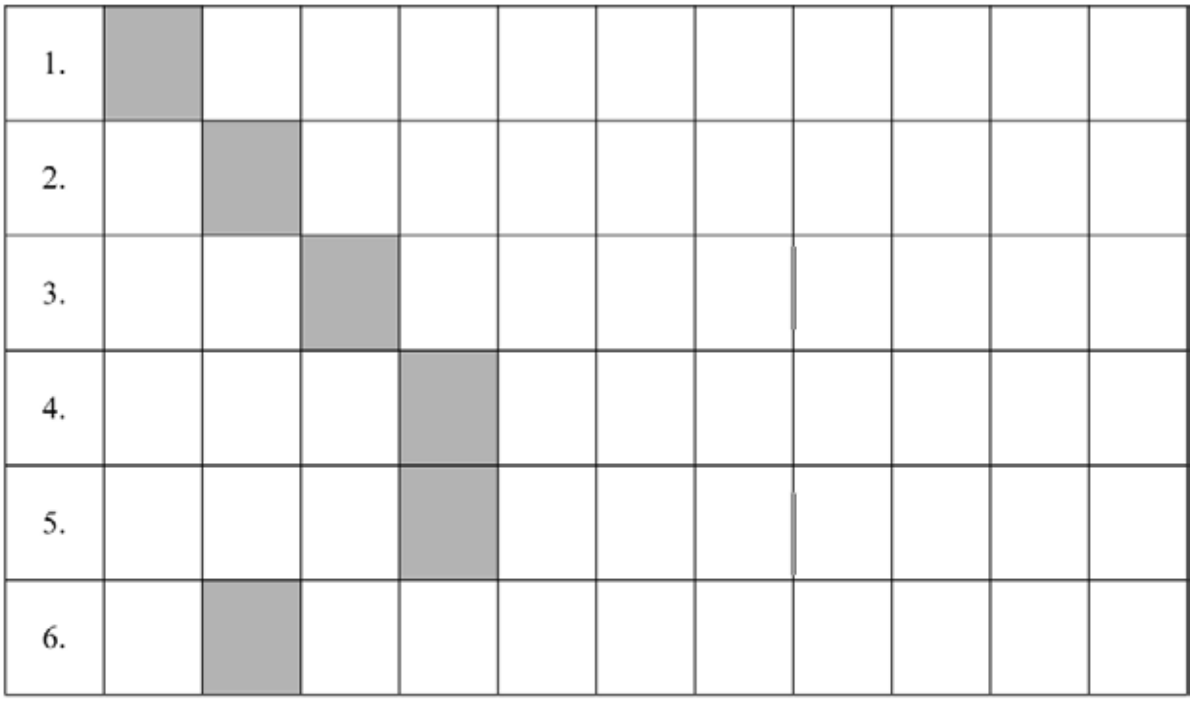
Great work! Each officer in the Canadian Armed Forces receives a commissioning scroll signed by the Monarch's representative in Canada, the Governor General. The symbol of the Monarch is the crown, which is incorporated into many of our national, provincial and military symbols.

Congratulations!

You have finished the treasure hunt!
Report back to your instructor to show off what you've learned!

TREASURE HUNT
SECRET WORD SHEET

As you find the answer to each clue, write it in the spaces here. The gray boxes are letters that spell the secret word! Take this sheet back to your instructor when you finish the treasure hunt to receive your prize!



_ _ _ _ _ _ _ _ _ O M

Secret word

Place the letters from the shaded squares here to find the secret word!

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TREASURE HUNT SECRET WORD ANSWER KEY

1.	H	O	R	S	E					
2.	B	E	A	V	E	R				
3.	U	N	I	C	O	R	N			
4.	L	A	C	R	O	S	S	E		
5.	M	A	P	L	E		T	R	E	E
6.	M	O	N	A	R	C	H			

Secret word: HEIRLOOM

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CANADIAN SYMBOLS: COAT OF ARMS CHALLENGE

OBJECTIVE: The aim of this learning station is to familiarize cadets with the components of Canada's coat of arms and appreciate its role as a national symbol.

TIME: 30 min

TRAINING LEVEL: 3–4

PRE-ACTIVITY INSTRUCTIONS:

- This activity may be assigned an instructor or be self-directed by the cadets.
- Gather the required resources:
  - Coat of Arms Challenge sheet located at Appendix 1 (1 copy),
  - About Our Coat of Arms handout located at Appendix 2 (1 per cadet),
  - Coat of Arms Challenge worksheet located at Appendix 3 (1 per cadet),
  - Coat of Arms Template located at Appendix 4 (1 per cadet),
  - Masking tape,
  - Pencils and erasers,
  - Pencil crayons or markers and other art supplies (stickers, rubber stamps, etc.), and
  - Pencil sharpener.

ACTIVITY INSTRUCTIONS:

Have the cadets read and follow the instruction sheet.

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Coat of Arms Challenge

A coat of arms was originally a symbol that warriors painted on their shields to identify themselves and bring them protection in battle.

Today, a country's coat of arms symbolizes the values and history of that country and identifies them to the world.

Imagine that you have just founded a new country. Your mission is to design a coat of arms to represent your country to the world. Each member of the team should make their own, but you can discuss your decisions with teammates.

1. Read the About Our Coat of Arms handout to familiarize yourself with the parts of the coat of arms and what they mean.
2. Choose appropriate symbols for your own coat of arms and write them in the correct spaces on the Coat of Arms worksheet. Be sure to explain what each symbol represents in the space provided.
3. Draw your new coat of arms and post it on the wall for the rest of the cadets to see!

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ABOUT OUR COAT OF ARMS

Check out this information from the Canadian heritage page (www.pch.gc.ca) to find out about our Canadian coat of arms.

The shield

The design of the arms of Canada reflects the royal symbols of Great Britain and France (the three royal lions of England, the royal lion of Scotland, the royal *fleurs-de-lis* of France and the royal Irish harp of Tara. On the bottom portion of the shield is a sprig of three Canadian maple leaves representative of Canadians of all origins.

The three royal lions of England

The first quarter consists of the three gold lions of England walking and shown full face, on a red background. The lion is the oldest device known in heraldry and, as "king of beasts", was adopted by kings of Leon, Norway and Denmark as their emblem. However, the origin of the three royal lions of England still remains a mystery.

In the 11th century, Henry I, known as "the lion of justice", may have been the first English king to use a lion. It is uncertain as to why a second lion suddenly appeared. When Henry II married Eleanor of Aquitaine, whose family emblem was also a lion, it is believed that he added the third lion. There is no question that, when he led his English troops in the Crusades, Richard I, "the Lion-Hearted" carried a shield emblazoned with three golden lions on a red background. To this day they have been the royal symbol of England.

The royal lion of Scotland

The second quarter consists of a red lion rearing on the left hind foot, within a red double border with *fleurs-de-lis*, on a gold background. The royal lion of Scotland was probably first used by King William, who was known as "the lion". However it was certainly used by his son, Alexander III, who made Scotland an independent nation.

The royal Irish harp of Tara

The third quarter is a gold harp with silver strings, on a blue background. North of the present city of Dublin, there is a hill called Tara which for centuries was the religious and cultural capital of ancient Ireland. If you visit the site, you will see a 750 foot earthen work that is said to have been the site of the banqueting hall of Irish kings. Thomas Moore recalls the history of this site in one of the most famous of all Irish lyrics that begins: "The harp that once through Tara's hall the soul of music shed..." There is a legend, recorded in C.W. Scott-Giles monumental work The Romance of Heraldry, that this harp was found and came into the possession of the pope. In the 16th century, Henry VIII suppressed the Irish people in his attempt to become the lawful successor to the kings of ancient Ireland. The pope sent the harp of Tara to England whereupon Henry added its likeness to his royal shield. From this time it has remained a symbol of Ireland.

The royal *fleurs-de-Lis* of France

The fourth quarter depicts three gold *fleurs-de-lis*, on a blue background. The *fleurs-de-lis* was the first heraldic emblem raised in Canada. On July 24, 1534, Jacques Cartier landed at *Gaspé* and erected a cross, affixed with the symbol of his sovereign and the royal house of France.

The three maple leaves

To complete the design of the shield, a Canadian symbol was required. Three red maple leaves conjoined on one stem, on a silver or white background, were then added. Throughout the 19th century, the maple leaf had gradually become closely identified with Canada. The maple leaf had been worn as a symbol of Canada during the visit of the Prince of Wales in 1860. The song "The Maple Leaf Forever", written by the Toronto school teacher Alexander Muir in 1868 had become Canada's national song. During World War I, the maple leaf was incorporated into the badge of many Canadian regiments. It was most appropriate that three maple leaves were given a commanding position within the shield, which made it unmistakably "Canadian".

The ribbon

On the advice of the Prime Minister of Canada, Her Majesty The Queen approved, on July 12, 1994 that the arms of Canada be augmented with a ribbon with the motto of the Order of Canada: "*Desiderantes Meliorem Patriam*". (They desire a better country).

The helm and the mantling

The helm (*heaume* or helmet), which in heraldry is usually placed above the shield of arms, not only serves as a means of displaying the crest, but also has a significance of its own, since its type denotes the rank of the person bearing the arms. On the helm lies a mantling or lambrequin. The mantle, originally, was to protect the head and shoulders of the wearer from the sun's heat. It has become a decorative accessory to the crest and shield.

The arms of Canada show a royal helmet, which is a barred helm of gold looking outward and draped in a mantle of white and red which are the official colours of Canada.

The crest

On the royal helmet is the crest. This symbol consists of a wreath or ring of twisted white and red silk on which stands a crowned gold lion holding in its right paw a red maple leaf. The lion is a symbol of valour and courage.

The crest is used to mark the sovereignty of Canada. It is now the symbol used on the Governor General's Standard.

The supporters

The figures that stand on either side of the shield are known in heraldry as "supporters" and are often depicted in a ferocious manner. The King of England chose two lions while Scotland chose two unicorns.

When James VI of Scotland became James I of England in 1603, he chose one lion and one unicorn as the supporters of his royal shield. Canada adopted the same pattern and used a lion on the shield's left holding a gold pointed silver lance from which flies the Royal Union flag, and a unicorn with gold horn, mane and hoofs, on the shield's right. Around its neck is a gold and chained coronet of crosses and *fleurs-de-lis*. The unicorn holds a lance flying a banner of royalist France, namely three gold *fleurs-de-lis*, on a blue background. The two banners represent the two principal founding nations that had established Canada's most enduring laws and customs.

The motto

Canada's motto "*A Mari usque ad Mare*" (From sea to sea) is based on biblical scripture: "He shall have dominion from sea to sea and from the river unto the ends of the earth (From Sea to sea) – Psalm 72:8". The first official use of this motto came in 1906 when it was engraved on the head of the mace of the Legislative Assembly of the new Province of Saskatchewan. The wording of the motto came to the attention of Sir Joseph Pope, then Under Secretary of State, who was impressed with its meaning. He later proposed it as motto for the new design of the coat of arms, which was approved by Order in Council on April 21, 1921 and by Royal Proclamation on November 21, 1921.

The four floral emblems

At the base of the arms are the floral emblems associated with the Canadian Monarchy: the English rose, the Scottish thistle, the French *fleur-de-lis* and the Irish shamrock.

- **English rose** - The rose first became the symbol of England when Henry III married Eleanor of Provence and the golden rose of Provence became England's new floral symbol. From this golden rose eventually came the red rose of the House of Lancaster and the white rose of the House of York.
- **Scottish thistle** - There is a legend that, in 1010 when they attempted to capture Scotland, the Danes landed secretly at night. As they approached Stains Castle they removed their shoes to avoid making any noise. When they reached the castle's moat, they jumped in not realizing that the moat was dry and overgrown with thistles. The screams of the bare-footed Danes roused the garrison. The castle and Scotland were both saved and, according to legend, it is in memory of that night that the thistle became the floral emblem of Scotland.
- **Irish shamrock** - In Irish legends, it is said that when he brought Christianity to Ireland, Saint Patrick used the three petals of the shamrock to illustrate the Holy Trinity. As a result, the shamrock became the floral emblem of Christian Ireland.
- **The French *fleurs-de-Lis***- Following its adoption as the symbol of France's king, the *fleurs-de-lis* also became the symbol of Christian France. By the 13th and 14th centuries, the three petals of the lily of France were being described by writers as symbols of faith, wisdom and chivalry. As in Ireland, they also came to be seen as symbols of the Holy Trinity.

The imperial crown

On top of the "achievement of the arms of Canada" is the imperial crown which is indicative of the presence of a monarch as Canada's Head of State.

The shapes of symbols in a coat of arms can be altered by an artist since heraldry is an art as well as a science. However the symbols themselves can never be changed without formal approval. In 1957, when Canada's arms were slightly modified to produce a cleaner more contemporary design, the Government replaced the original Tudor crown of the 1921 design by a crown that would represent not just one of the royal families of English monarchs, but centuries of kings and queens of England. In accordance with the expressed wishes of Her Majesty Queen Elizabeth II, the Saint Edward's crown is now used for the arms of Canada. It is this crown that has been used for the coronation of kings and queens in Westminster Abbey for centuries.

COAT OF ARMS CHALLENGE

WORKSHEET

Part of the coat of arms	What you chose	What it represents
Colours and patterns on the Shield		
Motto for your new country		
Items in the Helm		
Animal on the Crest (on top)		
Supporter 1		
Supporter 2		
Floral emblems		
Crown or other symbol of government or allegiance		
Other symbols you choose to incorporate into your country's coat of arms		

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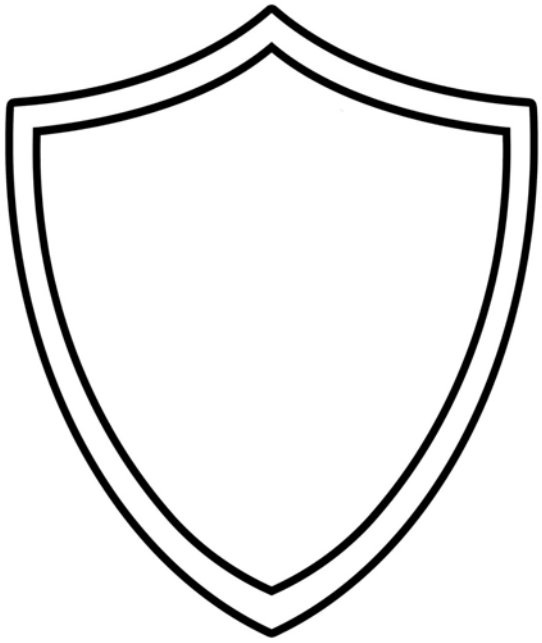
COAT OF ARMS OF THE NATION OF



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CANADA'S ECONOMY

OBJECTIVE: The aim of this learning station is to familiarize cadets with key aspects of Canada's economy and consider ongoing economic issues.

TIME: 30 min

TRAINING LEVEL: 1–4

PRE-ACTIVITY INSTRUCTIONS:

- This activity is self-directed by the cadets.
- Provide a quiet area large enough for all team members with a table and chairs.
- Gather the required resources:
  - Canada's Economy activity instruction sheet located at Appendix 1 (1 copy per team),
  - Canada's Economy overview located at Appendix 2, and
  - Canada's Economy worksheet located at Appendix 3 (1 per cadet).
- Post the Canada's Economy activity instruction sheet on the wall or tape it to the table.
- Place copies of Canada's Economy overview and worksheet on the table.

ACTIVITY INSTRUCTIONS:

Have the cadets read and follow the Canada's Economy activity instruction sheet.

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CANADA'S ECONOMY
INSTRUCTIONS:

1. List what you already know about Canada's Economy and "Pair-Share" your knowledge with another person on your team.
2. Read the brief overview on Canada's Economy.
3. Answer each of the questions on the worksheet. Your answers don't have to be written out in full; they can be in point form. There are no "right" answers but your answers should be well thought out and supported.
4. You have 30 minutes to complete this activity.

Things to consider:

- Which industry do you think is most prevalent in your region?
- What have you learned about Canada's Economy that you didn't know before?
- Which industry are you most likely to go into when you finish school?

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CANADA'S ECONOMY

OVERVIEW

A Trading Nation

Canada has always been a trading nation and commerce remains the engine of economic growth. As Canadians, we could not maintain our standard of living without engaging in trade with other nations.

In 1988, Canada enacted free trade with the United States. Mexico became a partner in 1994 in the broader North American Free Trade Agreement (NAFTA), which created the world's largest free trade area, which now links over 450 million people producing $17 trillion worth of goods and services as of 2012.

Today, Canada has one of the ten largest economies in the world and is part of the G8 group of leading industrialized countries with the United States, Germany, the United Kingdom, Italy, France, Japan and Russia.

Canada's Economy Includes Three Main Types of Industries:

Service industries provide thousands of different jobs in areas like transportation, education, health care, construction, banking, communications, retail services, tourism and government. More than 75% of working Canadians now have jobs in service industries.

Manufacturing industries make products to sell in Canada and around the world. Manufactured products include paper, high technology equipment, aerospace technology, automobiles, machinery, food, clothing and many other goods. Our largest international trading partner is the United States.

Natural resources industries include forestry, fishing, agriculture, mining and energy. These industries have played an important part in the country's history and development. Today, the economy of many areas of the country still depends on developing natural resources, and a large percentage of Canada's exports are natural resources commodities.

Canada – US Relations

Canada enjoys close relations with the United States and each is the other's largest trading partner. Over three-quarters of Canadian exports are destined for the U.S.A. In fact we have the biggest bilateral trading relationship in the world. Integrated Canada-U.S.A. supply chains compete with the rest of the world. Canada exports billions of dollars worth of energy products, industrial goods, machinery, equipment, automotive, agricultural, fishing and forestry products, and consumer

goods every year. Millions of Canadians and Americans cross every year freely in what is traditionally known as “the world’s longest undefended border.”

At Blaine in the State of Washington, the Peace Arch, inscribed with the words “children of a common mother” and “brethren dwelling together in unity,” symbolizes our close ties and common interests.

CANADA'S ECONOMY

WORKSHEET

1. How do you think the diverse geography and natural resources of Canada have influenced / contributed to our economy? Provide 5 points.

2. The United States is our largest international trading partner. Is this beneficial or detrimental to our economy and why?

3. Canada is rich in natural resources such as oil, gas, energy, fresh water, lumber, fishing, agricultural products etc. The potential exists that in the future these resources could become scarce or even run out. At what point, if any, should Canada limit the amount of natural resources that are sold to other countries and why?

4. Should Canada rely more on natural resources as a source of income or focus on developing other manufacturing industries to boost / sustain our economy? What industries should Canada focus on developing in future?

5. What Canadian brands can you think of? What products do you own that are made in Canada?

CANADA'S REGIONS: SYMBOLS MAP

OBJECTIVE: The aim of this learning station is to familiarize cadets with the regions of Canada and their characteristics.

TIME: 30 min

TRAINING LEVEL: 1–2

PRE-ACTIVITY INSTRUCTIONS:

- This activity may be assigned an instructor or be self-directed by the cadets.
- Provide an area large enough for all team members with a table and ample wall space to display the map of Canada.
- Gather the required resources:
  - Regional Symbols activity instruction sheet located at Appendix 1 (1 copy),
  - Map of Canada's Regions located at Appendix 2,
  - Canada's Regions Sheets located at Appendix 3 (1 set),
  - Canada's Regions - Symbols and Place Names located at Appendix 4 (2 sets),
  - Canada's Regions - Symbols answer key located at Appendix 5 (1 copy), and
  - Masking tape.
- Cut two sets of the Canada's Regions Symbols and one set of place names into individual cards, and place them on the table.
- Post the Canada's Regions activity instruction sheet on the wall or tape it to the table.
- Post the Map of Canada's Regions on the wall or place it on the table.
- Either post the Canada's Regions Sheets on the wall or place them on a table. Alternatively, a large map may be used.

ACTIVITY INSTRUCTIONS:

Have the cadets read and follow the Canada's Regions activity instruction sheet.

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REGIONAL SYMBOLS

Instructions:

Canada has **five** distinct regions that include many different geographical areas. Even with the diversity of region, many things are similar across the country.

1. Place the province and capital city names on the map.
2. As a team, discuss and determine which symbols belong to each region.
3. Place each of the cut-outs on either the appropriate regional sheet or a large map of Canada (if available). Keep in mind that some of the symbols may belong to more than one region.
4. If your team is uncertain about where to place a symbol, try to figure it out using what you already know about Canada and what makes the most sense (eg, polar bears live in the north).
5. You have 30 minutes to complete this activity.
6. Check the answer key to see how many you got correct.

Things to consider:

- Which regions have you visited? How are they different from your own?
- What have you learned about your own region that you didn't know before?
- What have you learned about the other regions that you didn't know before?

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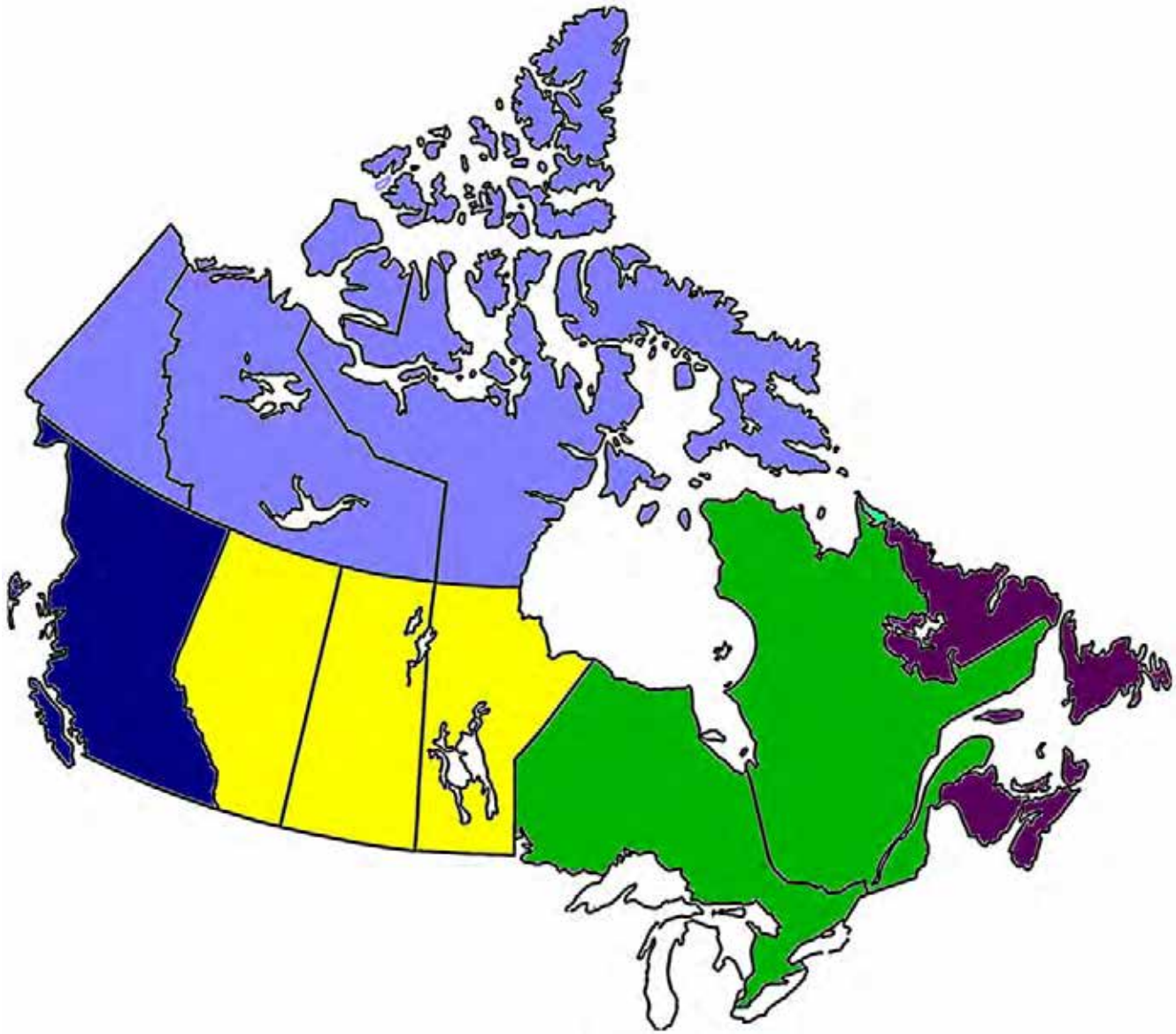
CANADA'S REGIONS



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CANADA'S REGIONS

ATLANTIC

CANADA'S REGIONS

CENTRAL

CANADA'S REGIONS

PRAIRIE

CANADA'S REGIONS

WEST COAST

CANADA'S REGIONS

NORTHERN

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CANADA'S REGIONS

SYMBOLS

 Igloo	 Film Industry	 Polar Bear
 Salmon	 Oil Drill	 Off-Shore Oil Rig
 Inuksuk	 Potatoes	 Mountain
 Wheat	 Gold Miner	 Moose

 Forestry	 CN Tower	 Cowboy
 Lumberjack	 Orca	 Fishing Boat
 Viking Hat	 Hydro Dam	 Anne of Green Gables
 Farm	 Freighter	 Celtic cross

 Fleur de lis	 Gold	 Mining
 Wine Industry	 Fruit	 Dairy
 Caribou	 Freshwater fishing	 Dogsled
 RCMP	 Ukrainian Egg	 Natural Gas
 Totem Pole	 Fireweed	 Dinosaur

 Cattle Drive	 Tepee	 Seal
 Diamond	 Apple	 Submarine
 Parliament	 Chinatown	 Confederation Bridge
 Iceberg	 Lighthouse	 Lobster
 Maple Syrup	 Niagara Falls	 Buffalo

Canada's regions

Capital Cities & Provinces / Territories

Ontario	*Quebec*
Prince Edward Island	*Alberta*
Yukon	*Northwest Territories*
Nova Scotia	*New Brunswick*
Nunavut	*St. John's*
Halifax	*Fredericton*
Toronto	*Winnipeg*
Edmonton	*Victoria*
Yellowknife	*Whitehorse*
Manitoba	*Saskatchewan*
British Columbia	*Charlottetown*
Newfoundland and Labrador	*Quebec City*
Regina	*Iqaluit*
Ottawa	*Prairie*
Atlantic	*Central*
West Coast	*Northern*

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CANADA'S REGIONS

ANSWER KEY

From the information below, determine if your team has placed the symbols in the correct regions.

Canada has five distinct regions:

The Atlantic Provinces	• Newfoundland and Labrador • Prince Edward Island • Nova Scotia • New Brunswick
Central Canada	• Quebec • Ontario
The Prairie Provinces	• Manitoba • Saskatchewan • Alberta
The West Coast	• British Columbia
The Northern Territories	• Nunavut • Northwest Territories • Yukon Territory

Each region enjoys its own distinct heritage, culture and resources:

Region	Resources	Heritage
Atlantic	Fishing, farming, forestry, mining, off-shore oil and gas extraction, hydro-electric, tourism, shipbuilding, shipping.	Celtic, Viking, Aboriginal, English and French
Central	Industry, manufacturing, farming, hydro-electric, forestry, mining, pulp and paper, film, finance, fruit and wine, dairy, beef.	Aboriginal, English and French
Prairie	Farming, mining, hydro-electric, grain, oilseed, oil and natural gas, beef.	English, French, Ukrainian, Aboriginal
West Coast	Forestry, mining, fishing, fruit and wine, tourism, shipping.	English, Asian, Aboriginal
Northern	Mining, oil and gas, hunting, fishing, trapping.	Aboriginal, English

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CANADA'S REGIONS: WORKSHEET

OBJECTIVE: The aim of this learning station is to familiarize cadets with the regions of Canada and symbols associated with each.

TIME: 30 min

TRAINING LEVEL: 3–4

PRE-ACTIVITY INSTRUCTIONS:

- This activity is self-directed by the cadets.
- Provide a quiet area large enough for all team members with a table and chairs.
- Gather the required resources:
  - Canada's Regions activity instruction sheet located at Appendix 1 (1 copy per team),
  - KWL Chart located at Appendix 2 (1 per cadet),
  - Canada's Regions overview located at Appendix 3 (1 per cadet), and
  - Canada's Regions worksheet located at Appendix 4 (1 per cadet).
- Post the Canada's Regions activity instruction sheet on the wall or tape it to the table.
- Place copies of Canada's Regions overview, worksheet and KWL chart on the table.

ACTIVITY INSTRUCTIONS:

Have the cadets read and follow the Canada's Regions activity instruction sheet.

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CANADA'S REGIONS

Instructions:

1. Consider what you already know about each of Canada's Regions. Complete the "K" and "W" columns of the KWL (Know, Want, Learned) chart.
2. Read the brief overview on Canada's Regions.
3. Answer each of the questions on the worksheet. Your answers don't have to be written out in full; they can be in point form. There are no "right" answers but your answers should be well thought out and supported.
4. Complete the "L" column of the KWL chart.
5. You have 30 minutes to complete this activity.

Things to consider:

- Which regions have you visited? How are they different from your own?
- What have you learned about your own region that you didn't know before?
- What have you learned about the other regions that you didn't know before?

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CANADA'S REGIONS
KWL CHART

Complete the chart below based on:

1. What you **K**now about each of Canada's Regions,
2. What you **W**ant to know about each of Canada's Regions, and
3. What you have **L**earned about the topic (to be completed after reading the overview as part of the follow-up activity).

REGION	KNOW	WANT TO KNOW	LEARNED
Atlantic			
Central			

REGION	KNOW	WANT TO KNOW	LEARNED
Prairie			
West Coast			
Northern			

CANADA'S REGIONS

OVERVIEW

- Canada is the second largest country in the world.
- Three oceans line our coasts; the Pacific Ocean to the west, the Atlantic Ocean to the east and the Arctic Ocean to the north.
- The United States lies at the southern edge of Canada. The US – Canada boarder is the longest undefended boarder in the world.
- The National Capital is located in Ottawa and is the country's fourth largest metropolitan area.
- The population of Canada is approx 34 million people most of whom live in cities, but Canadians also live in small towns, villages and rural areas.
- Canada is divided into five distinct regions:

The Atlantic Provinces	• Newfoundland and Labrador • Prince Edward Island • Nova Scotia • New Brunswick
Central Canada	• Quebec • Ontario
The Prairie Provinces	• Manitoba • Saskatchewan • Alberta
The West Coast	• British Columbia
The Northern Territories	• Nunavut • Northwest Territories • Yukon Territory

The Atlantic Provinces

Atlantic Canada's coasts and natural resources, including fishing, farming, forestry and mining, have made these provinces an important part of Canada's history and development. The Atlantic Ocean brings cool winters and cool humid summers.

- **Newfoundland and Labrador** is the most easterly point in North America and has its own time zone. In addition to its natural beauty, the province has a unique heritage linked to the sea. The oldest colony of the British Empire and a strategic prize in Canada's early history, the province has long been known for its fisheries, coastal fishing villages and distinct culture. Today off-shore oil and gas extraction contributes a substantial part of the economy. Labrador also has immense hydro-electric resources.
- **Prince Edward Island (P.E.I.)** is the smallest province, known for its beaches, red soil and agriculture, especially potatoes. P.E.I. is the birthplace of Confederation, connected to mainland Canada by one of the longest continuous multispan bridges in the world, the Confederation Bridge. Anne of Green Gables, set in P.E.I. by Lucy Maud Montgomery, is a much-loved story about the adventures of a little red-headed orphan girl.
- **Nova Scotia** is the most populous Atlantic Province, with a rich history as the gateway to Canada. Known for the world's highest tides in the Bay of Fundy, the province's identity is linked to shipbuilding, fisheries and shipping. As Canada's largest east coast port, deep-water and ice-free, the capital, Halifax, has played an important role in Atlantic trade and defence and is home to Canada's largest naval base. Nova Scotia has a long history of coal mining, forestry and agriculture. Today there is also off-shore oil and gas exploration. The province's Celtic and Gaelic traditions sustain a vibrant culture. Nova Scotia is home to over 700 annual festivals, including the spectacular military tattoo in Halifax.
- **New Brunswick** is situated in the Appalachian Range, the province was founded by the United Empire Loyalists and has the second largest river system on North America's Atlantic coastline, the St. John River system. Forestry, agriculture, fisheries, mining, food processing and tourism are the principal industries. Saint John is the largest city, port and manufacturing centre; Moncton is the principal Francophone

Acadian centre; and Fredericton, the historic capital. New Brunswick is the only officially bilingual province, and about one-third of the population lives and works in French. The province's pioneer Loyalist and French cultural heritage and history come alive in street festivals and traditional music.

Central Canada

More than half the people in Canada live in cities and towns near the Great Lakes and the St. Lawrence River in southern Quebec and Ontario, known as Central Canada and the industrial and manufacturing heartland. Southern Ontario and Quebec have cold winters and warm humid summers. Together, Ontario and Quebec produce more than three-quarters of all Canadian manufactured goods.

- **Quebec** has nearly eight million people, the vast majority along or near the St. Lawrence River. More than three-quarters speak French as their first language. The resources of the Canadian Shield have helped Quebec to develop important industries, including forestry, energy and mining. Quebec is Canada's main producer of pulp and paper. The province's huge supply of fresh water has made it Canada's largest producer of hydro-electricity. Quebecers are leaders in cutting-edge industries such as pharmaceuticals and aeronautics. Quebec films, music, literary works and food have international stature, especially in *La Francophonie*, an association of French-speaking nations. Montreal, Canada's second largest city and the second largest mainly French-speaking city in the world after Paris, is famous for its cultural diversity.
- **Ontario,** at more than 12 million, makes up more than one-third of Canadians. The large and culturally diverse population, natural resources and strategic location contribute to a vital economy. Toronto is the largest city in Canada and the country's main financial centre. Many people work in the service or manufacturing industries, which produce a large percentage of Canada's exports. The Niagara region is known for its vineyards, wines and fruit crops. Ontario farmers raise dairy and beef cattle, poultry, and vegetable and grain crops. Founded by United Empire Loyalists, Ontario also has the largest French-speaking population outside of Quebec, with a proud history of preserving their language and culture. There are five Great Lakes located between Ontario and the United States: Lake Ontario, Lake Erie, Lake Huron, Lake Michigan (in the U.S.A.) and Lake Superior, the largest freshwater lake in the world.

The Prairie Provinces

Manitoba, Saskatchewan and Alberta are the Prairie Provinces, rich in energy resources and some of the most fertile farmland in the world. The region is mostly dry, with cold winters and hot summers.

- **Manitoba's** economy is based on agriculture, mining and hydro-electric power generation. The province's most populous city is Winnipeg, whose Exchange District includes the most famous street intersection in Canada, Portage and Main. Winnipeg's French Quarter, St. Boniface, has Western Canada's largest Francophone community at 45,000. Manitoba is also an important centre of Ukrainian culture, with 14% reporting Ukrainian origins, and the largest Aboriginal population of any province, at over 15%.
- **Saskatchewan**, once known as the "breadbasket of the world" and the "wheat province," has 40% of the arable land in Canada and is the country's largest producer of grains and oilseeds. It also boasts the world's richest deposits of uranium and potash, used in fertilizer, and produces oil and natural gas. Regina, the capital, is home to the training academy of the Royal Canadian Mounted Police. Saskatoon, the largest city, is the headquarters of the mining industry and an important educational, research and technology centre.
- **Alberta** is the most populous Prairie province. The province, and the world-famous Lake Louise in the Rocky Mountains, were both named after Princess Louise Caroline Alberta, fourth daughter of Queen Victoria. Alberta has five national parks, including Banff National Park, established in 1885. The rugged Badlands house some of the world's richest deposits of prehistoric fossils and dinosaur finds. Alberta is the largest producer of oil and gas, and the oil sands in the north are being developed as a major energy

source. Alberta is also renowned for agriculture, especially for the vast cattle ranches that make Canada one of the world's major beef producers.

- **The West Coast:** British Columbia is known for its majestic mountains and as Canada's Pacific gateway. The Port of Vancouver, Canada's largest and busiest, handles billions of dollars in goods traded around the world. Warm airstreams from the Pacific Ocean give the B.C. coast a temperate climate.
- British Columbia (B.C.), on the Pacific coast, is Canada's western most province, with a population of four million. The Port of Vancouver is our gateway to the Asia-Pacific. About one-half of all the goods produced in B.C. are forestry products, including lumber, newsprint, and pulp and paper products—the most valuable forestry industry in Canada. B.C. is also known for mining, fishing, and the fruit orchards and wine industry of the Okanagan Valley. B.C. has the most extensive park system in Canada, with approximately 600 provincial parks. The province's large Asian communities have made Chinese and Punjabi the most spoken languages in the cities after English. The capital, Victoria, is a tourist centre and headquarters of the navy's Pacific fleet.

The Northern Territories

The Northwest Territories, Nunavut and Yukon contain one-third of Canada's land mass but have a population of only 100,000. There are gold, lead, copper, diamond and zinc mines. Oil and gas deposits are being developed. The North is often referred to as the "Land of the Midnight Sun" because at the height of summer, daylight can last up to 24 hours. In winter, the sun disappears and darkness sets in for three months. The Northern territories have long cold winters and short cool summers. Much of the North is made up of tundra, the vast rocky Arctic plain. Because of the cold Arctic climate, there are no trees on the tundra and the soil is permanently frozen. Some continue to earn a living by hunting, fishing and trapping. Inuit art is sold throughout Canada and around the world.

- **Yukon** saw thousands of miners during the Gold Rush of the 1890s, as celebrated in the poetry of Robert W. Service. Mining remains a significant part of the economy. The White Pass and Yukon Railway opened from Skagway in neighboring Alaska to the territorial capital, Whitehorse in 1900 and provides a spectacular tourist excursion across precipitous passes and bridges. Yukon holds the record for the coldest temperature ever recorded in Canada (-63°C).
- **The Northwest Territories (N.W.T.)** were originally made up in 1870 from Rupert's Land and the North-Western Territory. The capital, Yellowknife (population 20,000), is called the "diamond capital of North America." More than half the population is Aboriginal (Dene, Inuit and Métis). The Mackenzie River, at 4,200 kilometers, is the second-longest river system in North America after the Mississippi and drains an area of 1.8 million square kilometers.
- **Nunavut**, meaning "our land" in Inuktitut, was established in 1999 from the eastern part of the Northwest Territories, including all of the former District of Keewatin. The capital is Iqaluit, formerly Frobisher Bay, named after the English explorer Martin Frobisher, who penetrated the uncharted Arctic for Queen Elizabeth I in 1576. The 19-member Legislative Assembly chooses a premier and ministers by consensus. The population is about 85% Inuit, and Inuktitut is an official language and the first language in schools.

CANADA'S REGIONS
WORKSHEET

1. What three things that stood out / made the most impression on you after reading the overview on Canada's Regions?

2. What, if anything, new have you learned about your own Region?

3. What have you learned about the other regions that you didn't already know?

4. How would you describe Canada to a person interested in moving to our country?

5. The different regions of Canada make it an exciting and interesting place to live. What is your favourite thing about Canada?

COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

CITIZENSHIP

SECTION 9

EO CX01.01 – PARTICIPATE IN CITIZENSHIP ACTIVITIES

Total Time:	Six sessions (18 periods)

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO. REFER TO THE LESSON SPECIFICATION LOCATED IN A-CR-CCP-801/PG-001, *ROYAL CANADIAN AIR CADETS PROFICIENCY LEVEL ONE QUALIFICATION STANDARD AND PLAN*.

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CHAPTER 2

PO X02 – PERFORM COMMUNITY SERVICE

COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

COMMUNITY SERVICE

SECTION 1

EO MX02.01 – PERFORM COMMUNITY SERVICE

Total Time: 3 sessions (9 periods) = 270 min

PREPARATION

PRE-LESSON INSTRUCTIONS

This IG supports EO MX02.01 (Perform Community Service) located in A-CR-CCP-801/PG-001, *Royal Canadian Air Cadets Proficiency Level One Qualification Standard and Plan*, Chapter 4.

Read and prepare to conduct The Five Stages of Service Learning located at Annex A.

See Examples of Community Service located at Attachment F to get an idea of what community service using the five stages of service learning might look like.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A practical activity was chosen for this lesson as it allows the cadets to interact with their peers while providing a service to the community.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have performed community service that:

- has value, purpose, and meaning;
- uses previously learned and newly acquired skills and knowledge;
- offers unique learning experiences;
- has real consequences; and
- offers a safe environment to learn, to make mistakes, and to succeed.

IMPORTANCE

It is important for cadets to perform community service as it contributes directly to supporting part of the aim of the Cadet Program—to develop attributes of good citizenship. Through participating in all five stages of service learning, cadets recognize how participation and the ability to respond to authentic needs improves the quality of life in the community, which leads to a lifelong ethic of service and civic participation.

ACTIVITY

Refer to The Five Stages of Service Learning located at Annex A for more details on each stage.

Youth voice and youth choice are essential for cadet buy-in and ownership over the service learning process. To the greatest extent possible, the community service should be cadet-led.

1. Have the cadets complete Stage 1 of Service Leaning (Inventory and Investigation) by:
   (a) developing a list or spreadsheet of cadet interests, skills, and talents through an activity such as:
      (1) having cadets complete a personal inventory worksheet, such as the one located at Annex B;
      (2) conducting a survey with the cadets; or
      (3) interviewing cadets;
   (b) selecting a need in the community by:
      (1) identifying an existing program or activity that is addressing a community need;
      (2) identifying a need in the community that has been observed; or
      (3) receiving a request from the community for assistance in meeting a need; and
   (c) investigating the underlying problem and validating the need by having the cadets:
      (1) examine media, such as books, magazines, or newspapers;
      (2) conduct interviews with people who have expertise in the subject matter;
      (3) review past experiences;
      (4) observe relevant situations (eg, investigating homelessness by visiting a local shelter); or
      (5) conduct a survey with people who may have knowledge about the subject matter.
2. Have the cadets complete Stage 2 of Service Learning (Preparation and Planning) by developing a plan that uses the identified skills and knowledge to address, as much as possible, the underlying problem behind the community need. The Community Service Proposal at Annex C may be used to help develop the plan. The plan should:
   (a) describe the involvement of community partners;
   (b) define the goal of the community service;

(c) describe anticipated results;

(d) identify how to measure the effects;

(e) identify how progress will be monitored;

(f) define roles and responsibilities of all involved;

(g) include a timeline for all tasks; and

(h) identify required resources.

3. Have the cadets complete Stage 3 of Service Learning (Action) by completing the community service while monitoring progress using the indicators identified in Stage 2: Preparation and Planning and adapting the plan as necessary.

4. Have the cadets complete Stage 4 of Service Learning (Reflection) by completing an activity that places the community service within the context of themselves personally, the community directly served, and greater communities (eg, national or global), such as:

(a) the four square reflection tool located at Annex D,

(b) a journal, blog, or video blog,

(c) an analysis of a “day in the life” of those benefiting from the service. How has it changed? How might they feel differently?

(d) a piece of art that represents the community service activity, or

(e) another activity that provides a structured avenue for reflecting on the community service.

5. Have the cadets complete Stage 5 of Service Learning (Demonstration) by completing an activity that showcases what they have done and the effect it has had on themselves (such as new skills, knowledge, or understandings) and the community, such as:

(a) a video or photo essay,

(b) a letter to the editor,

(c) an article for local or corps / squadron media,

(d) a presentation or performance, or

(e) a public display of art.

A checklist is located at Annex E to guide cadets through the stages of Service Learning.

END OF LESSON CONFIRMATION

The cadets’ participation in community service will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Community service not only has a positive impact on others in your community—it has a positive impact on you by developing critical thinking and problem-solving skills; growing your understanding of diverse cultures and communities; providing an opportunity to learn more about social issues and their root causes; and developing your communication, collaboration, and leadership skills. Seek out opportunities to be a good citizen by positively contributing to your community.

INSTRUCTOR NOTES / REMARKS

Youth voice is key to developing cadets as leaders. Cadets need ample opportunities to express their ideas and opinions, and to make constructive choices and see the results. Community service enables cadets to take initiative, make decisions, interact with community representatives, learn about the role of government in social issues, develop critical-thinking skills, put their ideas into action, and assess and evaluate what happened.

More than one community service activity may be chosen to complete the required training time.

If additional time is required to complete all five stages of service learning, periods from C102.01 (Perform Community Service) may be used.

The community service activity shall not have any partisan political association or support any single religious denomination or belief system.

The community service activity shall not directly benefit the corps / squadron or the sponsor.

REFERENCES

Kaye, Cathryn B. *The Complete Guide to Service Learning: Proven, Practical Ways to Engage Students in Civic Responsibility, Academic Curriculum*, & *Social Action*. Minneapolis, MN: Free Spirit Publishing Inc, 2010.

THE FIVE STAGES OF SERVICE LEARNING

STAGE 1: INVENTORY AND INVESTIGATION

Objective

The aim of the first stage of service learning is to select a genuine opportunity for meaningful community service by identifying a verified need in the community that appeals to the cadets' interests and which their skills and knowledge will allow them to fill.

Process

First, a personal inventory is created, identifying the skills, knowledge, and strengths of the cadets. This simple list will serve as a tool to identify the optimal manner in which the cadets can address a community need.

Second, a need in the community is identified. This may be done by:

- identifying an existing program or activity that is addressing a community need;
- observing a need in the community; and / or
- receiving a request from the community for assistance in meeting a need.

The cadets then investigate the problem and validate the need. The observable need or issue may be the manifestation or symptom of a larger problem. Where possible, the underlying problem should be the target of the community service rather than the visible need. For example, to address the need posed by litter in a park, the cadets could arrange for the installation of additional garbage cans rather than organizing patrols. This would address the underlying problem, a lack of places to put garbage, rather than the observable issue (the presence of trash).

Even if a need is identified through a request from a community member or organization, an investigation is still conducted to document, authenticate, and understand the underlying problem behind the need.

Research methods that may be used to investigate underlying problems and validate needs include:

- examining the media, such as books, magazines, and newspapers;
- conducting interviews with people who have expertise in the subject matter;
- reviewing past experiences;
- observing relevant situations (eg, investigating homelessness by visiting a local shelter); and
- conducting a survey with people who may have knowledge about the subject matter.

When the investigation is completed, the cadets will understand the extent of the need and have developed a baseline from which they may monitor progress.

STAGE 2: PREPARATION AND PLANNING

Objective

The aim of the second stage of the service learning process is to prepare the cadets to complete the service by developing a plan.

Process

With guidance and support from their supervisor, cadets:

- draw upon previously acquired skills and knowledge;
- acquire new information through varied, engaging means and methods;
- collaborate with community partners;
- develop a plan;
- become ready to provide meaningful community service;
- articulate roles and responsibilities of all involved; and
- define realistic parameters for implementation.

Communicating with stakeholders (those who will be affected by the community service activity) and building partnerships with other community organizations (governments, businesses, community groups, etc.) are key to the success of the community service activity. For example, if cadets are interested in beautifying a local park, they will need to make contacts with the municipality and park users.

STAGE 3: ACTION

Objective

In this stage, the community service is conducted.

Process

While conducting the community service, it is important that the cadets monitor progress towards the objectives, conduct more research as needed, and alter the plan as required.

STAGE 4: REFLECTION

Stage 4: Reflection may occur both during and after implementation of the community service activity. Reflection during the activity may reveal better ways to complete the community service or a new focus.

Objective

The aim of the fourth stage is to place the service learning experience in the context of the cadets, the community, and the global community.

Process

Through reflection activities such as discussion, journaling, and worksheets, cadets:

- describe what happened;
- examine the difference made;
- discuss thoughts and feelings;
- consider project improvements;

- generate ideas and identify questions; and
- receive feedback.

Reflection is integral to service learning. During the reflection stage, cadets link learning and experience with personal growth and awareness. When cadets reflect on their experiences during community service activities, they consider how the knowledge, experience and skills gained relate to their own lives and communities and begin to understand the purpose of their engagement.

Since people naturally reflect in different ways, more cadets will be engaged by allowing a variety of reflection methods. Examples of reflection activities include art, music, role play, journals, sculpture, drama, worksheets, photographs, and discussion.

Reflection through group discussion can have its drawbacks as cadets can be influenced by the comments of others, causing the conversation to go in circles. Have cadets write down responses to reflection questions in brief notes before the group discussion so they can refer to their written thoughts in conversation. This simple act preserves the integrity of each cadet's experience before it can be influenced by others' impressions and assures that everyone has something to contribute.

Regardless of the reflection activity chosen, some questions that can be posed to the cadets to assist them with reflection include:

- What did the experience remind you of?
- What did you learn that you didn't know before?
- How did you feel being at the service site? How did your feelings change from when you first arrived to when you left?
- How did you make a difference today?
- Five years from now, what do you think you will remember about this experience?
- What can we all do to make our time and efforts have a bigger impact?

STAGE 5: DEMONSTRATION

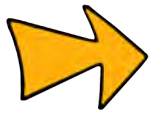
Objective

The aim of the final stage of the service learning model is to showcase what the cadets have done and the effect it has had on them and the community.

Process

Demonstration is the stage of the Community Service Model where cadets showcase what they have done and the effect it has had on them and the community.

Presenting what they have learned allows cadets to teach others while also identifying and acknowledging to themselves what they have learned and how they learned it. When cadets tell others about what they have done and the impact of their actions, it re-enforces the intrinsic value of community service.



Demonstrations need to be cadet-led with supervisor guidance and support to be effective. If cadets do not feel they are in control of the product they are creating, they will not apply their full efforts to complete it.

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PERSONAL INVENTORY

Interests are what you like to think about and what you would like to know more about—for example, outer space, popular music, or a historical event like a world war. Are you interested in animals, movies, mysteries, or visiting faraway places? Do you collect anything?

I like to learn and think about . . .

Skills have to do with things you like to do or that you do easily or well. Do you have an activity you especially like? Do you sing, play the saxophone, or study ballet? Do you know more than one language? Can you cook? Do you have a garden? Do you prefer to paint pictures or play soccer? Do you have any special computer abilities?

I can . . .

Knowledge sets are what you know and understand well. Do you have a favourite subject in school? What do you like to read about in your spare time?

I know about . . .

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COMMUNITY SERVICE PROPOSAL

By: _____

Supervisor: _____ Corps / Squadron: _____

Corps / Sqn Address: _____

Phone: _____ Fax: _____ Email: _____

Project name: _____

Need—Why this plan is needed:

Purpose—How this plan will help:

Participation—Who will help and what they will do:

- Cadets:
- Staff:
- Organizations or groups:

Outcomes—What we expect to happen as a result of our work:

How we will check outcomes—What evidence we will collect and how we will use it:

Resources—What we need to get the job done, such as supplies (itemize on back):

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FOUR SQUARE REFLECTION TOOL

What happened?	How do I feel?
Ideas?	**Questions?**

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COMMUNITY SERVICE CHECKLIST

Inventory and Investigation	Identify skills and interests	❑
	Identify a community need to address	❑
	Investigate the underlying problem	❑
	Identify potential community partners	❑
Preparation and Planning	Collaborate with community partners	❑
	Define the goal of the community service	❑
	Describe anticipated results	❑
	Identify how to measure the effects of the community service	❑
	Identify how progress will be monitored	❑
	Define roles and responsibilities of all involved	❑
	Create a timeline for all tasks	❑
	Identify required resources	❑
	Create a budget if required	❑
Action	Monitor progress	❑
Reflection	Describe what happened	❑
	Examine the difference made	❑
	Discuss thoughts and feelings	❑
	Consider activity improvements	❑
	Generate ideas and identify questions	❑
	Receive feedback	❑
Demonstration	Identify an audience	❑
	Identify a time and place to do the demonstration	❑
	Create a demonstration	❑
	Execute the demonstration	❑

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EXAMPLES OF COMMUNITY SERVICE

Community Garden. Through a survey of local residents, cadets identify the need for a community garden. The personal inventory reveals a couple of cadets with gardening experience and several more cadets who know people with gardening experience. They contact the municipality to get the required permissions to use an empty lot. Cadets do research into community gardens and form partnerships with those community members interested in having plots in the garden. Cadets plan and build the infrastructure for the community garden, including the creation of plots. They demonstrate their project by giving a joint presentation with their community partners at a municipal council meeting.

Disabled Program. Through the personal inventory one cadet reveals the volunteer work they do for a local disabled program and indicates a need for more volunteers. They talk about some of the things volunteers do for the program, such as organizing activities and entertainment. The cadets express interest in helping out and arrange a visit to become familiar with the program and to meet the participants, staff, and other volunteers. After their visit the cadets brainstorm some activities they can do with the program participants. After planning and executing an evening of fun activities, the cadets reflect on the impact made. Although they are proud of the impact they made for that evening, one cadet points out that the disabled program will still have a shortage of regular volunteers into the future. Cadets then decide to take their community service project one step further by creating an advertising campaign to attract more volunteers to the program.

Food Drive. Cadets decide to get involved with the local food drive. They contact the Food Bank, do a tour of the facility, learn about the food needs of the local community, and spend two hours organizing and sorting non-perishable food items. Cadets help the Food Bank promote the upcoming food drive by creating posters and speaking with local media. Cadets create a sign-up list for parent volunteers to drive, divide themselves into teams of three, and assign each team a geographic area to cover during the food drive. The cadets demonstrate their project by creating an article that they distribute to the local newspaper.

Remembrance Day and Poppy Campaign. Cadets are approached by the Royal Canadian Legion to participate in the annual Poppy Campaign and Remembrance Day ceremony. Cadets research the Royal Canadian Legion and learn about some of the initiatives it leads using the moneys raised during the Poppy Campaign, such as the creation and care of memorials. Cadets also learn the history of the poppy and how it came to be a symbol of remembrance, and invite a veteran to speak about what remembrance means to them. Cadets identify several other ways they can thank and support veterans. They create a demonstration for their Annual Ceremonial Review to make others aware of how they can get involved.

Emergency Health Services. A cadet living in a rural area loses his father to a heart attack. A factor in his father's death was the time it takes for medical assistance to reach his community. Cadets decide to address this problem. After brainstorming, researching, and communicating with local government and medical services, cadets come up with two ways to improve medical assistance in the community. First, they all agree to take first aid training and arrange for a first aid provider to come to the community to deliver that training. Second, they use GPS to create detailed maps of the local community for use by the ambulance services, leading to reduced response times. Some cadets reveal during the reflection activity that they see a potential future career in health services. The cadets demonstrate their accomplishments by doing a first aid display at a CO's Parade.

Recycling Program. Cadets identify the need for a recycling program in their community. Through their research they discover that a recycling program has not been set up in the community because the nearest recycling plant is so far as to make transportation costs prohibitive. The personal inventory indicates several of the cadets have ties to local businesses. Cadets have some discussions with local business owners and realize that the truck that regularly re-stocks the grocery store is empty when it leaves the community. Cadets contact the trucking company and arrange to have the recyclables shipped out regularly. After successfully solving this piece of the puzzle, the cadets enthusiastically go about planning, promoting, and implementing the community's recycling program. To demonstrate the project they give a presentation at a municipal council meeting.

Election. Through their personal inventory, cadets discover a common interest in the upcoming election so they decide to get in touch with election organizers to find out how they can help. The cadets investigate the electoral process and volunteer to register voters and work the polls on election day. During reflection, the cadets discuss what it means to them to be citizens of a democratic country. This leads to discussions about refugees fleeing from countries where they are in danger and oppressed. They decide their next community service activity will be to learn about the stories of local refugees and to host a Citizenship Ceremony.

Animal Humane Society. Upon reviewing their personal inventory, cadets recognize many of them share an interest in the welfare of animals, so they plan a trip to the local animal humane society. After discussing the need to care for pets responsibly, cadets create a brochure called “Taking Care of Your Pet”. The brochure is distributed by the humane society and, after making contacts with administration at several local schools, by the cadets who attend these schools. During the reflection activity, some cadets decide to volunteer to walk the dogs as part of their personal community service. The cadets demonstrate their project by creating a display consisting of photos of each cadet either with their pet or with an animal at the humane society. The display is posted at the humane society.

COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

COMMUNITY SERVICE

SECTION 2

EO CX02.01 – PERFORM COMMUNITY SERVICE

Total Time:	6 sessions (18 periods) = 540 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO. REFER TO THE INSTRUCTIONAL GUIDE FOR EO MX02.01 (PERFORM COMMUNITY SERVICE).

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CHAPTER 3

PO 103 – PARTICIPATE AS A MEMBER OF A TEAM

COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 1

EO M103.01 – IDENTIFY THE RESPONSIBILITIES OF A FOLLOWER IN A TEAM

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Cut up Scrambled Words Handout located at Attachment A into strips.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for this lesson to orient the cadets to identify responsibilities of a follower in a team and generate interest.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

The cadet shall have explained the responsibilities of a follower in a team environment.

IMPORTANCE

Cadets need to learn how to be effective members of a team. Understanding the responsibilities of a follower in a team setting makes cadets more aware of what is expected of them. This knowledge enables them to contribute to the overall success of the team.

Teaching Point 1 **Explain the following four responsibilities of a follower.**

Time: 10 min Method: Interactive Lecture

RESPECT THE LEADER AND OTHER TEAM MEMBERS

The ability to work with other people in a team is a useful skill. A sincere respect for other people is a great asset. In order to be an effective team member one must respect what the leader is asking the team to do. It is also important to respect the opinion and views of the other members of the team.

COOPERATE WITH OTHERS

In order for the team to effectively and efficiently achieve an objective the members must co-operate. Through co-operation a great deal more can be achieved than by working alone.

ADMIT MISTAKES AND LEARN FROM EXPERIENCE

In a team setting one must be able to admit when they are wrong and learn from the mistake. This makes the team stronger and creates a better outcome.

ACCEPT CONSTRUCTIVE CRITICISM

Constructive criticism is observations or thoughts about ways to improve the manner in which a task was completed. Leaders will often provide constructive criticism to members of the team. This criticism is given to assist individuals develop as team member and eventually become leaders. Members must learn to take this criticism and use it in a beneficial way.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. What is constructive criticism?

Q2. What does it mean to admit mistakes and learn from experience?

Q3. Why is it important to respect the leader and other team members?

ANTICIPATED ANSWERS:

A1. Constructive criticism is observations or thoughts about ways to improve the manner in which a task was completed.

A2. In a team setting one must be able to admit when they are wrong and learn from the mistake. This makes the team stronger and creates a better outcome.

A3. The ability to work with other people in a team is a useful skill. A sincere liking and respect for other people is a great asset. In order to be an effective team member one must respect what the leader is asking the team to do. It is also important to respect the opinion and views of the other members of the team.

Teaching Point 2 **Explain the following five responsibilities of a follower in a team**

Time: 15 min Method: Interactive Lecture

ASSUME RESPONSIBILITY

Team members should be prepared to assume responsibility when needed. The team leader delegates duties to team members and relies on these members to be prepared and willing to take on the responsibility.

BE HONEST

Team members must be honest with others in the team. Most people believe and want to work with someone they trust. Honesty is an important characteristic of a good follower. In order to complete objectives, team members must trust each other and be honest.

ACCEPT OTHER TEAM MEMBERS FOR WHO THEY ARE

It is important to be sensitive to other people's wants and needs and to changes in these wants and needs. Acceptance and understanding of individual differences allows the group to communicate and cooperate.

KNOW THE JOB AND BE PREPARED

A good follower needs to be knowledgeable about the group's goals. An effective follower should be organized and prepared.

COMMUNICATE CLEARLY WITH OTHERS

A follower must be able to understand and communicate with the leader and other team members. Communication works in two directions, listening and speaking. The ability to listen to others is essential in receiving correct information and implementing the strategy outlined for the team.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. Why is it important to be honest in a team?

Q2. What does it mean to communicate clearly with others?

Q3. Why must a team member assume responsibility?

ANTICIPATED ANSWERS:

A1. Team members must be honest with others in the team. Most people believe and want to work with someone they trust. Honesty is an important characteristic of a good follower. In order to complete objectives, team members must trust each other and be honest.

A2. A follower must be able to understand and communicate with the leader and other team members. Communication works in two directions, listening and speaking. The ability to listen to others is essential in receiving correct information and implementing the strategy outlined for the team.

A3. Team members should be prepared to assume responsibility when needed. The team leader delegates duties to team members and will rely on these members to be prepared and willing to take on the responsibility.

END OF LESSON CONFIRMATION

ACTIVITY

Time: 5 min

OBJECTIVE

The objective of this activity is for the cadets to unscramble the responsibilities of a follower in a team and explain what each means.

RESOURCES

- Scrambled responsibilities found in Attachment A.
- Container to pick scrambled responsibilities from.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Divide the class into nine groups. If the class is too small, fewer groups can be formed.
2. Have one member from each group pick a slip from the container.
3. Each group will unscramble the words to reveal one of the responsibilities of a follower.
4. The group is to discuss what the responsibility means.
5. Each group is to present their answer to the class.

SAFETY

Nil.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Understanding the responsibilities of a follower in a team is essential for team members. Knowing what is expected of them will help create a successful outcome.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

C3-038 Campbell, R. (2006). *Leadership: Getting it done*. Retrieved 16 Mar 06, from http://www.ssu.missouri.edu/faculty/rcampbell/leadership/chapter5.htm

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SCRAMBLED WORDS

CERPTES HET DERLEA NDA EHORT AETM BESMERM

RPCOEAEOT TWHI TSERSOH

IAMTD STSAKIEM DNA RLENA MFOR XRPEIECNEE

PCETCA SRUCONTTIVEC IIISCTMRC

SUSAME YEBPISONSILRIT

EB TENHOS

EACTCP HTROE AEMT ESMBRME OFR HWO YEHT RAE

NOWK ETH BOJ NAD EB PPRDREAE

MAOCMUENCIT LYEACRL TIHW EHORST

COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 2

EO M103.02 – MAP A PERSONAL GOAL FOR THE TRAINING YEAR

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Photocopy the SMART Goal handout located at Attachment A for each cadet.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TP1 as it is an effective way to generate interest and motivate the cadets to set personal goals for themselves.

An in-class activity was chosen for TP2 as it is an interactive way to provoke thought and stimulate interest among cadets.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of the lesson, the cadets will have mapped a personal goal for the training year.

IMPORTANCE

It is important for cadets to set goals that will encourage personal development and motivate them to complete tasks.

Teaching Point 1 **Explain the concept of goal setting.**

Time: 10 min Method: Interactive Lecture

DEFINITION OF A GOAL

A goal is an aim an individual or group works toward; an object of ambition / effort.

DIFFERENCE BETWEEN SHORT-TERM AND LONG-TERM GOALS

Short-term goals are those that can be met in a short period of time and are often set to achieve long-term goals. For example, if an individual strives to run five kilometers by the end of the year, their short-term goal could be to run two kilometers within two months. By setting achievable short-term goals, individuals can measure their progress in the pursuit of their long-term goals.

HOW TO DEVELOP GOALS

Goals should be set with a specific purpose in mind. They should be measurable and achievable, allowing individuals to track progress. A goal should be something an individual can be motivated toward achieving.

SMART GOAL SETTING

Distribute the SMART Goal handout located at Attachment A. Discuss with the cadets what each letter in “SMART” represents and give an example of a SMART goal.

Cadets should set a specific goal to work toward. The acronym SMART is a tool the cadets may find useful.

S stands for specific: the aim of the goal must be precisely defined.

M stands for measurable: identify a standard against which to assess achievement.

A stands for attainable: ensure needed resources are accessible for accomplishing the goal.

R stands for realistic: ensure the goal is worthwhile for the cadet.

T stands for timely: the completion date of the goal.

Ask the following questions to the cadets to help elicit SMART goals:

Specific. What specific activity, or activities, can you do to help you reach your goal? Your goal should be concise and focused on one specific outcome (your goal cannot be too vague).

Measurable. How often will I work toward my goal? How long will I work at activities that help me to meet my goal? How can I track my progress in meeting my goal? Measuring your progress will help you to track your success and maintain motivation.

Attainable. How can I reach my goal? Are there people who can help me reach my goal? Do I have any attitudes that I need to change in order to meet my goal? Identifying the resources and supports that are available to help meet a goal is important to keep you on track.

Realistic. Can I really reach my goal? Is my goal too big? Would a smaller goal be more realistic and help me ensure success? Running a marathon is a big goal and one that will not likely be achieved by many; however, joining a running club or running smaller distances may be realistic attainable goals.

Timely. When will I start to work on my goal? When do I want to have my goal completed? Goals are more effective if they have time associated with them.

SMART Goal Example

SMART GOAL: By the Commanding Officer's (CO's) parade in December, I will have all of my badges sewn onto my uniform in the correct positions.

Specific: I will have all my badges sewn onto my uniform in the correct positions. I will not have any loose threads.

Measurable: I will get a copy of the dress instructions that show where badges will be sewn onto the uniform. I will ask my mom to help me sew the badges onto my uniform. I will work on my sewing every Thursday night until all the badges are sewn correctly. I will meet my Flight Sergeant the week before the December CO's parade to make sure my badges are sewn onto my uniform in the correct positions. I will spend the Monday night before CO's parade correcting any errors my Flight Sergeant finds with the badges on my uniform.

Attainable: I will check with my fellow Proficiency Level One cadets to ensure my uniform is correct. I will also seek advice from my Flight Sergeant.

Timely: I will start at this week's parade night by asking for a copy of the dress instructions. I will work at completing my goal each Thursday night until CO's parade.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS

Q1. What is a goal?

Q2. What is the difference between short-term and long-term goals?

Q3. What is SMART?

ANTICIPATED ANSWERS

A1. A goal is an aim an individual or group works toward; an object of ambition / effort.

A2. Short-term goals are those that can be met in a short period of time and are often set to achieve long-term goals.

A3. Specific, measurable, attainable, realistic, and timely.

Teaching Point 2 **Conduct a goal mapping activity.**

Time: 15 min Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets map a personal goal for the training year.

RESOURCES

- SMART Goal handout located at Attachment A, and
- Pen / Pencil.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Have the cadets brainstorm and record on flipchart paper a list of achievable training year goals.
2. Have each cadet pick a goal from the list.
3. Have the cadets complete the SMART Goal handout based on their identified goal.
4. Check that each cadet has completed the form.
5. Cadets will keep their completed form.

CONFIRMATION OF TEACHING POINT 2

The cadets' participation in the activity will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the activity will serve as the confirmation of the lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

You will have many opportunities to set goals in the cadet program. When you set goals remember to be SMART!

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

C0-021 ISBN 1-58062-513-4 Adams, B. (2001). *The Everything Leadership Book*. Avon, MA: Adams Media.

C0-022 ISBN 0-02864-207-4 Cole, K. (2002). *The Complete Idiot's Guide to Clear Communication*. Indianapolis, IN: Alpha Books.

C0-431 Health Canada. (2011). *Eat Well and Be Active Education Toolkit*. Retrieved September 29, 2011, from http://hc-sc.gc.ca/fn-an/food-guide-aliment/educ-comm/toolkit-trousse/plan-3a-eng.php

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SMART GOAL

	Definition	My Smart Goal
Specific	**What do I want to do?** What specific activity, or activities, can you do to help you reach your goal? Your goal should be concise and focused on one specific outcome (your goal cannot be too vague).	
Measurable	**How much and how often will I do it?** How often will I work toward my goal? How long will I work at activities that help me to meet my goal? How can I track my progress in meeting my goal? Measuring your progress will help you to track your success and maintain motivation.	
Attainable	**How will I do it?** How can I reach my goal? Are there people who can help me reach my goal? Do I have any attitudes that I need to change in order to meet my goal? Identifying the resources and supports that are available to help meet a goal is important to keep you on track.	
Realistic	**Can I do it?** Can I really reach my goal? Is my goal too big? Would a smaller goal be more realistic and help me ensure success? Large goals can be broken down into smaller goals that are more easily obtained and tracked.	
Timely	**When will I do it?** When will I start to work on my goal? When do I want to have my goal completed? Goals are more effective if they have time associated with them.	

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COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 3

EO M103.03 – PARTICIPATE IN TEAMBUILDING ACTIVITIES

Total Time: 60 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Ensure that an OHP has been set-up.

Bring paper and pens for group work.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An in-class activity was chosen for TPs 1–3 as it is an interactive way to present team building activities and the learning objective.

A group discussion was chosen for TP4 as it allows the cadet to interact with their peers and share their knowledge, opinions and feelings about the advantages and characteristics of a successful team.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

The cadet shall participate in teambuilding activities and discuss the characteristics and advantages of a successful team.

IMPORTANCE

Having the skills to work as an effective team member is essential to the success of the team. Once introduced to these skills, they will continue to develop whenever the individual is placed in a team setting or situation that require people to work together.

Teaching Point 1 **Conduct the teambuilding activity "the Human Knot."**

Time: 10 min Method: In-Class Activity

BACKGROUND KNOWLEDGE

CHARACTERISTICS OF A SUCCESSFUL TEAM

- Communication – Clear communication is essential to an effective team. Team members must feel comfortable sharing ideas and concerns with each other and the leader.
- Mutual cooperation and support – It is hard to be innovative when you are not sure how others will react to your ideas. Team members must be aware that even if people disagree the objection is to the idea, not to the person presenting it. Members of a team must have the right to a certain level of trust that precludes backstabbing, gossip and negative behaviours aimed solely at making someone look bad.
- Share a common goal – When a team understands the purpose for a task they have a heightened motivation to work together towards the completion of it.
- High esprit de corps – When each member of the team has a sense of pride and belonging to the team, it is more likely they will want to be part of the team. This sense of belonging will enable the group to become more cohesive and willing to work together to accomplish the task.

ADVANTAGES OF EFFECTIVE TEAMWORK

- Includes everyone and ensures a better outcome – In a team setting people feel that their contributions are valuable. A strong group performance is generated from strong individual efforts. When many individuals are working together to accomplish a task different ideas and opinions mesh together to provide a sound outcome.
- Tasks are easier when more people are involved – When the responsibility and workload are shared among the team members and the team works together to ensure everyone stays on track, the team will offer support to those who need it.
- Increases and develops communication – Teamwork is an opportunity for people to interact in new ways by forming relationships and communicating with new people. Communication is the key to ensuring members are carrying out their role in accomplishing the task.

ACTIVITY

OBJECTIVE

The objective of this activity is to untangle the "human knot" through teamwork.

This activity highlights the necessity for communication, mutual cooperation and support, including everyone and ensuring a better outcome, high esprit de corps and sharing a common goal.

RESOURCES

Nil.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Divide the class into groups of approximately 10 cadets.
2. Direct each group to stand in a circle and place their right hand in the centre and take the hand of anyone except the person on either side of them.
3. Have them do the same with their left hands.
4. Explain to the cadets that they must not let go of their hands, and that their job is to work together to untangle the "Human Knot."

SAFETY

Ensure the area where this activity is being conducted is flat and open so as to avoid any falls or collisions with other objects.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in the activity will serve as the confirmation of this TP.

Teaching Point 2 **Conduct the teambuilding activity "Memory."**

Time: 10 min Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to remember as many of the items in the collage both as an individual and as a team.

RESOURCES

- Collage found in Attachment A.
- Overhead projector.
- Pens.
- Paper.
- Whiteboard/flip chart.
- Markers.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Place a copy of the collage found in Attachment A on the OHP.
2. Turn the OHP on and have the cadets observe the overhead for 15 seconds.
3. After 15 seconds turn the OHP off and have the cadets individually write down as many items as they can recall.

4. After approximately two minutes record on the board/flipchart the number of items recalled on an individual basis.
5. Split the cadets into two groups and have them compile a group list of items they recall.
6. After two minutes compare the individual results to the group results.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 2

The cadets' participation in the activity will serve as the confirmation of this TP.

Teaching Point 3 **Conduct the teambuilding activity "Silent Birthdays."**

Time: 10 min Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to line up according to birthdays without speaking to one another.

RESOURCES

- Paper; and
- Pens.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTION

1. Direct the cadets to line up in birth order from oldest to youngest by not talking to one another.
2. If the task becomes daunting for the cadets provide a method to assist them (i.e. using pens and paper).
3. The pens and paper can be laid out on a table in the vicinity of the activity.
4. When the time is up, starting at the beginning of the line, have each cadet state his or her birthday to see if the task was successful.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 3

The cadet's participation in the activity will serve as the confirmation of the TP.

Teaching Point 4 **Lead a discussion on the characteristics of a successful team.**

Time: 20 min Method: Group Discussion

DISCUSSION QUESTIONS

TIPS FOR ANSWERING/FACILITATING DISCUSSION:

- Prepare questions ahead of time.
- Be flexible (you are not bound to only the prepared questions).
- Encourage cadets to participate by using praise such as “great idea” or “excellent response, can anyone add to that?”.
- Try to involve everyone by directing questions to non-participants.

SUGGESTED QUESTIONS:

Q1. What advantages of teamwork were noticed while engaging in the activities?

Q2. What things made the team successful in the activities?

Q3. What things were frustrating throughout the activities?

Q4. Why do you think teamwork is important?

Other questions and answers will develop throughout the reflection stage. The discussion should not be limited to only those suggested.

END OF LESSON CONFIRMATION

The cadets' participation in the activities will serve as the confirmation of the lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Teamwork is essential to a successful outcome. Knowing what skills contribute to the success of a team will aid in this. Development of these skills will occur each and every time an individual is involved in a team.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

C0-003 ISBN 0-943210-44-5 Pike, B., & Busse, C. (1995). *101 more games for trainers*. Minneapolis, MN: Lakewood Publishing.

C0-004 ISBN 1-58062-577-0 McClain, G., & Romaine, D.S. (2002). *The everything managing people book*. Avon, MA: Adams Media.

C0-005 ISBN 0-07-046414-6 Scannell, E.E., & Newstrom, J. W. (1994). *Even more games trainers play*. New York: McGraw-Hill.

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COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 4

EO C103.01 – PARTICIPATE IN ICEBREAKER ACTIVITIES

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Prepare all materials listed in the resource section of each activity.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An in-class activity was chosen for TPs 1 to 3 as it is an interactive way to present icebreaker activities and the learning objective.

A group discussion was chosen for TP 4 as it allows the cadets to interact with their peers and share their knowledge, opinions and feelings about icebreaker activities.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

The cadet shall participate in icebreaker activities in order to become familiar with other cadets in the group.

IMPORTANCE

Introductions are vital to the success of any team. Cadets may be spending a long period of time together with each other throughout their involvement with the program. These activities will assist in developing positive relationships.

Teaching Point 1 **Conduct the icebreaker activity "True Confession Toothpicks."**

Time: 5 min Method: In-Class Activity

BACKGROUND KNOWLEDGE

ICEBREAKERS

Icebreakers are a method for getting cadets to introduce themselves. These exercises may vary according to the type of training being conducted, the size of the group, and how well the group members know each other. Icebreakers encourage self-disclosure, humour, respect for others, thought and creativity. Most importantly, they allow people to laugh at themselves.

ACTIVITY

OBJECTIVE

The objective of this activity is to assist cadets in getting to know each other by challenging participants to think creatively.

RESOURCES

- Large amount of toothpicks.

ACTIVITY LAYOUT

A circle classroom arrangement may be appropriate for this activity.

ACTIVITY INSTRUCTIONS

1. Give each cadet five toothpicks.
2. Select a cadet to go first; ask them to talk about something they have never done (eg. I have never jay-walked).
3. After the statement, anyone in the group who has done the action must forfeit a toothpick.
4. The next person then shares something they have never done. Again, someone who has done the action must forfeit a toothpick.
5. The disclosers continue until someone has lost all five toothpicks.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in the activity will serve as the confirmation of this TP.

Teaching Point 2 **Conduct the icebreaker activity "Two Truths and a Lie."**

Time: 5 min Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to get cadets thinking about differences and similarities between themselves and others.

RESOURCES

Nil.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Divide cadets into groups of four;
2. Cadets will brainstorm three characteristics that make every cadet in the group the same;
3. Cadets will brainstorm three characteristics that make every cadet in the group different;
4. Each group of cadets peer share their similarities and their differences with the rest of the class.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 2

The cadets' participation in the activity will serve as the confirmation of this TP.

Teaching Point 3 **Conduct the icebreaker activity "Self Disclosure Introductions."**

Time: 5 min Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to provide innovative ways for the cadets to know one another by adding adjectives to their first or last names.

RESOURCES

Nil.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTION

Direct cadets to state their first or last name with an adjective put in front. The adjective should describe a dominant characteristic and start with the first letter of the first or last name. For example: Serious Stan, Mathematical Mary.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 3

The cadet's participation in the activity will serve as the confirmation of the TP.

Teaching Point 4 **Lead a group discussion on the effectiveness of the icebreakers in introducing themselves to each other.**

Time: 10 min Method: Group Discussion

DISCUSSION QUESTIONS

TIPS FOR ANSWERING/FACILITATING DISCUSSION:

- Prepare questions ahead of time.
- Be flexible (you are not bound to only the prepared questions).
- Encourage cadets to participate by using praise such as "great idea" or "excellent response, can anyone add to that?".
- Try to involve everyone by directing questions to non-participants.

SUGGESTED QUESTIONS:

Q1. Did the tasks help you introduce yourselves to one another?

Q2. Did the activity help include everyone in the team environment?

Q3. How did you feel about the others in the group after the activity was completed?

Other questions and answers will develop throughout the reflection stage. The discussion should not be limited to only those suggested.

END OF LESSON CONFIRMATION

The cadets' participation in the activities will serve as the confirmation of the lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Introductions are vital to the success of any team. Cadets may be spending a long period of time together through their involvement with the program. These activities will assist in developing positive relationships.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

C0-003 ISBN 0-943210-44-5 Pike, B and Busse, C. (1995). *101 More games for trainers*. Minneapolis, MN: Lakewood Books.

C0-028 ISBN 0-07-046513-4 Newstrom, J and Edward, S. (1998). *The big book of teambuilding games*. New York, NY: McGraw-Hill.

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COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 5

EO C103.02 – PARTICIPATE IN SELF INTRODUCTIONS

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Prepare all materials listed in the resource section of each activity.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An in-class activity was chosen for TP 1 as it is an interactive way to reinforce self-introductions and to provoke thought and stimulate interest among cadets.

A group discussion was chosen for TP2 as it allows the cadets to interact with their peers and share their knowledge, opinions and feelings about self-introductions.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

The cadet shall introduce themselves to the group.

IMPORTANCE

Communication is an important aspect of leadership. Being able to communicate with other members of the group and the leader will lead to successful completion of tasks. Starting with a short, informal introduction will give the cadets confidence to start developing their communication skills.

Teaching Point 1 **Conduct a self-introduction activity.**

Time: 15 min Method: Interactive Lecture

BACKGROUND KNOWLEDGE

COMMUNICATION

Effective communication skills are key to any successful group or team and are an important factor in becoming an effective leader. A leader who can communicate effectively with the team will move the team towards a positive outcome.

Communication works in both directions. When one person is delivering a message, the team members must be listening to ensure they receive the message correctly. Part of becoming a leader is developing good listening skills. Team members should feel comfortable enough to bring forth ideas to the leader and feel that their ideas are heard and taken into account.

ACTIVITY

OBJECTIVE

The objective of this activity is to have each of the cadets present themselves to the class.

RESOURCES

- White board with markers;
- Pens; and
- Paper.

ACTIVITY LAYOUT

If the class is big, divide the group into smaller groups and use assistant instructors to facilitate the introductions.

ACTIVITY INSTRUCTIONS

1. Have each cadet stand in front of the class and present a short introduction.
2. The introduction should include information such as:
   (a) their name;
   (b) what school they attend;
   (c) what grade they are in;
   (d) why they joined cadets;
   (e) their hobbies;
   (f) their interests; and
   (g) their general career ambitions.
3. Write this list on the board for the cadets to reference during the introduction.

4. Give the cadets two minutes to write some notes to use during the introduction.

5. Each introduction should be no more then two minutes in length.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in the activity will serve as the confirmation of this TP.

Teaching Point 2 — **Lead a discussion on the importance of the self-introduction activity in regards to developing communication skills.**

Time: 10 min — Method: Group Discussion

DISCUSSION QUESTIONS

TIPS FOR ANSWERING/FACILITATING DISCUSSION:

- Prepare questions ahead of time.
- Be flexible (you are not bound to only the prepared questions).
- Encourage cadets to participate by using praise such as "great idea" or "excellent response, can anyone add to that?".
- Try to involve everyone by directing questions to non-participants.

SUGGESTED QUESTIONS:

Q1. How does this exercise emphasize the importance of communication?

Q2. Why is communication important in a team setting?

Q3. What feelings were experienced while introducing yourself?

Other questions and answers will develop throughout the reflection stage. The discussion should not be limited to only those suggested.

END OF LESSON CONFIRMATION

The cadets' participation in the activities will serve as the confirmation of the lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Being able to communicate with others is essential in leadership both as a follower and a leader. Participating in self-introductions will give the cadet confidence to communicate with others in the group and with the leader.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

C0-021 ISBN 1-58062-513-4 Adams, B. (2001). *The everything leadership book*. Avon, MA: Adams Media.

COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 6

EO C103.03 – PARTICIPATE IN TEAMBUILDING ACTIVITIES

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Prepare all materials listed in the resource section of each activity.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An in-class activity was chosen for TPs 1 and 3 as it is an interactive way to present team building activities and the learning objective.

A group discussion was chosen for TPs 2 and 4 as it allows the cadet to interact with their peers and share their knowledge, opinions and feelings about teamwork.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

The cadet shall participate in teambuilding activities and discuss the characteristics and advantages of a successful team.

IMPORTANCE

Acquiring the skills needed to work as an effective team member is essential to achieving the team's goals.

Teaching Point 1 **Conduct the teambuilding activity "Jigsaw."**

Time: 5 min Method: In-Class Activity

BACKGROUND KNOWLEDGE

CHARACTERISTICS OF A SUCCESSFUL TEAM

- Communication – Clear communication is essential to an effective team. Team members must feel comfortable sharing ideas and concerns with each other and the leader.
- Mutual cooperation and support – It is hard to be innovative when you are not sure how others will react to your ideas. Team members must be aware that even if people disagree the objection is to the idea, not to the person presenting it. Members of a team must have the right to a certain level of trust that precludes backstabbing, gossip and negative behaviours aimed solely at making someone look bad.
- Share a common goal – When a team understands the purpose for a task they have a heightened motivation to work together towards the completion of it.
- High esprit de corps – When each member of the team has a sense of pride and belonging to the team, it is more likely they will want to be part of the team. This sense of belonging will enable the group to become more cohesive and willing to work together to accomplish the task.

ADVANTAGES OF EFFECTIVE TEAMWORK

- Includes everyone and ensures a better outcome – In a team setting people feel that their contributions are valuable. A strong group performance is generated from strong individual efforts. When many individuals are working together to accomplish a task different ideas and opinions mesh together to provide a sound outcome.
- Tasks are easier when more people are involved – When the responsibility and workload are shared among the team members and the team works together to ensure everyone stays on track, the team will offer support to those who need it.
- Increases and develops communication – Teamwork is an opportunity for people to interact in new ways by forming relationships and communicating with new people. Communication is the key to ensuring members are carrying out their role in accomplishing the task.

ACTIVITY

OBJECTIVE

The objective of this activity is to stress the importance of each team member's individual contributions and the importance of working as a group.

RESOURCES

- One previously constructed picture puzzle, divided into sets of approximately 10 pieces per participant, broken apart and allocated to each cadet for re-assembly;
- CD player (optional); and
- Appropriate CDs (optional).

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Select a suitable picture puzzle (Attachment A).
2. Break the puzzle into nine connectable subsets (so the subsets can be connected to each other)
3. Distribute the subsets to each participant (divide cadets into groups if there are more than 9 participants).
4. Have the cadets assemble the subsets of the puzzle.
5. After the subsets are assembled, have the cadets come together to join the subsets and form the full picture.
6. Set a challenging time limit for the activity and play energizing music to create a sense of urgency.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in the activity will serve as the confirmation of this TP.

Teaching Point 2 **Lead a discussion on how the cadets viewed the Jigsaw game in terms of how it fostered teamwork.**

Time: 5 min Method: Group Discussion

DISCUSSION QUESTIONS

TIPS FOR ANSWERING/FACILITATING DISCUSSION:

- Prepare questions ahead of time.
- Be flexible (you are not bound to only the prepared questions).
- Encourage cadets to participate by using praise such as "great idea" or "excellent response, can anyone add to that?".
- Try to involve everyone by directing questions to non-participants.

SUGGESTED QUESTIONS:

Q1. What was your reaction were experienced when you realized your importance to the overall team?

Q2. What impact did the time deadline have on the effectiveness the group completing the task?

Q3. What was the impact of having team members available to help with the task?

Q4. What do you feel the completed picture puzzle represents?

Q5. Ask the cadets to consider both their productive and counterproductive behaviours. It is likely that they are using the same behaviours in actual team environments, with similar positive and negative effects.

CONFIRMATION OF TEACHING POINT 2

The cadets' participation in the group discussion will serve as the confirmation of this TP.

Teaching Point 3 **Conduct the teambuilding activity "Alphabetically."**

Time: 10 min Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to stress the importance of each team member's individual contributions and the importance of working as a group.

RESOURCES

- Blindfolds (optional)

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTION

1. Begin with the cadets sitting or standing in random locations throughout the activity area with their eyes closed (or blindfolds on).
2. Direct one cadet to say the first letter of the alphabet.
3. The remainder of the cadets must now state the remaining letters in order without ever having two cadets saying the same letter at the same time.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 3

The cadet's participation in the activity will serve as the confirmation of the TP.

Teaching Point 4 **Lead a discussion on the characteristics of a successful team.**

Time: 20 min Method: Group Discussion

DISCUSSION QUESTIONS

TIPS FOR ANSWERING/FACILITATING DISCUSSION:

- Prepare questions ahead of time.
- Be flexible (you are not bound to only the prepared questions).
- Encourage cadets to participate by using praise such as “great idea” or “excellent response, can anyone add to that?”.
- Try to involve everyone by directing questions to non-participants.

SUGGESTED QUESTIONS:

Q1. Did the group try to use any non-verbal clues to determine the order within the group? If so, what were they and did they assist in completing the task?

Q2. What makes this activity so difficult?

Q3. If a pattern was created, was the activity then easier to complete?

Q4. Was the activity easier to complete with eyes open? If so, why?

Q5. How did you feel about the individual contribution that each cadet made?

Other questions and answers will develop throughout the reflection stage. The discussion should not be limited to only those suggested.

END OF LESSON CONFIRMATION

The cadets' participation in the activities will serve as the confirmation of the lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Teamwork is essential to the outcome of a group task. Knowing what skills contribute to the success of a team will aid in a positive outcome. Development of these skills will occur each and every time an individual is involved in a team.

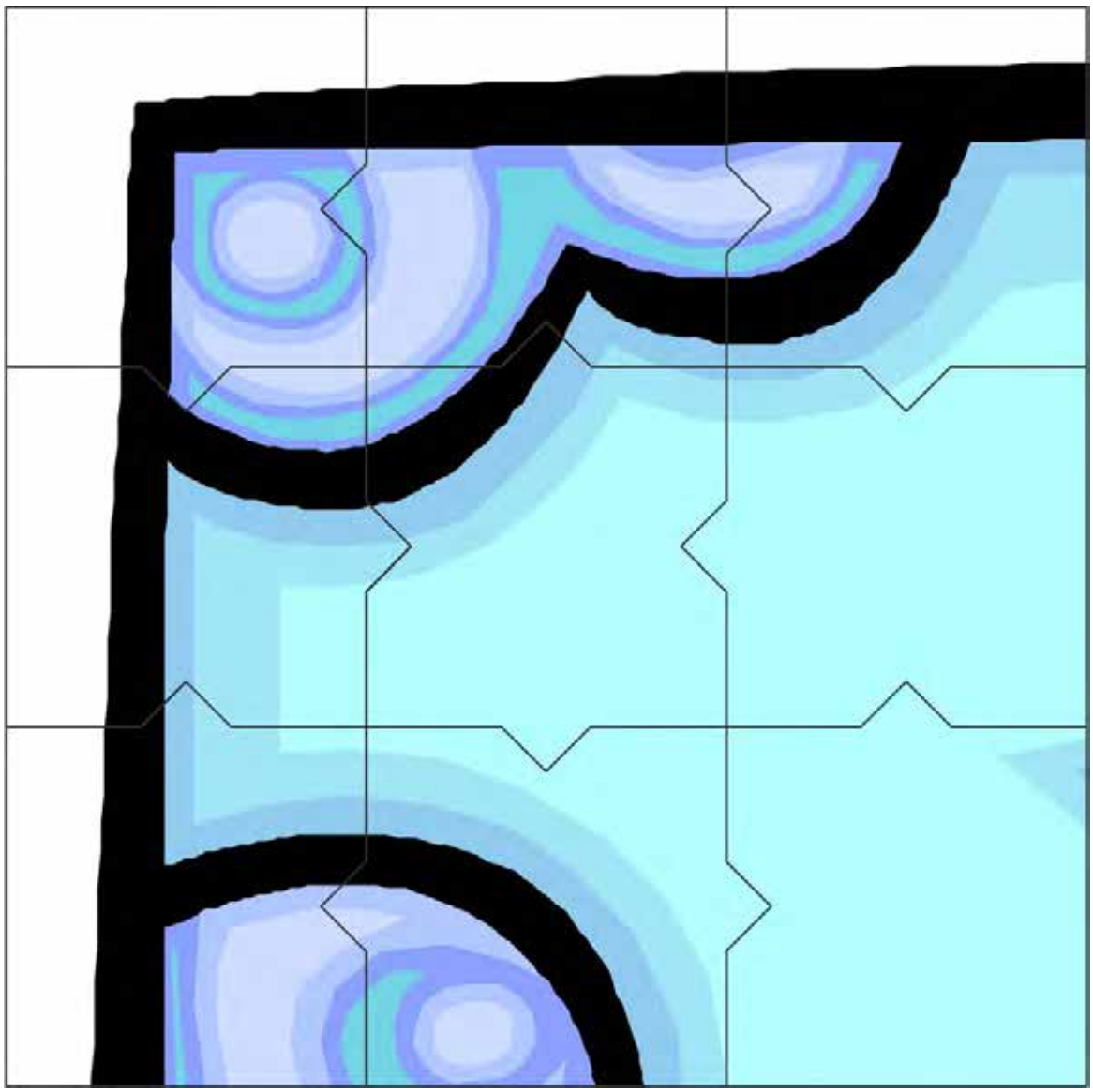
INSTRUCTOR NOTES / REMARKS

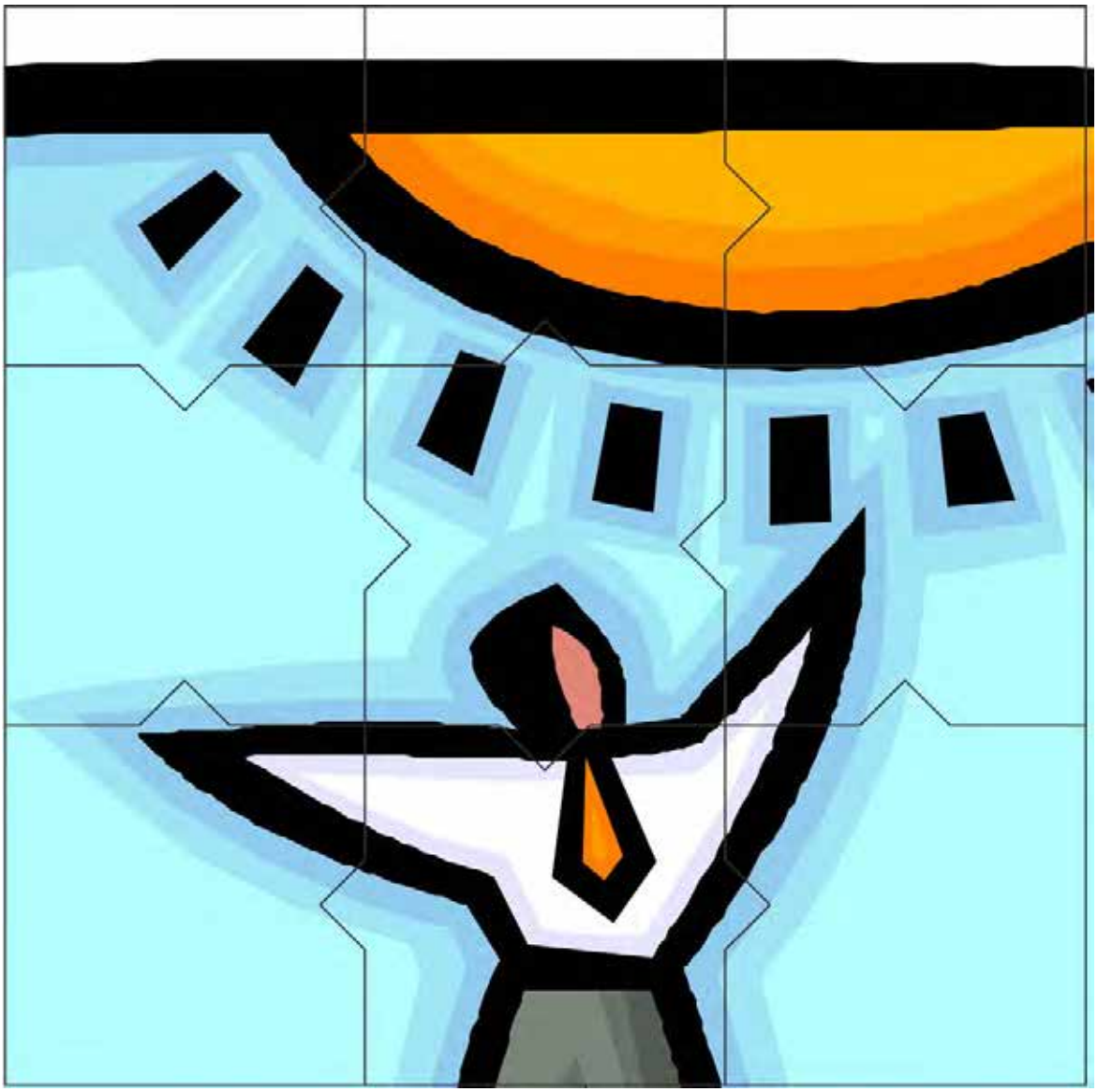
Nil.

REFERENCES

C0-028 ISBN 0-07-046513-4 Newstrom, J and Scannell, E. (1998). *The big book of teambuilding games*. New York, NY: McGraw-Hill.

C0-029 ISBN 0-7872-4532-1 Cain, J and Jolliff, B. (1998). *Teamwork and teamplay*. Brockport, NY: Kendall/ Hunt.





CHAPTER 4

PO X04 – TRACK PARTICIPATION IN PHYSICAL ACTIVITIES

COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

PERSONAL FITNESS AND HEALTHY LIVING

SECTION 1

EO MX04.01 – PARTICIPATE IN 60 MINUTES OF MODERATE- TO VIGOROUS-INTENSITY PHYSICAL ACTIVITY (MVPA) AND TRACK PARTICIPATION IN PHYSICAL ACTIVITIES

Total Time:	One session (3 periods) = 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

This IG supports EO MX04.01 (Participate in 60 Minutes of Moderate- to Vigorous-Intensity Physical Activity [MVPA] and Track Participation in Physical Activities) located in A-CR-CCP-801/PG-001, *Royal Canadian Air Cadets Proficiency Level One Qualification Standard and Plan*, Chapter 4.

Review the warm-up and cool-down located at Annexes A and B.

Select a Cardio Activity for TP 1 as per Annex C.

Assign instructors for Learning Stations 1, 2, 3, and 4 located at Annexes D, E, F and G respectively.

Photocopy the Physical Activity Tracker located at Annex H for each cadet.

Gather the required resources:

- Activity posters / tape / whistle or Instructor Guide / stopwatch as per selected cardio activity,
- Music and music player,
- *Canadian Physical Activity Guidelines for Youth* located at Annex D, Appendix 1 (one copy per Proficiency Level One cadet),
- *Canadian Sedentary Behaviour Guidelines* located at Annex D, Appendix 2 (one copy per Proficiency Level One cadet),
- The Three Components of Physical Fitness located at Annex D, Appendix 3 (one copy),
- *Eating Well with Canada's Food Guide* (one copy per Proficiency Level Two team),
- Chairs (one per Proficiency Level Three cadet),
- Flipchart paper (one sheet per Proficiency Level Three team),
- Pens / pencils,
- Markers (one per Proficiency Level Three team),
- Healthy Lifestyle Tool Belt handout located at Annex G, Appendix 1 (one copy per Proficiency Level Four cadet), and
- Physical Activity Tracker located at Annex H (one per cadet).

Cut out the Three Components of Physical Fitness, so the three components are separated.

Create the Jeopardy Game Board for Learning Station 2.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A practical activity was chosen for TP 1 as it is a fun and interactive way to stimulate interest in physical activities.

An in-class activity was chosen for TPs 2 and 4 as it is a fun and interactive way to stimulate interest in personal fitness and healthy living and in ways to improve participation in physical activity.

An interactive lecture was chosen for TP 3 to orient the cadets to the Physical Activity Tracker requirements.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this session the cadets shall have participated in 60 minutes of MVPA, have participated in a personal fitness and healthy living learning station, and have learned the requirements for tracking MVPA time over a four-week period.

IMPORTANCE

It is important for cadets to participate in this lesson as it will give them tools to be more active and to track their participation in physical activity. Tracking participation in physical activities will make them aware of how much time they spend being physically active. Becoming more physically active and less sedentary will help cadets avoid long-term health issues related to inactivity.

Teaching Point 1 **Have the cadets participate in 60 minutes of MVPA.**

Time: 60 min Method: Practical Activity

BACKGROUND KNOWLEDGE

THE WARM-UP

Purpose of a Warm-Up

A warm-up session is composed of light cardiovascular exercises and stretches designed to:

- gradually increase respiratory action and heart rate;
- raise the muscle temperature to facilitate reactions in muscle tissue; and
- stretch the muscles.

The warm-up prepares the cardiovascular system for the physical activity. It is composed of activities such as brisk walking, light jogging, or simple games that elevate the heart rate. As a guide, allow 10 minutes to warm up for every hour of physical activity.

THE COOL-DOWN

Purpose of a Cool-Down

A cool-down is composed of light cardiovascular exercises and stretches designed to:

- allow the body time to slowly recover from physical activity and to help prevent injury;
- prepare the respiratory system to return to its normal state; and
- stretch the muscles to help relax and restore them to their resting length.

Guidelines for Stretching

The following guidelines should be followed while stretching:

- Stretch all major muscle groups, including the back, chest, legs, and shoulders.
- Never bounce while stretching.
- Hold each stretch for 10–30 seconds to let the muscles release fully.
- Repeat each stretch two to three times.
- When holding a stretch, support the limb at the joint.

ACTIVITY

1. Conduct a warm-up as per Annex A.
2. Conduct the selected Cardio Activity for all cadets in Training Levels 1–4 as per Annex C.
3. Conduct the cool-down as per Annex B.

Teaching Point 2 **Have the cadets participate in learning stations.**

Time: 20 min Method: In-Class Activity

1. Divide the cadets into their training levels.
2. Conduct the four learning stations concurrently, as per Annexes D, E, F, and G:
   (a) Phase One / Green Star / Proficiency Level One: *Canadian Physical Activity Guidelines* and *Canadian Sedentary Behaviour Guidelines*,
   (b) Phase Two / Red Star / Proficiency Level Two: Nutrition,
   (c) Phase Three / Silver Star / Proficiency Level Three: Stress, and
   (d) Phase Four / Gold Star / Proficiency Level Four: Healthy Lifestyle Tool Belt.

Teaching Point 3 **Explain Physical Activity Tracker requirements.**

Time: 5 min Method: Interactive Lecture

Distribute the Physical Activity Tracker located at Annex H.

PHYSICAL ACTIVITY TRACKER REQUIREMENTS

- Phases One and Two / Green and Red Stars / Proficiency Levels One and Two: Track participation in MVPA over a period of four consecutive weeks;
- Phase Three / Silver Star / Proficiency Level Three: achieve a minimum of 60 minutes of MVPA daily for at least 16 days over four consecutive weeks;
- Phase Four / Gold Star / Proficiency Level Four: achieve a minimum of 60 minutes of MVPA daily for at least 20 days over four consecutive weeks; and
- Phase Five / Master Cadet / Proficiency Level Five: achieve a minimum of 60 minutes of MVPA daily for at least 24 days over four consecutive weeks.

Teaching Point 4 **Conduct an activity on strategies to improve participation in physical activities.**

Time: 5 min Method: In-Class Activity

ACTIVITY

1. Ask the cadets: What strategies can you use to improve participation in physical activity?
2. Allow two minutes for cadets to individually list as many strategies as they can.
3. Ask the cadets to share items they have listed and explain why they are strategies for them.

Examples of strategies to improve participation in physical activities include:

- identifying enjoyable activities;
- finding an activity partner;
- tracking progress;
- joining a community or school recreational program;
- setting goals;
- trying a new physical activity;
- building physical activity into daily routine; and
- planning for physical activity.

CONCLUSION

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

It is important for cadets to participate in moderate- to vigorous-intensity physical activity as it will help them meet the *Canadian Physical Activity Guidelines*. Additionally, participating in personal fitness and healthy living learning stations will help them gain knowledge and skills that they can use throughout their lives.

INSTRUCTOR NOTES / REMARKS

There are numerous potential leadership opportunities for cadets when conducting these learning stations:

- Phase Five / Master Cadet / Proficiency Level Five cadets may plan, prepare and conduct the learning stations activity as a leadership project IAW PO 503 (Lead Cadet Activities); and
- Phase Three / Silver Star / Proficiency Level Three, Phase Four / Gold Star / Proficiency Level Four, and Phase Five / Master Cadet / Proficiency Level Five cadets may complete leadership assignments, such as leading or supervising individual learning stations, IAW POs 303 (Perform the Role of a Team Leader), 403 (Act as a Team Leader), and 503 (Lead Cadet Activities).

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Canadian Society for Exercise Physiology. (2013). *Guidelines*. Retrieved from: http://www.csep.ca

Health Canada. (2013). *Physical Activity*. Retrieved from: http://www.hc-sc.gc.ca/hl-vs/physactiv/index-eng.php

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WARM-UP

WARM-UP MOVEMENTS

1. Have the cadets get into a formation (eg, circle or half-circle) so they can all see the instructor.
2. Demonstrate and have the cadets complete the movements below for 30 seconds each.

Focus more on full range of motion of joints and muscles (and less on stretching).

3. Have the cadets complete continuous cardiovascular movements (eg, jogging, fast walking or skipping) for five minutes.

1.  **Jumping Jacks**	**2.**  **Butt Kicks**	**3.**  **High Knee Grab**
4.  **Hip Rotations**	**5.**  **Jumping Squats**	**6.**  **Trunk Rotations**
7.  **Shoulder Rotations**	**8.**  **Wrist Rotations**	**9.**  **Ankle Rotations**

Figure A-1 Instructor Guide

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 Figure A1-1 Jumping Jacks	Stand with your hands by your sides. Jump up, swing your arms up to meet above your head while spreading your feet shoulder width apart and landing softly back on the ground. Jump back into the starting position. Repeat the alternating jumps continuously.
 Figure A1-2 Butt Kicks	Jog in place while trying to touch your buttocks with your heels.
 Figure A1-3 High Knee Grab	Keeping your body straight, bring one knee up to your chest, holding it in place with your hands for 5 seconds. Return to the standing position, and repeat with the other knee. Continue alternating between both knees.
 Figure A1-4 Hip Rotations	Keep your shoulders square and centered over your feet, with feet planted on the floor. Place your hands on your hips and rotate your hips in a clockwise direction in large circles. Change direction after 15 seconds.

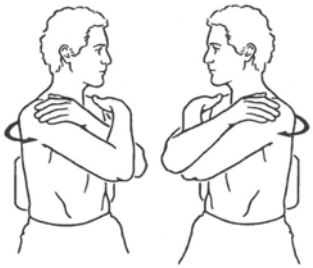
 Figure A1-5 Jumping Squats	Bend you knees to a sitting position (don't let your knees go past your toes), then jump up. Land lightly on the balls of your feet. Keep your back straight throughout the exercise.
 Figure A1-6 Trunk Rotations	Cross your arms over your chest and rotate slowly in one direction until you feel the stretch. Be careful not to over extend this movement. Alternate between both sides.
 Figure A1-7 Shoulder Rotations	Slowly swing your arms forward in small circles, gradually getting larger. Repeat in the other direction.
 Figure A1-8 Wrist Rotations	Rotate both hands in circular motions at the wrist. Rotate in both directions.

 Figure A1-9 Ankle Rotations	Keeping your foot off the floor, rotate your foot in one direction, and then the opposite direction. Switch and repeat on the opposite side.

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COOL-DOWN

ACTIVITY INSTRUCTIONS

1. Have the cadets get into a formation (eg, circle, half-circle) so they can all see the instructor.
2. Have the cadets complete the following movements. Supervise and correct technique as required.

Figure B1-1 Instructor Guide

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SAMPLE STRETCHES

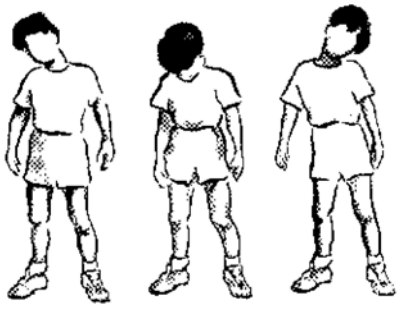

Figure B1-1 Neck Stretch

Slowly roll your head across your chest from shoulder to shoulder. Do not roll your head backwards.

Figure B1-2 Shoulder Push

Stand and extend your arms behind you, interlocking your fingers. Push up and back with your shoulders.

Hold this position for a minimum of 10 seconds.

Figure B1-3 Shoulder Shrug

Stand and raise your shoulders as high as possible and then lower your shoulders, stretching your neck up.

Pull your shoulders back as far as possible and then round your shoulders forward by pushing your shoulders forward as far as possible.

Hold each position for a minimum of 10 seconds.

Figure B1-4 Arm Circles

Hold your arms straight out, palms up. Make small circles with your arms, gradually increasing the size.

Reverse the direction of your circles.

Figure B1-5 Shoulder Stretch

Either standing or sitting, take your right arm in your left hand and bring it across your chest, supporting the joint by holding it behind the elbow. Pull lightly on the elbow towards your chest. You should feel the stretch in your right shoulder.

Hold this position for a minimum of 10 seconds and repeat on the opposite side.

Figure B1-6 Wrist Rotations

Rotate your hands in circular motions at the wrist.

Change direction and repeat on both sides.

Figure B1-7 Triceps Stretch

Stand and bring your right arm over your head, bent at the elbow. Use your left hand to gently pull your arm down.

Hold this position for a minimum of 10 seconds and repeat on the opposite side.

Figure B1-8 Forearm Stretch

In a kneeling position, place your hands on the floor in front of you turned so that your fingers are pointing toward your knees, and your thumbs are pointing out. Keeping your hands flat on the floor, lean back.

Hold this position for a minimum of 10 seconds.

Figure B1-9 Chest Stretch

Stand facing a wall. With your right arm bent and your elbow at shoulder height, place your palm against the wall. Turn your body away from your right arm. You should feel the stretch on the front side of your armpit and across the front of your chest.

Hold this position for a minimum of 10 seconds and repeat on the opposite side.

Figure B1-10 Side Stretch

Stand with your left arm up over your head. Bend at your waist towards the right side of your body.

Hold this position for a minimum of 10 seconds and repeat on the opposite side.

Figure B1-11 Lower Back Stretch

Lie on your back and bring your knees toward your chest. Grasp the back of your knees.

Hold this position for a minimum of 10 seconds.

Figure B1-12 Upper Back Stretch

Extend your arms straight in front of you at shoulder height crossing one arm over the other. With the palms facing each other, intertwine your fingers and press out through your arms. Let your chin fall to your chest as you exhale. You should feel the stretch in the upper back.

Hold this position for a minimum of 10 seconds and repeat on the opposite side.

Figure B1-13 Hamstring Stretch

Lie flat on the floor with your knees bent and your back flat on the floor. Slowly raise and straighten one leg, grasping it behind your thigh with both hands.

Hold this position for a minimum of 10 seconds.

Figure B1-14 Inner Thigh Stretch

Sit on the floor with your knees bent and the soles of your feet together. Grab your toes and pull yourself forward while keeping your back and neck straight.

Hold this position for a minimum of 10 seconds.

Grab your ankles and push your knees down toward the floor with your elbows.

Hold this position for a minimum of 10 seconds.

Figure B1-15 Hip Flexor

Kneel on your right knee. Position your left foot in front of you, bending your knee and placing your left hand on that leg for stability. Keep your back straight and abdominal muscles tight. Lean forward, shifting more body weight onto your front leg. You should feel the stretch in the front of your hip and the thigh of the leg you are kneeling on. Cushion your kneecap with a folded towel if necessary.

Hold this position for a minimum of 10 seconds and repeat on the opposite side.

Figure B1-16 Ankle Rotations

From a sitting position, rotate your foot in a clockwise, and then a counter-clockwise, direction.

Switch and repeat on the opposite side.

Figure B1-17 Calf Stretch

Stand three steps away from and facing a wall. Step in towards the wall with your right leg, bending your right knee and keeping your left leg straight. Extending your arms with your palms forward, reach out to the wall and let your body fall toward the wall. Keep your toes forward and your heels down. Lean your body into the wall with your left leg straight behind your body. You should feel the stretch in your left calf.

Hold this position for a minimum of
10 seconds and repeat on the opposite side.

Figure B1-18 Quadriceps Stretch

Stand with your hand against a wall for balance. Lift your left foot off the ground, bending your knee as if you are trying to kick your bottom with your heel. Do not lean forward at the hips. Grab and hold your ankle with your left hand. You should feel the stretch in your left thigh.

Hold this position for a minimum of
10 seconds and repeat on the opposite side.

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CARDIO ACTIVITY OPTION 1: CIRCUIT TRAINING

OBJECTIVE: This activity is designed to raise awareness of exercises that can be used to achieve sustained moderate- to vigorous-intensity physical activity.

TIME: 40 min

TRAINING LEVEL: 1–4

PRE-ACTIVITY INSTRUCTIONS:

- Select 10 stations from the ones provided at Appendix 1.

Suggested circuits include:

- Stations 1–10;
- Stations 11–20; or
- Stations 21–30.

- Review the selected stations' descriptions located at Appendix 2.
- Assign an instructor and a demonstrator to this activity.
- Gather the required resources:
  - Activity posters for each of the selected stations located at Appendix 1,
  - Tape,
  - Stopwatch,
  - Whistle, and
  - Music.
- Prepare the circuit layout by taping activity posters in numerical order on the wall, at intervals, in a clockwise direction.
- Prepare the demonstrator by reviewing the activity stations and ensuring the demonstrator is using proper technique.

ACTIVITY INSTRUCTIONS:

1. Complete a "walk about" of the 10 stations, explaining the activity at each station to the cadets and highlighting the importance of proper technique while the demonstrator demonstrates the activity. Depending on the size of the corps / squadron this can be done as:
   (a) one group with one instructor and one demonstrator,
   (b) five groups with five instructors and five demonstrators, or
   (c) ten groups with ten instructors and ten demonstrators.
2. Divide the cadets into 10 equal groups.

3. Give the cadets the following instructions:
   (a) each station is 45 seconds with the start and stop time indicated by a whistle blow,
   (b) 15 seconds to get to the next station,
   (c) circuit will be done three times, and
   (d) one minute rest and rehydration after the first and second completion of the circuit.
4. Supervise the cadets as they participate in the activity, correcting technique and providing encouragement.

CARDIO ACTIVITY OPTION 2: INSTRUCTOR-LED TRAINING

OBJECTIVE: This activity is designed to raise awareness of exercises that can be used to achieve sustained moderate- to vigorous-intensity physical activity.

TIME: 40 min

TRAINING LEVEL: 1–4

PRE-ACTIVITY INSTRUCTIONS:

- Assign an instructor to this activity. The instructor must be capable of leading a physical activity session. Recommended: Basic Fitness and Sports Course or Fitness and Sports Instructor Course cadet.
- Select one of the following options:
  - 1 round of (12 exercises x 3 min each) = 36 min
  - 2 rounds of (12 exercises x 1.5 min each) = 36 min
  - 3 rounds of (12 exercises x 1 min each) = 36 min
  - A combination of timings per exercise that totals 36 min
- Select one of the suggested Instructor Guide located at Appendix 3.
- Review the selected stations' descriptions located at Appendix 2.
- Gather the required resources:
  - Selected Instructor Guide located at Appendix 3,
  - Stopwatch, and
  - Music.

ACTIVITY INSTRUCTIONS:

1. Have the cadets spread out so that they have room to move.
2. Using the Instructor Guide, lead the cadets through the list of 12 physical activities, as per selected option above.
3. Provide water breaks and rest breaks between rounds, or as required.
4. Supervise, correct technique and provide encouragement throughout.

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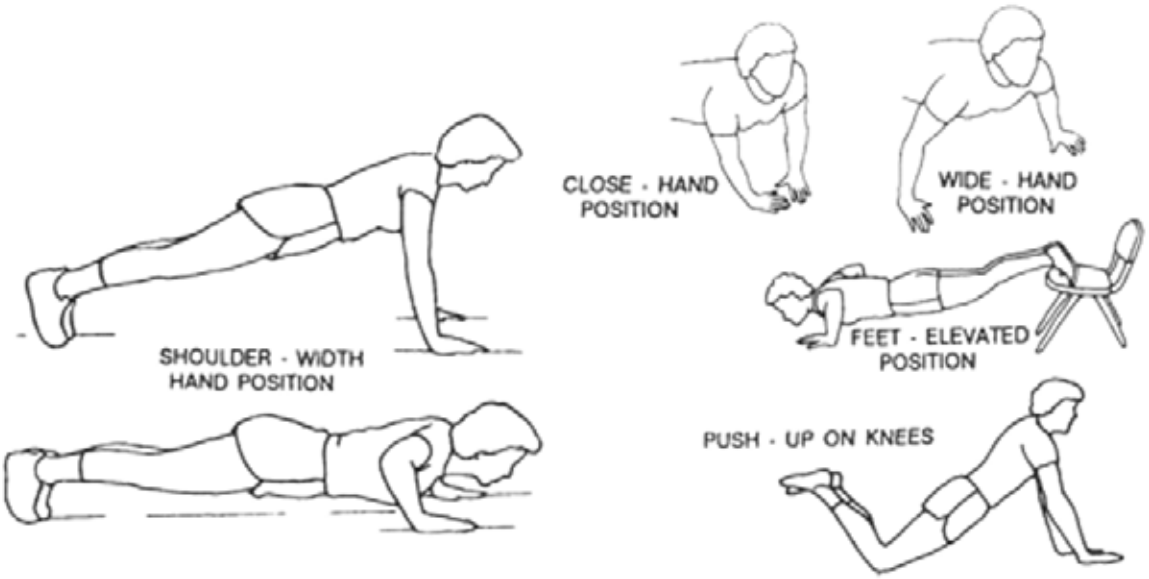
STATION 1: BICYCLE LEGS

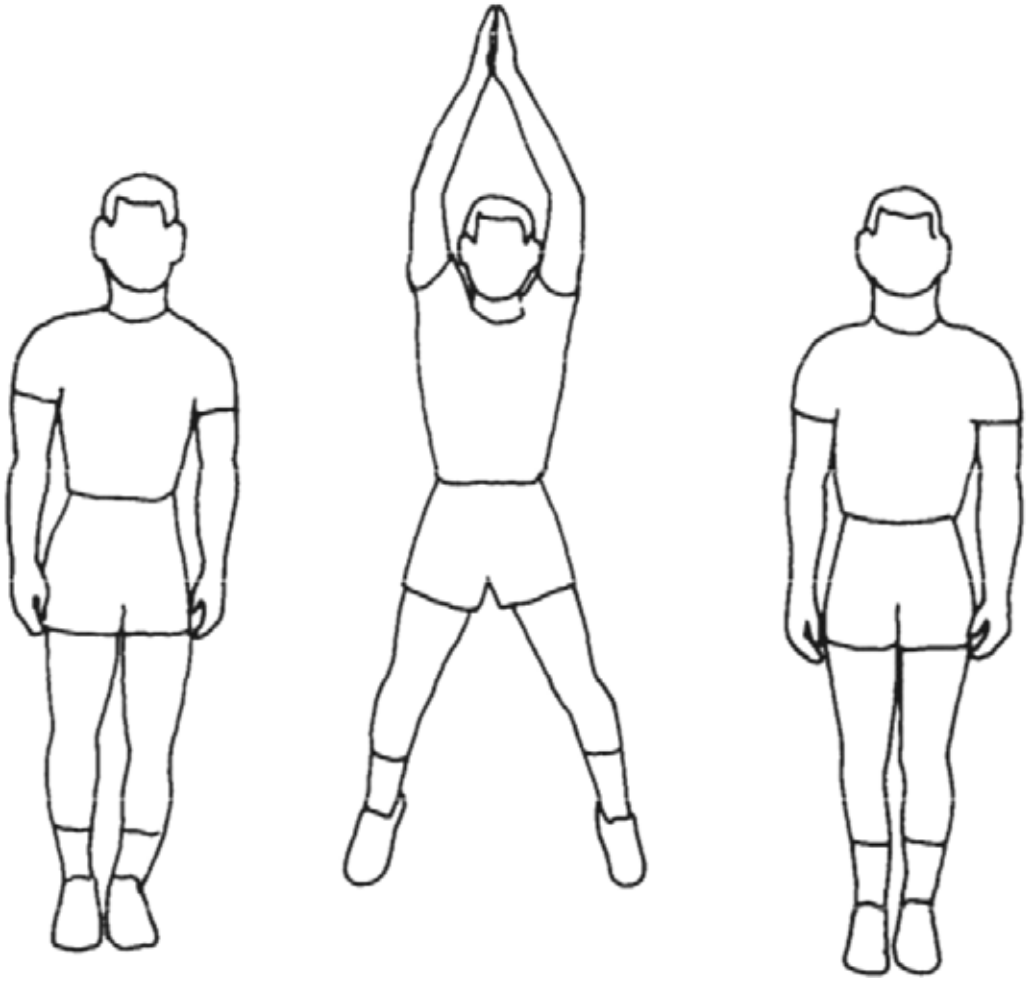
	Keep core tight to protect your back. Do not pull on your head with your hands.
↓ challenge	Place your hands on the floor beside your hips to help balance.

STATION 2: PUSH-UPS



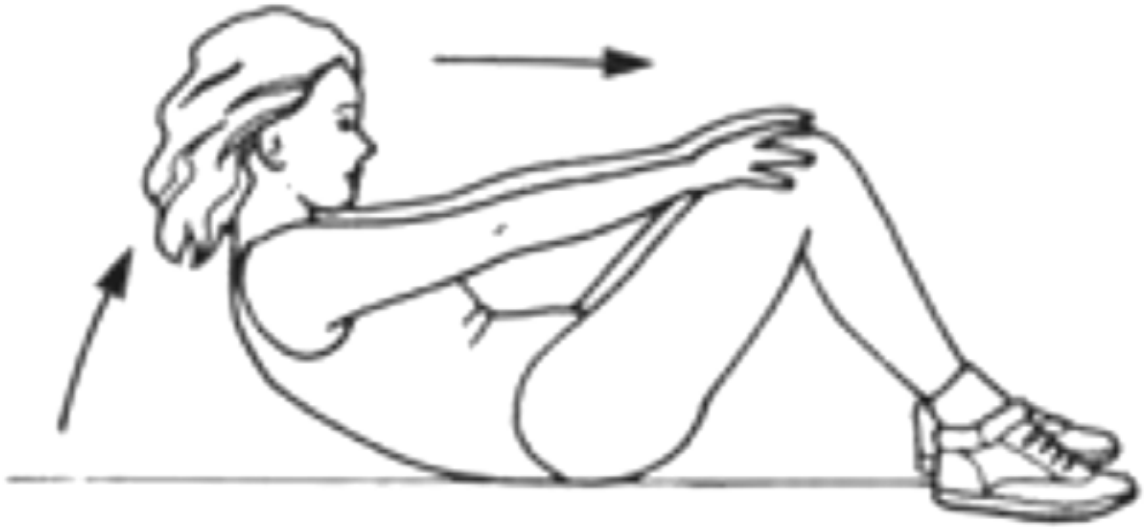
	Keep your body in a straight line.
↓ challenge	Place your knees on the floor.
↑ challenge	Move your hands closer together.

STATION 3: STAR JUMPS



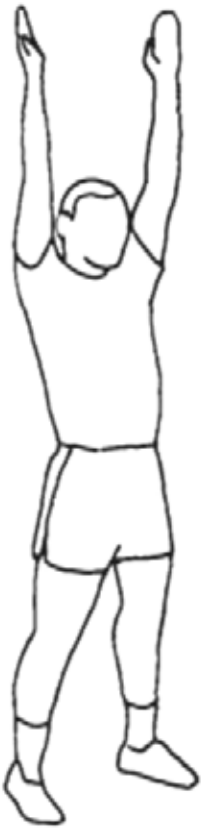
	Land with your knees slightly bent.
↓ challenge	Step between movements instead of jumping.

STATION 4: CURL-UPS



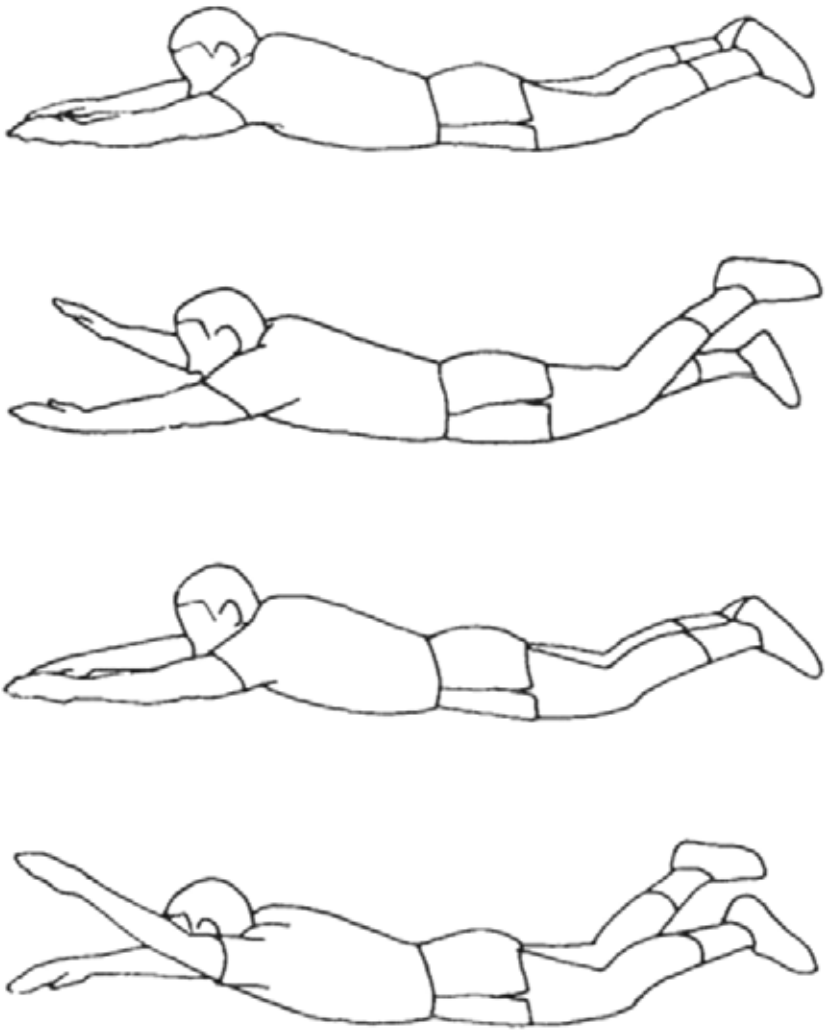
	Keep lower back and feet on the floor.
↓ challenge	Move your feet closer to your buttocks.
↑ challenge	Move your feet away from your buttocks.

STATION 5: FROG JUMPS



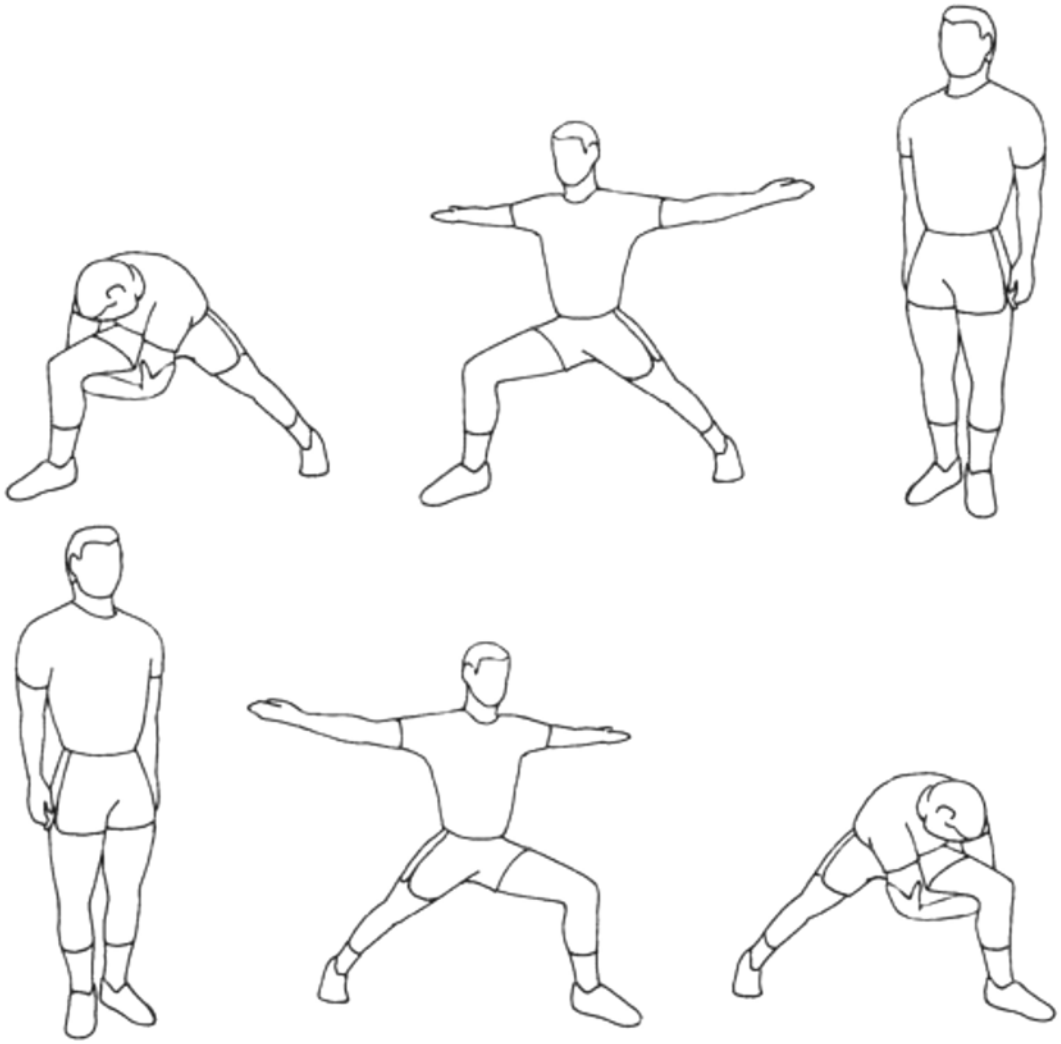
	Keep knees slightly over toes and feet shoulder width apart for balance. Land lightly.
↓ challenge	Remove the jump.
↑ challenge	Increase the height of your jump.

STATION 6: SWIMMER



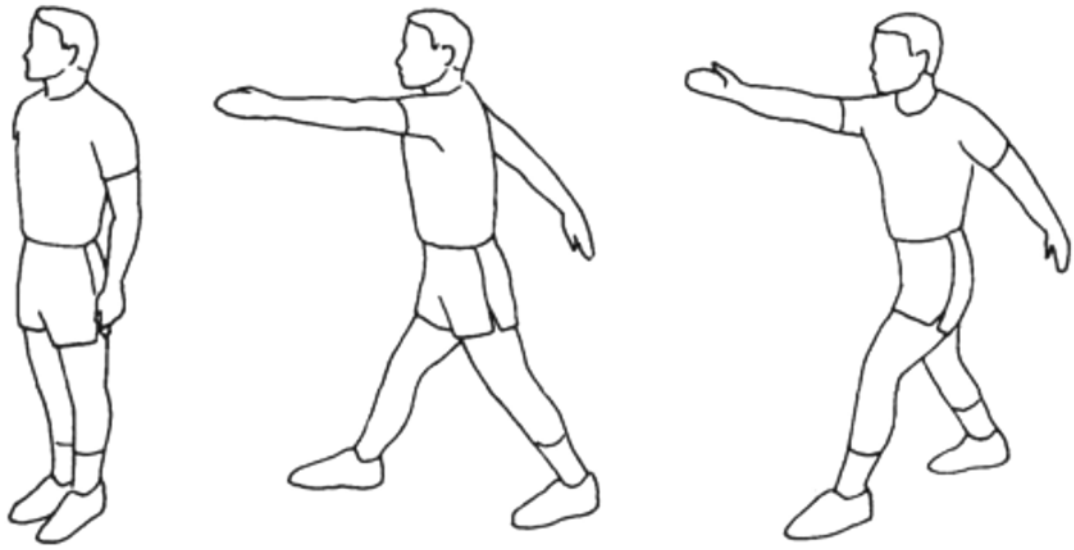
	Keep your core tight to protect your back.

STATION 7: REACHING LUNGES



	Keep your posture straight to protect your back.
↓ challenge	Remove reach movement.
↑ challenge	Replace with alternating jump lunges.

STATION 8: CROSS COUNTRY SKIER

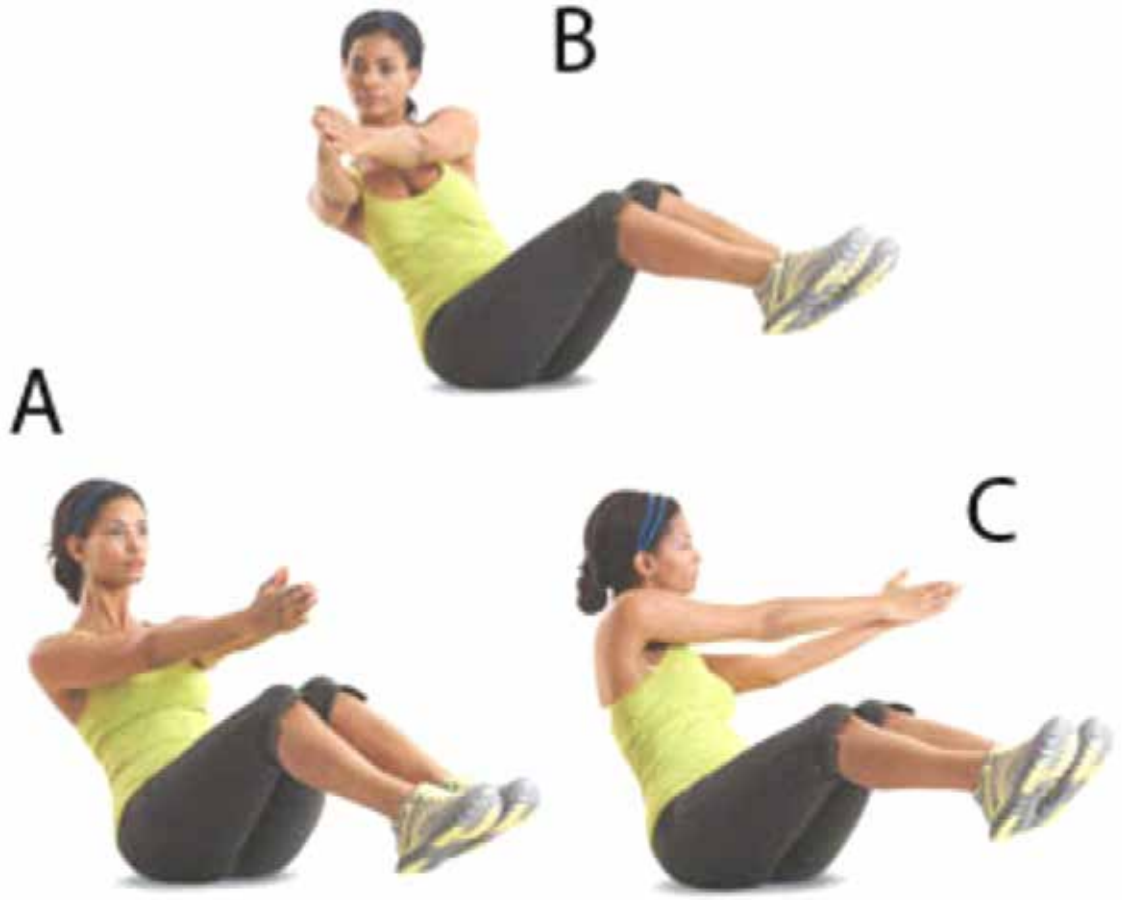


	Land lightly between jumps.
↓ challenge	Step instead of jumping in between positions.

STATION 9: BURPEES

	Keep core tight in plank position to protect your back.
↓ challenge	Stand up instead of jumping. Walk your feet to and from the plank position.
↑ challenge	Add a push-up from the plank position.

STATION 10: SEATED TWISTS



	Keep shoulders and posture straight to protect your back.
↓ challenge	Place feet on the floor for balance.
↑ challenge	Straighten arms and legs.

STATION 11: MOUNTAIN CLIMBER

	Keep head up for safety.
↓ challenge	Step movements instead of jumping. Lower tempo.

STATION 12: ALTERNATING TS

	Keep core tight to protect your back.
↓ challenge	Balance on bent forearm and one knee.
↑ challenge	Lift top leg up and hold.

STATION 13: SPIDERMAN PUSH-UPS

	Keep straight line from head to knees.
↓ challenge	Regular push-ups.

STATION 14: LATERAL JUMPS

	Land lightly.
↓ challenge	Step instead of jumping.

STATION 15: FRONT KICK LUNGES

	Keep knees slightly bent while kicking.
↓ challenge	Touch knee instead of toes.

STATION 16: ALTERNATING CANOE STROKES

	Keep core tight to protect your back.

STATION 17: JUMPING HIGH KNEES

	Keep posture straight to protect your back.

STATION 18: OVER THE TOP

	Keep shoulders square, and back straight.
↑ challenge	Lift foot high off the floor with straightened leg.

STATION 19: SQUAT JUMPS

	Keep back straight. Land lightly.
↓ challenge	Remove the jump.

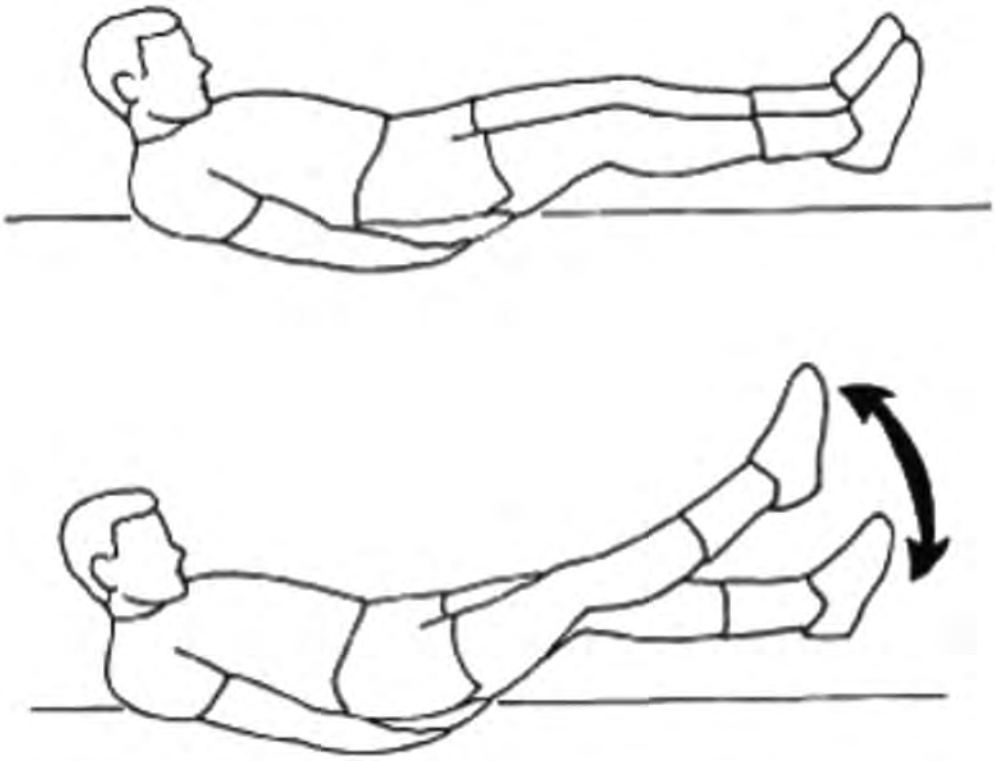
STATION 20: DONKEY KICKS

	Keep core tight.

STATION 21: ALTERNATING JUMP LUNGES

	Keep back straight.
↓ challenge	Step instead of jumping.

STATION 22: FLUTTER KICK



	Keep lower back on the floor.

STATION 23: HIGH KNEE BRIDGE

	Keep head and shoulders against the floor.
↓ challenge	Remain in bridge position.

STATION 24: ALTERNATING BRIDGE

	Keep straight line from head to knees.
↓ challenge	Place knees on the floor. Continue the exercise.

STATION 25: WINDMILL JUMPING LUNGES

	Land lightly. Keep front knee behind the toes.
↓ challenge	Hands to knee.

STATION 26: HIGH KNEE SMASH

	Keep your back straight.
↓ challenge	Hand to knee instead.

STATION 27: ALTERNATING LEG REACH

	Keep back straight and hips square. Keep supporting knee slightly bent.

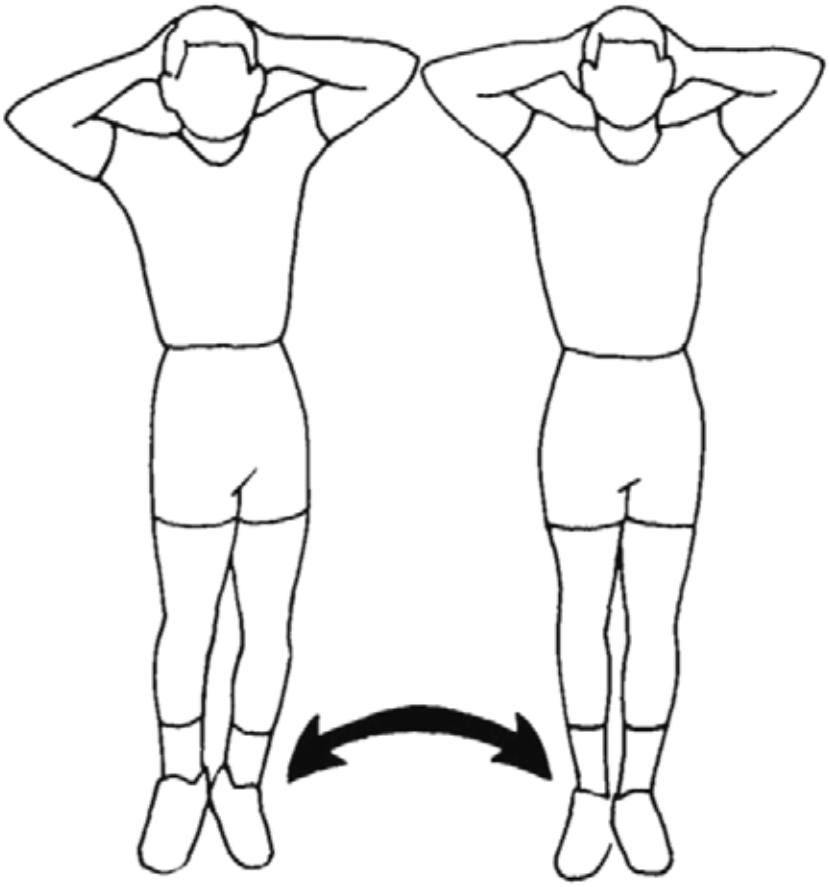
STATION 28: LEG SWOOP

	Control your movement at all times.

STATION 29: SKATER'S CRUNCH

	Keep core tight.
↓ challenge	Step instead of jumping.

STATION 30: SLALOM JUMPS



	Keep your back straight. Land lightly.
↓ challenge	Step between movements instead of jumping.
↑ challenge	Increase the tempo.

Stations	Instructions
Station 1: Bicycle Legs	Lie on your back. Lift your legs off the floor and put your hands on your head. Alternate bringing your left knee to your right elbow, and your right knee to your left elbow.
Station 2: Push-ups	As per CATO 14-18, Cadet Fitness Assessment and Incentive Program.
Station 3: Star Jumps	Stand with your feet together and your arms by your side. In one motion, jump up while attempting to touch your hands above your head and splitting your legs apart, and then bring your body back to the original position before landing on the ground.
Station 4: Curl-ups	As per CATO 14-18, Cadet Fitness Assessment and Incentive Program, or with your hands on your knees.
Station 5: Frog Jumps	Feet shoulder-width apart, squat as low as you feel comfortable. (This may mean as far as having your buttocks close to the ground.) While in the squat position, touch the ground with your fingers. Then, explode upwards and reach your hands into the air. Land lightly and repeat.
Station 6: Swimmer	Lie on your stomach. Lift straight arms and legs in the air and alternate lifting left arm / right leg, and right arm / left leg. Keep your head close to the ground during the exercise.
Station 7: Reaching lunges	From the standing position, lunge to the right with your right leg, with your arms out straight at shoulder level, and your back straight. Ensure your right knee remains behind your toes as you get into position. Then, grab your right thigh with your arms. Release, and come back to the initial position. Repeat on the left side. Alternate between both sides.
Station 8: Cross country skier	Jump up so that your left foot and right arm are in front of your body. Switch your feet and arms. Repeat. Land lightly between jumps.
Station 9: Burpees	From the standing position, kneel and put your hands on the ground. Explode into the push-up position. Explode back into the kneeling position. Jump up in the air, with your arms up. Repeat.
Station 10: Seated Twists	Sit on the ground, and get into a V position. Lift your feet off the floor and then extend your arms in front of you, so that they are at a 90 degree angle with your body. Keeping your arms straight, alternate pointing your hands to the left and to the right. The speed of the movement should be slow and controlled. Keep your core tight.
Station 11: Mountain Climber	Get into a push-up position. Bring the left foot up, so your left knee is by your chest. In one movement, bring your left foot to the back while moving your right foot to the front. Keep alternating between movements. Keep your back straight and your buttocks down.
Station 12: Alternating Ts	Balance your body with your right arm and the outside of your right foot. Lift your right arm straight into the air. Then, smoothly move into a plank position, and keep turning until you balance on the left arm and the outside of the left foot. Repeat from one side to the other.

Stations	Instructions
Station 13: Spiderman push-ups	Get into a push-up position. As you are going down into the push-up, bring one leg up, on the outside, so that the knee of that leg lifts up towards the elbow. On the way up, bring the leg back into place. Alternate between legs.
Station 14: Lateral jumps	Stand on one leg, with the knee slightly bent. Using your arms for momentum, jump in the air, and land on the other leg. Repeat from side to side.
Station 15: Front kick lunges	Move your right foot back, to get into a lunge position. Ensure that the knee that is in front stays behind your toes. Touch your right fingers on the floor by your front toes. When you get up, kick forward with the foot that was behind. Keep kicking with the same foot for half of the time. Then repeat with the other leg for the remainder of the time.
Station 16: Alternating Canoe Strokes	Stand with your legs slightly wider than your shoulders, feet pointing towards the outside. Put your hands together, and in a smooth motion, move them from left to right, as if you were canoeing. The speed of the movement should be slow and controlled. Specific attention should be placed on keeping the core tight.
Station 17: Jumping High Knees	With your arms up, fists in front of your shoulders, run on the spot, while bringing your knees up. Land lightly between movements.
Station 18: Over the Top	Stand with your legs wider than your shoulders, knees bent, and feet pointing towards the outside. Put your hands together by your hips. In a quick motion straighten your legs and extend your arms (still linked at the hands) above your head. Come back to the original position, and alternate with the other side.
Station 19: Squat Jumps	Feet shoulder-width apart, squat down. Ensure your knees remain behind your toes as you squat. From that position, jump up in the air. Land lightly and repeat.
Station 20: Donkey Kicks	Get into the table position, on your hands and knees. Lift one knee off the floor, and while keeping it bent at a 90-degree angle, lift it up so your thigh becomes in-line with your back, and then bring it back to the other knee. Don’t let it rest on the floor. Keep kicking with the same leg for half of the time. Then repeat with the other leg for the remainder of the time.
Station 21: Alternating Jump Lunges	From the standing position, jump into the lunge position. Ensure that the knee that is in front stays behind your toes. Then jump into the lunge position with your opposite leg in front. Keep alternating.
Station 22: Flutter Kick	Lie on your back. Lift your shoulders off the floor and place your hands under your buttocks. Lift your legs 10 cm off the floor. Keeping your legs straight, alternate moving your feet up and down without touching the floor.
Station 23: High Knee Bridge	Lie on your back. Place your hands by your sides and bring your feet close to your buttocks, so you can lift the bottom of your body on your heels. Get into the bridge position (knees at a 90-degree angle), and from there, alternate lifting the left and the right knees.
Station 24: Alternating Bridge	Get into the plank position. Simultaneously, lift your right arm and your left leg. Get back into the original position, and then lift your left arm and your right leg. Keep alternating.

Stations	Instructions
Station 25: Windmill Jumping Lunges	Take a side step on the right with the right leg and bend down to touch your right toes with your left hand. Jump up into the same position on the left side. Bend down to touch your left toes with your right hand. Repeat. Keep your back straight throughout the exercise.
Station 26: High Knee Smash	Stand up with your right arm up. In a quick motion, bring your left knee up to meet with your right elbow. Bring the knee back down and repeat for half of the time. Then repeat with the other leg for the remainder of the time.
Station 27: Alternating Leg Reach	From the standing position, lean forward with your hands forward and lift one leg up. Get back into the original position and repeat with the other leg. The speed of the movement should be slow and controlled. Keep the core tight.
Station 28: Leg Swoop	From the push-up position, extend one leg to its opposite side. Get back into the original position. Repeat with the other leg. Keep alternating.
Station 29: Skater's Crunch	With your arms up, fists in front of your shoulders, put your weight on your left leg. Simultaneously, bring your right leg behind, extending past your body on the left side. Jump into the same position on the right side. Keep alternating.
Station 30: Slalom jumps	Stand up and put your hands behind your head. Keeping your feet together, jump from one side to the other.

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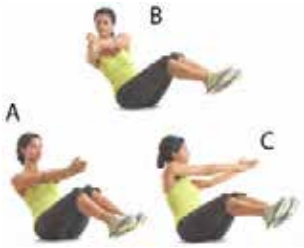
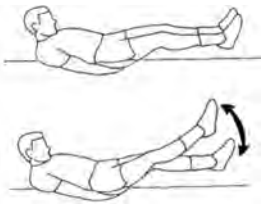
1.  **BURPEES**	2.  **OVER THE TOP**	3.  **STANDING SQUAT JUMPS**
4  **DONKEY KICKS**	5.  **SEATED TWISTS**	6.  **ALTERNATING JUMP LUNGES**
7.  **FLUTTER KICK**	8.  **HIGH KNEE BRIDGE**	9.  **ALTERNATING Ts**
10.  **LATERAL JUMPS**	11.  **ALTERNATING BRIDGE**	12.  **FRONT KICK LUNGES**

Figure C3-1 Instructor Guide, Option 1

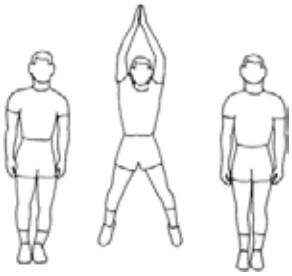
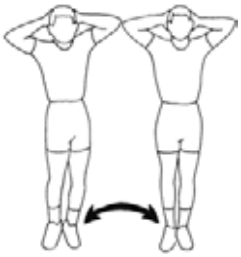
1.  MOUNTAIN CLIMBER	2.  BICYCLE LEGS	3.  SQUAT JUMPS
4  WINDMILL JUMPING SIDE LUNGES	5.  STAR JUMPS	6.  HIGH KNEE SMASH
7.  ALTERNATING LEG REACH	8.  LEG SWOOP	9.  SPIDERMAN PUSH-UPS
10.  SKATER'S CRUNCH	11.  SLALOM JUMPS	12.  FRONT KICK LUNGES

Figure C3-1 Instructor Guide, Option 2

LEARNING STATION 1: CANADIAN PHYSICAL ACTIVITY GUIDELINES AND CANADIAN SEDENTARY BEHAVIOUR GUIDELINES

OBJECTIVE: This activity is designed to raise awareness of the *Canadian Physical Activity Guidelines* and *Canadian Sedentary Behaviour Guidelines for Youth*, moderate-to-vigorous-intensity activities, and the three components of fitness.

TIME: 20 min

TRAINING LEVEL: 1

PRE-ACTIVITY INSTRUCTIONS:

- Assign an instructor to this activity.
- Gather the required resources:
  - *Canadian Physical Activity Guidelines for Youth* located at Appendix 1 (one copy per cadet), and
  - *Canadian Sedentary Behaviour Guidelines for Youth* located at Appendix 2 (one copy per cadet).
- Cut out the Three Components of Physical Fitness located at Appendix 3 and post on the wall.

ACTIVITY INSTRUCTIONS:

1. Distribute one copy of the *Canadian Physical Activity Guidelines for Youth* to each cadet.
2. Give the cadets three minutes to review the *Canadian Physical Activity Guidelines for Youth*. Ask cadets the following questions:
   (a) How much moderate- to-vigorous-intensity physical activity should you do daily? (60 min)
   (b) How often should you do vigorous-intensity activity per week? (3 times)
   (c) How often in a week should you do activities that strengthen muscles and bones? (3 days per week)
   (d) What activities can help strengthen muscles and bones? (Examples include planks, curl ups, sit ups, push ups, chin ups, lunges)
3. Explain the difference between moderate and vigorous intensity activity:
   (a) Moderate-intensity activity will cause you to sweat a bit and breathe harder.
   (b) Vigorous-intensity activity will cause you to sweat and be out of breath.
4. Point out the three cut-outs on the wall and ask the cadets to identify what they are. (They are the three components of physical fitness.) Explain that a balance of these is important to being physically fit.
5. Advise the cadets that they are now going to try three different activities so that they can feel the difference between moderate- and vigorous-intensity physical activity.
6. Tell the cadets that during the activity they should note when they are doing moderate-intensity activity and when it changes to vigorous-intensity activity. Tell the cadets the change in activity intensity will be different for each individual based on their current level of physical fitness.
7. Have the cadets participate in a six-minute period of activity (2 minutes of walking on the spot, 2 minutes of running on the spot, 2 minutes of jumping jacks).

8. Have the cadets reflect on the activity they have just completed. Suggested questions include:
   (a) Could you tell when your activity intensity changed? How?
   (b) Were you surprised at how soon the intensity changed?
   (c) How often are you supposed to do vigorous-intensity activity?
9. Distribute a copy of the *Canadian Sedentary Behaviour Guidelines for Youth*.
10. Give the cadets three minutes to review the *Canadian Sedentary Behaviour Guidelines for Youth*. Ask the cadets the following questions:
    (a) What is sedentary behaviour? (A time when you are doing very little activity.)
    (b) What are the guidelines for youth for sedentary behaviour? (Minimize the time spent being sedentary each day. Limit recreational screen time to no more than 2 hours per day.)
    (c) What are some alternatives to sedentary behaviours? (Answers may vary. See table below.)

Some examples of alternatives to sedentary behaviour include:

- taking the stairs instead of taking the elevators;
- walking to someone's room and socializing instead of texting them;
- playing sports instead of watching them on television; or
- walking to school or riding a bicycle instead of taking the bus.

Canadian Physical Activity Guidelines

FOR YOUTH - 12 – 17 YEARS

Guidelines

For health benefits, youth aged 12-17 years should accumulate at least 60 minutes of moderate- to vigorous-intensity physical activity daily. This should include:

Vigorous-intensity activities at least 3 days per week.

Activities that strengthen muscle and bone at least 3 days per week.

More daily physical activity provides greater health benefits.

Let's Talk Intensity!

Moderate-intensity physical activities will cause teens to sweat a little and to breathe harder. Activities like:

- Skating
- Bike riding

Vigorous-intensity physical activities will cause teens to sweat and be 'out of breath'. Activities like:

- Running
- Rollerblading

Being active for at least **60 minutes** daily can help teens:

- Improve their health
- Do better in school
- Improve their fitness
- Grow stronger
- Have fun playing with friends
- Feel happier
- Maintain a healthy body weight
- Improve their self-confidence
- Learn new skills

Parents and caregivers can help to plan their teen's daily activity. Teens can:

- ☑ Walk, bike, rollerblade or skateboard to school.
- ☑ Go to a gym on the weekend.
- ☑ Do a fitness class after school.
- ☑ Get the neighbours together for a game of pick-up basketball, or hockey after dinner.
- ☑ Play a sport such as basketball, hockey, soccer, martial arts, swimming, tennis, golf, skiing, snowboarding…

Now is the time. 60 minutes a day can make a difference.

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Canadian Sedentary Behaviour Guidelines

FOR YOUTH - 12 – 17 YEARS

Guidelines

For health benefits, youth aged 12–17 years should minimize the time they spend being sedentary each day. This may be achieved by

- Limiting recreational screen time to no more than 2 hours per day; lower levels are associated with additional health benefits.
- Limiting sedentary (motorized) transport, extended sitting and time spent indoors throughout the day.

The lowdown on the slowdown: what counts as being sedentary?

Sedentary behaviour is time when teens are doing very little physical movement. Some examples are:

- Sitting for long periods
- Using motorized transportation (such as a bus or a car)
- Watching television
- Playing passive video games
- Playing on the computer

Spending less time being sedentary can help teens:

- Maintain a healthy body weight
- Improve their self-confidence
- Do better in school
- Improve their fitness
- Have more fun with their friends
- Have more time to learn new skills

Cutting down on sitting down. Help teens swap sedentary time with active time!

Now is the time for teens to get up and get moving!

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CARDIOVASCULAR ENDURANCE

MUSCULAR STRENGTH & ENDURANCE

FLEXIBILITY

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LEARNING STATION 2: NUTRITION JEOPARDY

OBJECTIVE: This activity is designed to raise awareness of proper portion amounts, daily recommended serving sizes, and how to use *Eating Well With Canada's Food Guide*.

TIME: 20 min

TRAINING LEVEL: 2

PRE-ACTIVITY INSTRUCTIONS:

- Assign an instructor to this activity.
- Create the Jeopardy Game Board, as shown in Appendix 1.
- Make copies of *Eating Well With Canada's Food Guide* (one per four cadets) located at Appendix 3.

ACTIVITY INSTRUCTIONS:

1. Divide the cadets into teams of four.
2. Distribute a copy of *Eating Well With Canada's Food Guide* to each team.
3. Explain to the cadets that:
   (a) The objective of the game is to answer questions correctly and accumulate money.
   (b) The team that provides the correct answer can select the next question; questions are for all teams to try to answer.
   (c) *Eating Well With Canada's Food Guide* may be used to find answers.
   (d) When a team believes they have a correct answer, a cadet from their team must stand up.
   (e) The first cadet to stand will attempt to answer the question. A correct answer will earn that team the amount of money allocated to that question. For an incorrect answer, that amount will be withdrawn from that team's total.
4. Start the game by reading any of the $10 questions.
5. When a correct answer is given, read the explanation on the bottom of the question.
6. When all questions on the board have been answered, determine a winning team.
7. As time allows, have the cadets discuss what they have learned through participating in this activity.

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JEOPARDY GAME BOARD

VEGETABLES AND FRUIT	GRAIN PRODUCTS	MILK AND ALTERNATIVES	MEAT AND ALTERNATIVES	VARIOUS
$10	$10	$10	$10	$10
$20	$20	$20	$20	$20
$30	$30	$30	$30	$30
$40	$40	$40	$40	$40
$50	$50	$50	$50	$50

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Vegetables and Fruit

Q: How many daily servings of vegetables and fruit do teens 14–18 require?

$10

A: They require 6–8 servings of vegetables and fruit.

Explanation. Females require seven daily servings, while males require eight. Servings may be fresh, canned, frozen, dried, or even pureed.

Q: How many millilitres are in one serving of fruit juice?

$20

A: In one fruit juice serving, there are 125 ml. That is equivalent to ½ cup.

Q: When eating canned vegetables, what is one portion?

$30

A: One portion of canned vegetables is 125 ml. That is equivalent to ½ cup.

Explanation. This amount also applies to fresh and frozen vegetables, cooked leafy vegetables, fresh, frozen, or canned fruits, as well as 100% juice.

Q: What two colours of vegetables should you eat each day?

$40

A: You should eat at least one dark green and one orange vegetable each day.

Q: What methods of cooking vegetables are recommended instead of deep fried?

$50

A: Enjoy vegetables steamed, baked or stir-fried instead of deep fried.

Grain Products

Q: How many daily servings of grain products do teens 14–18 require?

$10

A: They require 6–7 servings of grain products every day.
Explanation. Females require six daily servings, while males require seven.

Q: How many slices of bread make up one serving of grain products?

$20

A: One slice of bread represents one serving of grain products.

Q: What percentage of your daily grain intake should be from whole grain?

$30

A: At least half of your grain products should be from whole grain each day.

Q: One cup of brown rice represents how many portions of grain products?

$40

A: One cup of rice is two portions of Grain Products.

Q: How much pasta can you eat if you have to consume 3 portions of Grain Products?

$50

A: You could consume 1 ½ cups of **cooked** pasta.

Explanation. Each ½ cup of pasta is one portion of grain products. The same applies to couscous, cooked rice, bulgur and quinoa.

Milk and Alternatives

Q: How many daily servings of milk and alternatives do teens 14–18 require? A: They require 3–4 servings of milk and alternatives each day. **Explanation.** In this case, both females and males require the same amount daily.	**$10**
Q: How much milk can you drink to fulfill one serving of milk and alternatives? A: One cup of milk (250 mL) is one portion of milk and alternatives.	**$20**
Q: What percentage of milk is recommended for consumption? A: The recommendation is to drink skim, 1%, or 2% milk.	**$30**
Q: To get adequate vitamin D, how many cups of milk are recommended daily? A: The recommendation is 500 mL (2 cups) of milk every day.	**$40**
Q: How much yogurt can be consumed for one serving of milk and alternatives? A: One portion of yogurt is 175g. That is equivalent to ¾ cup.	**$50**

Meat and Alternatives

Q: How many daily servings of meat and alternatives do teens 14–18 require?

$10

A: They require 2–3 servings of meat and alternatives each day.

Explanation. Females require two daily servings, while males require three.

Q: How many servings of fish are recommended each week?

$20

A: At least 2 servings of fish are recommended every week.

Q: How many eggs make up one serving of meat and alternatives?

$30

A: Two eggs make one serving of meat and alternatives.

Q: What cooking methods are recommended for meat and alternatives?

$40

A: The recommendation is to use cooking methods such as roasting, baking or poaching that require little or no added fat.

Q: What are some examples of legumes?

$50

A: Beans and lentils are examples of legumes.

Miscellaneous

Q: What vegetable oils are recommended for use?

$10

A: Vegetable oils, such as canola, olive, and soybean are recommended.

Q: What tool can be used to help compare food products?

$20

A: The Nutrition Facts table can be used to make wiser choices.
Explanation. For example, when selecting cheese or yogurts, the Nutrition facts table can help select a lower fat product.

Q: What should be done with the skin on poultry?

$30

A: Skin on poultry should be removed. Visible fat from meat should also be trimmed.

Q: What Food Group would you benefit from having at each meal and snacks?

$40

A: You would benefit from eating vegetables and fruit at all meals and as snacks.

Q: What are the benefits of following *Canada's Food Guide*?

$50

A: Meeting your needs in vitamins, minerals, and other nutrients; reducing the risk of obesity, type 2 diabetes, heart disease, certain types of cancer and osteoporosis; and contributing to your overall health and vitality.

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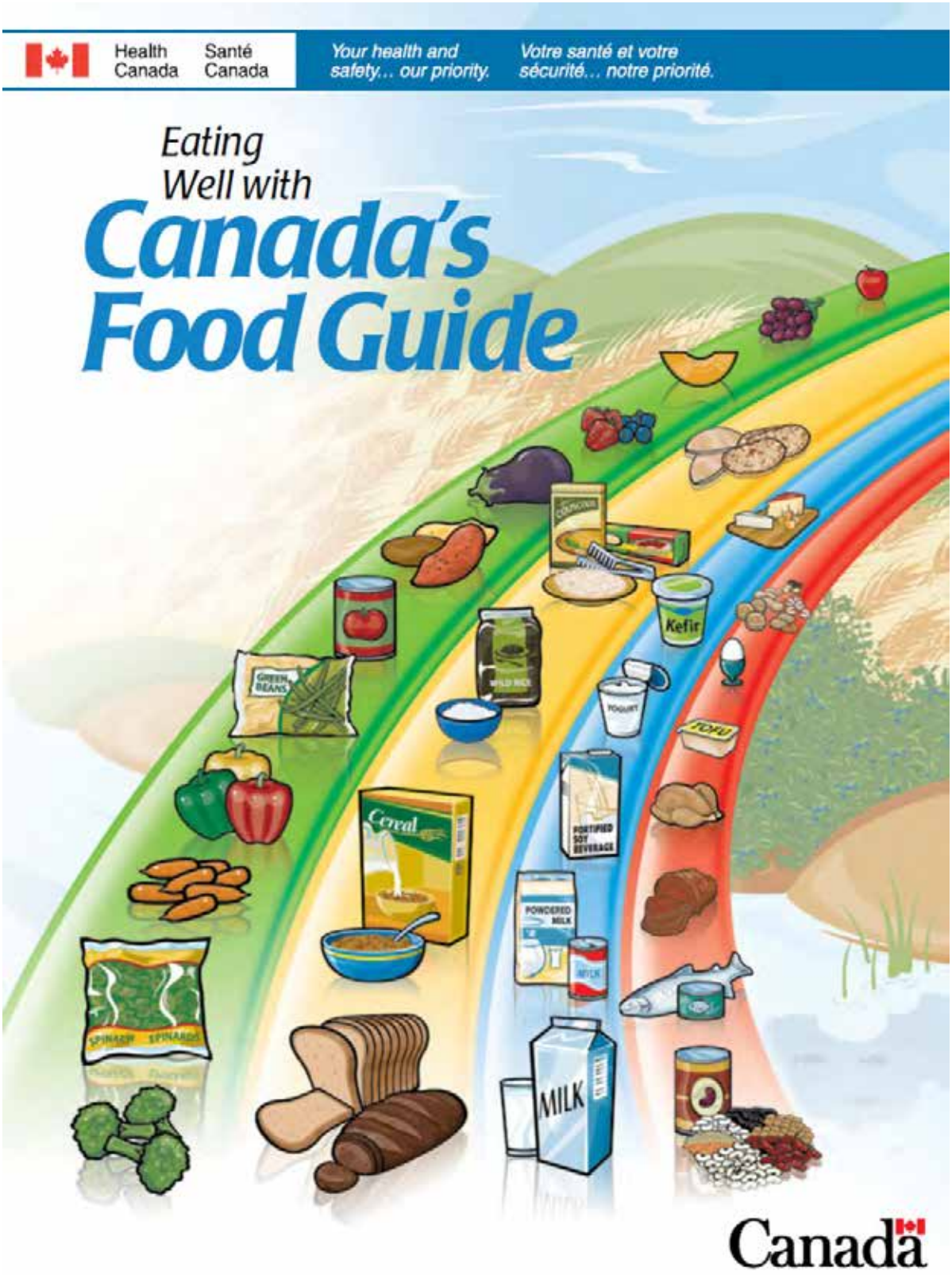
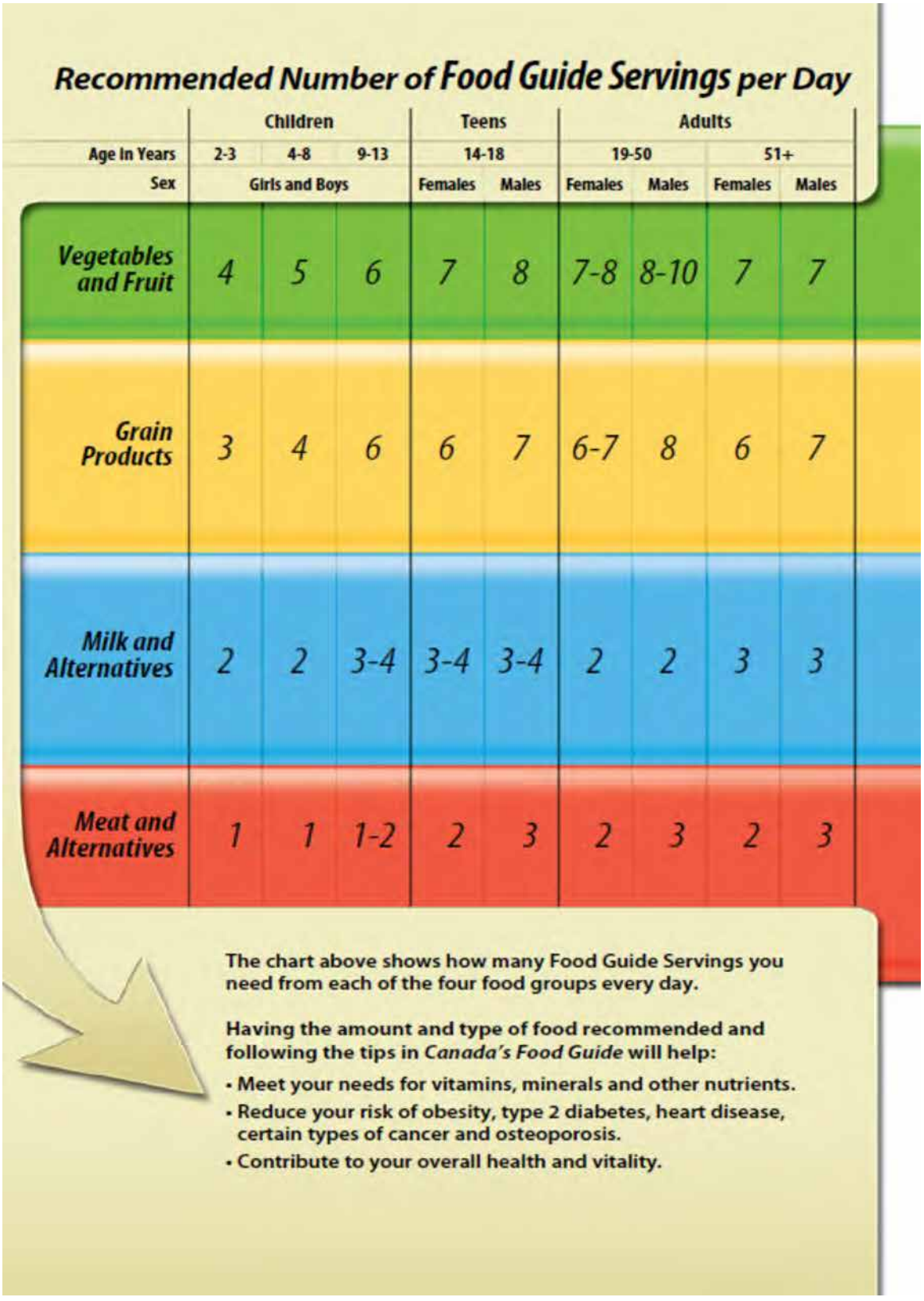

Health Canada
Santé Canada
Your health and safety… our priority.
Votre santé et votre sécurité… notre priorité.
Eating Well with
Canada's Food Guide
Kefir
Cereal
MILK
Canada



Recommended Number of Food Guide Servings per Day

	Children			Teens		Adults			
Age in Years	2-3	4-8	9-13	14-18		19-50		51+	
Sex	Girls and Boys			Females	Males	Females	Males	Females	Males
Vegetables and Fruit	4	5	6	7	8	7-8	8-10	7	7
Grain Products	3	4	6	6	7	6-7	8	6	7
Milk and Alternatives	2	2	3-4	3-4	3-4	2	2	3	3
Meat and Alternatives	1	1	1-2	2	3	2	3	2	3

The chart above shows how many Food Guide Servings you need from each of the four food groups every day.

Having the amount and type of food recommended and following the tips in *Canada's Food Guide* will help:

- Meet your needs for vitamins, minerals and other nutrients.
- Reduce your risk of obesity, type 2 diabetes, heart disease, certain types of cancer and osteoporosis.
- Contribute to your overall health and vitality.


What is One Food Guide Serving?
Look at the examples below.
Fresh, frozen or canned vegetables
125 mL (½ cup)
Leafy vegetables
Cooked: 125 mL (½ cup)
Raw: 250 mL (1 cup)
Fresh, frozen or canned fruits
1 fruit or 125 mL (½ cup)
100% Juice
125 mL (½ cup)
Bread
1 slice (35g)
Bagel
½ bagel (45 g)
Flat breads
½ pita or ½ tortilla (35 g)
BROWN RICE
Cooked rice, bulgur or quinoa
125 mL (½ cup)
Cereal
Cold: 30 g
Hot: 175 mL (¾ cup)
Cooked pasta or couscous
125 mL (½ cup)
MILK
Milk or powdered milk (reconstituted)
250 mL (1 cup)
Canned milk (evaporated)
125 mL (½ cup)
Fortified soy beverage
250 mL (1 cup)
Yogurt
175 g
(¾ cup)
Kefir
175 g
(¾ cup)
Cheese
50 g (1 ½ oz.)
Cooked fish, shellfish, poultry, lean meat
75 g (2 ½ oz.)/125 mL (½ cup)
Cooked legumes
175 mL (¾ cup)
TOFU
Tofu
150 g or
175 mL (¾ cup)
Eggs
2 eggs
Peanut or nut butters
30 mL (2 Tbsp)
Shelled nuts and seeds
60 mL (¼ cup)
Oils and Fats
• Include a small amount – 30 to 45 mL (2 to 3 Tbsp) – of unsaturated fat each day. This includes oil used for cooking, salad dressings, margarine and mayonnaise.
• Use vegetable oils such as canola, olive and soybean.
• Choose soft margarines that are low in saturated and trans fats.
• Limit butter, hard margarine, lard and shortening.

Make each Food Guide Serving count…
wherever you are – at home, at school, at work or when eating out!

- **Eat at least one dark green and one orange vegetable each day.**
  - Go for dark green vegetables such as broccoli, romaine lettuce and spinach.
  - Go for orange vegetables such as carrots, sweet potatoes and winter squash.
- **Choose vegetables and fruit prepared with little or no added fat, sugar or salt.**
  - Enjoy vegetables steamed, baked or stir-fried instead of deep-fried.
- **Have vegetables and fruit more often than juice.**

- **Make at least half of your grain products whole grain each day.**
  - Eat a variety of whole grains such as barley, brown rice, oats, quinoa and wild rice.
  - Enjoy whole grain breads, oatmeal or whole wheat pasta.
- **Choose grain products that are lower in fat, sugar or salt.**
  - Compare the Nutrition Facts table on labels to make wise choices.
  - Enjoy the true taste of grain products. When adding sauces or spreads, use small amounts.

- **Drink skim, 1%, or 2% milk each day.**
  - Have 500 mL (2 cups) of milk every day for adequate vitamin D.
  - Drink fortified soy beverages if you do not drink milk.
- **Select lower fat milk alternatives.**
  - Compare the Nutrition Facts table on yogurts or cheeses to make wise choices.

- **Have meat alternatives such as beans, lentils and tofu often.**
- **Eat at least two Food Guide Servings of fish each week.***
  - Choose fish such as char, herring, mackerel, salmon, sardines and trout.
- **Select lean meat and alternatives prepared with little or no added fat or salt.**
  - Trim the visible fat from meats. Remove the skin on poultry.
  - Use cooking methods such as roasting, baking or poaching that require little or no added fat.
  - If you eat luncheon meats, sausages or prepackaged meats, choose those lower in salt (sodium) and fat.

Enjoy a variety of foods from the four food groups.

Satisfy your thirst with water!

Drink water regularly. It's a calorie-free way to quench your thirst. Drink more water in hot weather or when you are very active.

* Health Canada provides advice for limiting exposure to mercury from certain types of fish. Refer to www.healthcanada.gc.ca for the latest information.

Advice for different ages and stages…

Children

Following *Canada's Food Guide* helps children grow and thrive.

Young children have small appetites and need calories for growth and development.

- Serve small nutritious meals and snacks each day.
- Do not restrict nutritious foods because of their fat content. Offer a variety of foods from the four food groups.
- Most of all… be a good role model.

Women of childbearing age

All women who could become pregnant and those who are pregnant or breastfeeding need a multivitamin containing **folic acid** every day. Pregnant women need to ensure that their multivitamin also contains **iron**. A health care professional can help you find the multivitamin that's right for you.

Pregnant and breastfeeding women need more calories. Include an extra 2 to 3 Food Guide Servings each day.

Here are two examples:

- Have fruit and yogurt for a snack, or
- Have an extra slice of toast at breakfast and an extra glass of milk at supper.

Men and women over 50

The need for **vitamin D** increases after the age of 50.

In addition to following *Canada's Food Guide*, everyone over the age of 50 should take a daily vitamin D supplement of 10 µg (400 IU).

How do I count Food Guide Servings in a meal?

Here is an example:

Vegetable and beef stir-fry with rice, a glass of milk and an apple for dessert		
250 mL (1 cup) mixed broccoli, carrot and sweet red pepper	=	2 **Vegetables and Fruit** Food Guide Servings
75 g (2 ½ oz.) lean beef	=	1 **Meat and Alternatives** Food Guide Serving
250 mL (1 cup) brown rice	=	2 **Grain Products** Food Guide Servings
5 mL (1 tsp) canola oil	=	part of your **Oils and Fats** intake for the day
250 mL (1 cup) 1% milk	=	1 **Milk and Alternatives** Food Guide Serving
1 apple	=	1 **Vegetables and Fruit** Food Guide Serving

Eat well and be active today and every day!

The benefits of eating well and being active include:

- Better overall health.
- Lower risk of disease.
- A healthy body weight.
- Feeling and looking better.
- More energy.
- Stronger muscles and bones.

Be active

To be active every day is a step towards better health and a healthy body weight.

It is recommended that adults accumulate at least 2 ½ hours of moderate to vigorous physical activity each week and that children and youth accumulate at least 60 minutes per day. You don't have to do it all at once. Choose a variety of activities spread throughout the week.

Start slowly and build up.

Eat well

Another important step towards better health and a healthy body weight is to follow *Canada's Food Guide* by:

- Eating the recommended amount and type of food each day.
- Limiting foods and beverages high in calories, fat, sugar or salt (sodium) such as cakes and pastries, chocolate and candies, cookies and granola bars, doughnuts and muffins, ice cream and frozen desserts, french fries, potato chips, nachos and other salty snacks, alcohol, fruit flavoured drinks, soft drinks, sports and energy drinks, and sweetened hot or cold drinks.

Read the label

- Compare the Nutrition Facts table on food labels to choose products that contain less fat, saturated fat, trans fat, sugar and sodium.
- Keep in mind that the calories and nutrients listed are for the amount of food found at the top of the Nutrition Facts table.

Nutrition Facts

Per 0 mL (0 g)

Amount	% Daily Value
Calories 0	
Fat 0 g	**0** %
Saturated 0 g + Trans 0 g	**0** %
Cholesterol 0 mg	
Sodium 0 mg	**0** %
Carbohydrate 0 g	**0** %
Fibre 0 g	**0** %
Sugars 0 g	
Protein 0 g	

Vitamin A	0 %	Vitamin C	0 %
Calcium	0 %	Iron	0 %

Limit trans fat

When a Nutrition Facts table is not available, ask for nutrition information to choose foods lower in trans and saturated fats.

Take a step today...

- ✓ Have breakfast every day. It may help control your hunger later in the day.
- ✓ Walk wherever you can – get off the bus early, use the stairs.
- ✓ Benefit from eating vegetables and fruit at all meals and as snacks.
- ✓ Spend less time being inactive such as watching TV or playing computer games.
- ✓ Request nutrition information about menu items when eating out to help you make healthier choices.
- ✓ Enjoy eating with family and friends!
- ✓ Take time to eat and savour every bite!

For more information, interactive tools, or additional copies visit Canada's Food Guide on-line at:
www.healthcanada.gc.ca/foodguide

or contact:

Publications
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Ottawa, Ontario K1A 0K9
E-Mail: publications@hc-sc.gc.ca
Tel.: 1-866-225-0709
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Également disponible en français sous le titre : Bien manger avec le Guide alimentaire canadien

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LEARNING STATION 3 : STRESS

OBJECTIVE: This activity is designed to raise awareness of stress, eustress and distress and to give cadets tools to deal with stress.

TIME: 20 min

TRAINING LEVEL: 3

PRE-ACTIVITY INSTRUCTIONS:

- Assign an instructor to this activity.
- Set up the four stations, one per relaxation exercise.
- Gather the required resources:
  - Chairs,
  - Flipchart paper,
  - Pens / pencils, and
  - Markers.

ACTIVITY INSTRUCTIONS:

1. Ask the cadets the following questions:
   (a) What is stress? (Stress is the body's reaction to a demanding situation.)
   (b) What is the difference between eustress and distress? (Eustress is described as good stress. This type of stress pushes a person to do better and reach goals. Distress is described as bad stress. This type of stress causes worry, sorrow, anger or pain.)
2. Divide the cadets into groups of three or four.
3. Distribute flipchart paper, pens / pencils and markers to each group.
4. Allow five minutes for cadets to brainstorm ways to overcome bad stress (distress).
5. Allow each group to share one item on their list and share why it is there.

Possible answers:

- going for a walk or a run;
- going to the gym / playing a sport;
- listening to music;
- talking to someone about the issue;
- watching a movie;
- laughing;
- practicing yoga or meditations;
- playing with a pet (dog, cat, etc.);
- using time wisely; and
- writing down your problem in a journal.

6. Demonstrate the first relaxation exercise located at Appendix 1.
7. Allow two minutes for the cadets to perform the exercise.
8. Repeat the process with the other exercises.

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RAG DOLL

1. Sit in a chair (or stand) with feet apart.
2. Stretch the arms and trunk upward and inhale.
3. Exhale and drop the body forward. Let the trunk, head and arms dangle between the legs, keeping the muscles relaxed (as illustrated in Figure F1-1).
4. Remain in this position for 10–15 seconds.
5. Slowly roll up, one vertebrae at a time.

Figure F1-1 Rag Doll

NECK ROLL

1. Sit in a chair or on the floor with legs crossed.
2. Keeping the head and chin tucked, inhale and slowly turn the head as far left as possible (as illustrated in Figure F1-2).
3. Exhale and turn the head to the centre.
4. Repeat Steps 2 and 3 for the right side.
5. Repeat Steps 2–4 three times, trying to turn further each time to feel the stretch in the neck.
6. Drop the chin to the chest and inhale while slowly rolling the head in a semicircle to the left shoulder and exhale while slowly rolling the head back to the centre.
7. Repeat Step 6 for the right side.

Do not roll the head backward or in a full circle.

Figure F1-2 Neck Roll

BODY BOARD

1. Lie on the right side with arms over the head (as illustrated in Figure F1-3).
2. Inhale and stiffen the body like a wooden board.
3. Exhale and relax the muscles.
4. Let the body fall without trying to control the direction (as illustrated in Figure F1-4).
5. Lie still for ten seconds.
6. Repeat Steps 1–5 for the left side.

Figure F1-3 Body Board Start Position

Figure F1-4 Body Board Finish Position

JAW STRETCH

1. Sit in a chair or on the floor with head up and arms and shoulders relaxed.
2. Open mouth as wide as possible and inhale.
3. Relax and exhale slowly.
4. Shift the jaw to the right as far as possible and hold for three seconds (as illustrated in Figure F1-5).
5. Repeat Step 4 for the left side.
6. Repeat Steps 4 and 5 ten times.

Figure F1-5 Jaw Stretch

LEARNING STATION 4: HEALTHY LIFESTYLE TOOL BELT

OBJECTIVE: This activity is designed to provide an awareness of activities that can be added to enhance healthy living.

TIME: 20 min

TRAINING LEVEL: 4

PRE-ACTIVITY INSTRUCTIONS:

- Assign an instructor to this activity.
- Gather required resources:
  - Healthy Lifestyle Tool Belt handout, located Appendix 1, for each cadet,
  - Mats, and
  - Pens / pencils.

ACTIVITY INSTRUCTIONS:

1. Distribute the Healthy Lifestyle Tool Belt handout to each cadet.
2. Explain that they will be completing five quick activities to develop an awareness of behaviours that can be used to promote a healthier lifestyle.
3. Ask for a volunteer to read the following information:

> "The commitments we make to ourselves and to others, and our integrity to those commitments, is the essence and clearest manifestation of our proactivity."
>
> S. Covey, *The 7 Habits of Highly Effective People*.
>
> Facts:
>
> - Commitments are things we agree to do, whether for ourselves or for someone else.
> - To develop integrity we have to stop making so many commitments and check to see, before taking on or making new commitments, if we will actually follow through, for sure.

4. Give the cadets one minute to identify their current commitments in Block 1 of the handout.
5. Have the cadets make a commitment to themselves related to healthy eating in Block 2 of the handout.
6. Ask for a volunteer to read the following information:

> "Research unequivocally shows that simple meditation practices for as little as 12–15 minutes per day can have HUGE positive results for us. As we close our eyes, breathe deeply and allow our minds to chillax, we go from active thinking to mellow chill-axing while triggering what Herbert Benson (the preeminent Harvard/MD researcher) calls 'The Relaxation Response'."
>
> B. Johnson, *A Philosopher's Notes*

7. Have the cadets assume the Child's Pose– Balasana or Corpse Pose– Savasana. Allow the cadets to remain in the position for 2 minutes: tell the cadets to breathe calmly, let their bodies relax and their minds unclutter.

Figure J-1 Child's Pose – Balasana

Figure J-2 Corpse Pose – Savasana

8. Ask the cadets how they felt during the exercise.
9. Ask for a volunteer to read the following information:

Author Eckhart Tolle tells us that although it is "important that we accept ourselves and our emotions", it's also really important to notice what thoughts and behaviours consistently lead to negative outcomes and to stop doing those things and thinking those thoughts.

E. Tolle, *The Power of Now*

10. Have the cadets identify behaviours that they have that consistently lead to negative outcomes in Block 5 of the handout. Examples: slamming the car door, having thoughts that you need to be the best at everything.
11. Have the cadets identify positive behaviours they would like to continue in Block 6 of the handout.
12. Ask for a volunteer to read the following information:

Robin Sharma is a Canadian author whose studies on greatness have found that "all great people have a passionate consistency for their fundamentals"—whether the specific manifestation of one's greatness is being an extraordinary athlete, political leader, entrepreneur, artist or musician. Every day, they attend to their fundamentals—it could be meditating, exercising every day, giving joy, appreciating someone, writing in a journal, practicing music, studying.

R. Sharma, *The Greatness Guide 2*

13. Tell the cadets that fundamentals are basic values or tasks that a person completes as part of their daily regimen and have them identify their current fundamentals in Block 7 of the handout.
14. Have the cadets circle the fundamentals they hope to continue for the rest of their life.
15. Ask for a volunteer to read the following information:

In the book *Spark*, author Dr. John Ratey demonstrates how and why physical activity is crucial to the way we think and feel.

"A notable experiment in 2007 showed that cognitive flexibility improves after just one 35-minute treadmill session at either 60 percent or 70 percent of maximum heart rate. The 40 adults in the study (aged 50–64) were asked to rattle off alternative uses for common objects like a newspaper —it's meant for reading, but it can be used to wrap fish, line a birdcage, pack dishes and so forth. Half of them watched a movie and the other half exercised, and they were tested before the session, immediately after and again 20 minutes later. The movie watchers showed no change, but the runners improved their processing speed and cognitive flexibility after just one workout. Cognitive flexibility is an important executive function that reflects our ability to shift thinking and to produce a steady flow of creative thoughts and answers as opposed to a regurgitation of the usual responses. So if you have an important afternoon brainstorming session scheduled, going for a short, intense run during lunchtime is a smart idea."

J. Ratey, *Spark: The Revolutionary New Science of Exercise and the Brain*

16.	Have the cadets identify activities they think they could be better prepared to perform if they did a short intense period of physical exercise prior to the activity in block 8 of the handout.

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<table>
<tr><th colspan="2">HEALTHY LIFESTYLE TOOL BELT</th></tr>
<tr><td>1. My current commitments are:
❑ _____
❑ _____
❑ _____
❑ _____
❑ _____</td><td>2. My commitment to myself related to healthy eating:
❑ eat no chocolate bars at the cadet canteen
❑ drink water with each meal
❑ _____
❑ _____
❑ _____</td></tr>
<tr><td>3.
 
Figure J1-1 Child’s Pose – Balasana</td><td>4.
 
Figure J1-2 Corpse Pose – Savasana</td></tr>
<tr><td>5. My current behaviours that lead to negative outcomes are:
❑ late for timings
❑ _____
❑ _____
❑ _____</td><td>6. Positive behaviours I want to continue:
_____
_____
_____
_____
_____</td></tr>
<tr><td>7. My current fundamentals, the things I attend to every day, are:
❑ meditate for ____minutes
❑ offer thanks to another person
❑ offer praise to another person
❑ exercise ____minutes
❑ write in a journal
❑ _____
❑ _____
❑ _____</td><td>8. My brain will be better prepared to perform if I engage in short periods of intense physical exercise before the following activities:
❑ studying
❑ writing an exam
❑ attending a meeting
❑ giving a speech
❑ _____
❑ _____
❑ _____</td></tr>
<tr><td colspan="2">“You must be the change you want to see in the world” - Mahatma Ghandi</td></tr>
</table>

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PHYSICAL ACTIVITY TRACKER

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 1	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90
	Physical Activity List	Physical Activity List	Physical Activity List	Physical Activity List	Physical Activity List	Physical Activity List	Physical Activity List
	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹
Week 2	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90
	Physical Activity List	Physical Activity List	Physical Activity List	Physical Activity List	Physical Activity List	Physical Activity List	Physical Activity List
	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹

Cadet's Signature: _____ Date: _____ Supervisor's Signature: _____ Date: _____

PHYSICAL ACTIVITY TRACKER

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 3	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90
	Physical Activity List	Physical Activity List	Physical Activity List	Physical Activity List	Physical Activity List	Physical Activity List	Physical Activity List
	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹
Week 4	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90	Physical Activity Time 15 30 45 60 75 90
	Physical Activity List	Physical Activity List	Physical Activity List	Physical Activity List	Physical Activity List	Physical Activity List	Physical Activity List
	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹	Less than 2 hours of recreational screen time ☺ ☹

Cadet's Signature: _____ Date: _____ Supervisor's Signature: _____ Date: _____

COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

PERSONAL FITNESS AND HEALTHY LIVING

SECTION 2

EO MX04.02 – IDENTIFY STRATEGIES TO IMPROVE PARTICIPATION IN PHYSICAL ACTIVITIES AND PARTICIPATE IN THE CADET FITNESS ASSESSMENT

Total Time:	One session (3 periods) = 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

This IG supports EO MX04.02 (Identify Strategies to Improve Participation in Physical Activities and Participate in the Cadet Fitness Assessment) located in A-CR-CCP-801/PG-001, *Royal Canadian Air Cadets Proficiency Level One Qualification Standard and Plan*, Chapter 4.

Review CATO 14-18, *Cadet Fitness Assessment and Incentive Program* and become familiar with the material prior to delivering the lesson.

Photocopy the *Individual Score Sheet for the 20-m Shuttle Run Test* located at CATO 14-18, Annex A, Appendix 1 for each cadet.

Photocopy the *Cadet Fitness Assessment and Incentive Level Results* located at CATO 14-18, Annex B, Appendix 3 for each cadet.

Photocopy Introduction to Goal Setting located at Annex A for one assistant instructor and Review of Goal Setting located at Annex A for the other.

Photocopy the SMART Goals Guide located at Annex A, Appendix 1 for each cadet.

Refer to the warm-up and the cool-down located at Annexes A and B of EO MX04.01 (Participate in 60 Minutes of Moderate- to Vigorous-Intensity Physical Activity and Track Participation in Physical Activities) for TP 3.

Assistant instructors are required for this lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An in-class activity was chosen for TP 1 as it is a fun and interactive way for cadets to compare their physical activity to the *Canadian Physical Activity Guidelines for Youth* and the *Canadian Sedentary Behaviour Guidelines for Youth*.

A practical activity was chosen for TPs 2 and 3 as it is a fun and interactive way to build on the cadets' knowledge of personal fitness and healthy living.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have compared their participation in physical activity to the *Canadian Physical Activity Guidelines for Youth* and *Canadian Sedentary Behaviour Guidelines for Youth*, have participated in the CFA, and set goals to improve their participation in physical activity.

IMPORTANCE

Meeting the *Canadian Physical Activity Guidelines for Youth* and *Canadian Sedentary Behaviour Guidelines for Youth* allows individuals to lead more active, healthy lives. Participating in the CFA will give cadets a tool to evaluate their physical fitness, which will allow them to set personal goals for improvement. Setting SMART goals is another great tool that cadets can use to maintain a healthier lifestyle.

Teaching Point 1 — **Conduct an activity where cadets compare their participation in physical activities to the *Canadian Physical Activity Guidelines for Youth* and the *Canadian Sedentary Behaviour Guidelines for Youth*.**

Time: 15 min — Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets compare their participation in physical activities to the *Canadian Physical Activity Guidelines for Youth* and *Canadian Sedentary Behaviour Guidelines for Youth*.

RESOURCES

- Completed Physical Activity Tracker,
- *Canadian Physical Activity Guidelines for Youth*, and
- *Canadian Sedentary Behaviour Guidelines for Youth*.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Have the cadets think individually about the following questions:
   (a) Did you meet the minimum requirements of the *Canadian Physical Activity Guidelines for Youth*? (60 minutes of activity daily)
   (b) Did you meet the requirements of the *Canadian Sedentary Behaviour Guidelines for Youth*? (Limit recreational screen time to no more than 2 hours per day, and limit sedentary (motorized) transport, extended sitting time as well as time spent indoors throughout the day)

(c) What are some of your personal barriers to physical activity? How can you overcome these barriers? (See table below)

(d) What are some ways to improve your participation in physical activity? (See table below)

Possible barriers to being physically active	Strategies to overcome barriers
No time, energy or motivation. Programs, facilities, transportation are too expensive. No friend / family member to exercise with. The fitness facility isn't nearby or it's on a road that's too busy for safe walking or cycling. Not enough support from family / friends. No confidence or the right clothing. Bad weather. The fitness facility doesn't make me feel welcome or comfortable.	Schedule some time throughout your weekly schedule to commit to be fit! Ask a family member, friend, teacher, officer, or fellow cadet for help. Convince yourself that physical activity will increase your energy level. Make activities that you already do more active (eg, clean your room while listening to upbeat music). Set goals. Track your progress. Get more sleep. Do a self assessment.

2. Divide cadets into pairs and allow five minutes for cadets to discuss questions a–d above.

3. As a large group, allow five minutes for cadets to share what they have learned from their discussions. Emphasize strategies to overcome barriers to being physically active.

SAFETY

Nil.

Teaching Point 2 **Have the cadets set a SMART goal to improve their participation in physical activities.**

Time: 15 min Method: Practical Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets set a SMART goal to improve their participation in physical activities.

RESOURCES

- SMART Goals Guide located at Appendix 1 for each cadet, and
- Pens / pencils.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Divide cadets into two groups: Year 1, and Years 2–4.
2. Assign each group an assistant instructor.
3. Conduct the following activities as per Annex A:
   (a) Introduction to Goal Setting for Year 1 cadets; and
   (b) Review of Goal Setting for Years 2–4, as per Annex A.

SAFETY

Nil.

Teaching Point 3 — **Supervise while the cadets participate in the Cadet Fitness Assessment.**

Time: 60 min — Method: Practical Activity

ACTIVITY

The Cadet Fitness Assessment shall be conducted IAW CATO 14-18, *Cadet Fitness Assessment and Incentive Program*.

OBJECTIVE

The objective of this activity is to have the cadets participate in the Cadet Fitness Assessment.

RESOURCES

- CATO 14-18, *Cadet Fitness Assessment and Incentive Program*,
- Leger 20-m Shuttle Run Test CD,
- Measuring tape,
- CD player,
- Pylons,
- Gym mats,
- 12-cm measuring strips,
- Stopwatches,
- Paper,
- Pens / pencils,
- Metre sticks,
- *Back-saver sit and reach* test apparatuses, and
- *Individual Score Sheet for the 20-m Shuttle Run Test*.

ACTIVITY LAYOUT

Set up the activity IAW CATO 14-18.

ACTIVITY INSTRUCTIONS

1. Have the cadets participate in a warm-up session as per Annex A of EO MX04.01 (Participate in 60 Minutes of Moderate- to Vigorous-Intensity Physical Activity and Track Participation in Physical Activities).

2. Have the cadets perform and score the Cadet Fitness Assessment IAW CATO 14-18.

Have the cadets complete the Cadet Fitness Assessment in pairs. Conduct the 20-m Shuttle Run Test first; conduct the remaining stations as a circuit.

3. Have the cadets participate in a cool-down session as per Annex B of EO MX04.01 (Participate in 60 Minutes of Moderate- to Vigorous-Intensity Physical Activity and Track Participation in Physical Activities).

SAFETY

- Ensure a designated first-aider and first aid kit are available.
- Ensure water is available for the cadets throughout this activity.

CONFIRMATION OF TEACHING POINT 2

The cadets' participation in the Cadet Fitness Assessment will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in activity will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Participating in the Cadet Fitness Assessment will indicate which of the three components of fitness (cardiovascular endurance, muscular strength and endurance, and muscular flexibility) you need to improve the most. Knowing this will help you set personal goals to improve your physical fitness.

INSTRUCTOR NOTES / REMARKS

The purpose of the Cadet Fitness Assessment is to have cadets measure their personal fitness to help them set individual goals for improvement. Each of the three components of fitness (cardiovascular, muscular strength, and muscular flexibility) are measured, and cadets are assessed using criterion-referenced standards as to whether they are in the healthy fitness zone (HFZ) within each of these components.

The HFZ is the level of fitness needed for good health. Cadets who do not fall within the HFZ for certain components should be coached and encouraged to set goals that will help them improve towards achieving the HFZ in the future.

The Cadet Fitness Assessment shall be set up prior to conducting this EO.

Assistant instructors will be required for this lesson.

The Cadet Fitness Assessment shall be conducted IAW CATO 14-18.

Retain cadets' CFA results for use in EO MX04.03 (Participate in the Cadet Fitness Assessment and identify Strategies for Improving Personal Fitness).

REFERENCES

Canadian Society for Exercise Physiology. (2013). *Guidelines*. Retrieved from: http://www.csep.ca

CATO 14-18 Director Cadets 3. (2010). *Cadet fitness assessment and incentive program*. Ottawa, ON: Department of National Defence.

Meredith, M., & Welk, G. (Eds.). (2005). *Fitnessgram / activitygram: Test administration manual (3rd ed.)*. Windsor, ON: Human Kinetics.

The Cooper Institute. (n.d.). *Fitnessgram / activitygram test administration kit: Fitnessgram 8.0 stand-alone test kit*. Windsor, ON: Human Kinetics.

INTRODUCTION TO GOAL SETTING

OBJECTIVE: This activity is designed to introduce cadets to goal setting.

TIME: 15 min

TRAINING LEVEL: 1

PRE-ACTIVITY INSTRUCTIONS:

Gather the required resources:

- SMART Goals Guide located at Appendix 1 for each cadet, and
- Pens / pencils.

ACTIVITY INSTRUCTIONS:

1. Explain SMART goals to the cadets.

SMART GOALS

Specific. What specific activity can you do to help you reach your goal? Your goal should be concise and focused on one specific outcome (your goal cannot be too vague).

Measurable. How will you measure the achievement of the goal?

Achievable. What might hinder you as you progress towards the goal? What resources can you call upon?

Relevant. What will you get out of this?

Timed. When will you achieve this goal? What will be your first step?

2. Ask the cadets to determine if the following scenario reflects a SMART goal.
   Scenario: Cadet Smith and Cadet Trudeau have recently teamed up to motivate each other to become more physically active. They want to get closer to achieving 60 minutes of activity each day. They set a goal to each walk 150 km over the next 30 days, by walking 5 km per day.
   Answer: This is a SMART goal. Here is why:
   - **Specific:** The cadets plan to walk 5 kilometres per day for the next 30 days.
   - **Measureable:** They can track the distance spent walking.
   - **Achievable:** It is realistic for each of them to walk 5 km per day. They can reach their goal by working together, providing motivation and support for one another.
   - **Relevant:** Their goal focuses on the aspect of being more physically active. Once they reach their goal, they will experience a sense of accomplishment for completing the task.
   - **Timed:** They have 30 days to reach their goal.
3. Distribute a copy of the SMART Goals Guide located at Appendix 1 to each cadet.
4. Supervise as the cadets set SMART goals linked to meeting the requirements of the *Canadian Physical Activity Guidelines for Youth* and *Canadian Sedentary Behaviour Guidelines for Youth*.
5. As time permits, have the cadets, who wish to, share their SMART goals with the group.

REVIEW OF GOAL SETTING

OBJECTIVE: This activity is designed to review to goal setting.

TIME: 15 min

TRAINING LEVEL: 2–4

PRE-ACTIVITY INSTRUCTIONS:

Gather the required resources:

- SMART Goals Guide located at Appendix 1 for each cadet, and
- Pens / pencils.

ACTIVITY INSTRUCTIONS:

1. Review SMART Goals with the cadets.

SMART GOALS

Specific. What specific activity can you do to help you reach your goal? Your goal should be concise and focused on one specific outcome (your goal cannot be too vague).

Measurable. How will you measure the achievement of the goal?

Achievable. What might hinder you as you progress towards the goal? What resources can you call upon?

Relevant. What will you get out of this?

Timed. When will you achieve this goal? What will be your first step?

2. Give each cadet a copy of the SMART Goals Guide located at Appendix 1.
3. Allow five minutes for cadets to individually complete the handout. Supervise as cadets set SMART goals linked to meeting the requirements of the *Canadian Physical Activity Guidelines for Youth* and *Canadian Sedentary Behaviour Guidelines for Youth*.
4. Divide the cadets into pairs.
5. Supervise as cadets discuss their SMART goals with their partner.
6. As time permits, have the cadets, who wish to, share their SMART goals with the group.

SMART GOALS GUIDE

Rank:	Last Name:
First Name:	Date:

1. Write down your SMART physical fitness goal.

_____
_____
_____

2. Provide a description of how the goal is SMART.

Specific:_____
_____

Measurable:_____
_____

Achievable:_____
_____

Relevant:_____
_____

Timed:_____
_____

3. List some steps that you can take to achieve your goal.

_____
_____
_____
_____

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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

PERSONAL FITNESS AND HEALTHY LIVING

SECTION 3

EO MX04.03 – PARTICIPATE IN THE CADET FITNESS ASSESSMENT AND IDENTIFY STRATEGIES FOR IMPROVING PERSONAL PHYSICAL FITNESS

Total Time:	One session (3 periods) = 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

This IG supports EO MX04.03 (Participate in the Cadet Fitness Assessment and Identify Strategies for Improving Personal Physical Fitness) located in A-CR-CCP-801/PG-001, *Royal Canadian Air Cadets Proficiency Level One Qualification Standard and Plan*, Chapter 4.

Review CATO 14-18, *Cadet Fitness Assessment and Incentive Program* and become familiar with the material prior to delivering the lesson.

Photocopy the *Individual Score Sheet for the 20-m Shuttle Run Test* located at CATO 14-18, Annex A, Appendix 1 for each cadet.

Photocopy the *Cadet Fitness Assessment and Incentive Level Results* located at CATO 14-18, Annex B, Appendix 3 for each cadet.

Photocopy the Strategies to Improve my Personal Physical Fitness handout located at Annex A for each cadet.

Photocopy Annex B for each assistant instructor.

Refer to the warm-up and the cool-down located at Annexes A and B of EO MX04.01 (Participate in 60 Minutes of Moderate- to Vigorous-Intensity Physical Activity and Track Participation in Physical Activities) for TP 1.

Gather cadets' CFA results from EO MX04.02 (Identify Strategies to Improve Participation in Physical Activities and Participate in the Cadet Fitness Assessment) for use in TP 2.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A practical activity was chosen for this lesson as it allows the cadets to participate in the CFA in a safe and controlled environment.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have participated in the CFA, identified which component of fitness needs the most improvement, identified strategies to improve that component of physical fitness, and set a SMART goal to help improve their personal physical fitness.

IMPORTANCE

It is important for the cadets to participate in the Cadet Fitness Assessment to measure their personal fitness as this will allow them to identify their strengths and their weaknesses. That information will allow cadets to identify strategies and set goals that will guide them towards a healthier lifestyle.

Teaching Point 1 **Supervise while the cadets participate in the Cadet Fitness Assessment.**

Time: 60 min Method: Practical Activity

ACTIVITY

The Cadet Fitness Assessment shall be conducted IAW CATO 14-18, *Cadet Fitness Assessment and Incentive Program*.

OBJECTIVE

The objective of this activity is to have the cadets participate in the Cadet Fitness Assessment.

RESOURCES

- CATO 14-18, *Cadet Fitness Assessment and Incentive Program*,
- Leger 20-m Shuttle Run Test CD,
- Measuring tape,
- CD player,
- Pylons,
- Gym mats,
- 12-cm measuring strips,
- Stopwatches,
- Paper,
- Pens / pencils,
- Metre sticks,

- *Back-saver sit and reach* test apparatuses, and
- *Individual Score Sheet for the 20-m Shuttle Run Test*.

ACTIVITY LAYOUT

Set up the activity IAW CATO 14-18.

ACTIVITY INSTRUCTIONS

1. Have the cadets participate in a warm-up session as per Annex A of EO MX04.01 (Participate in 60 Minutes of Moderate- to Vigorous-Intensity Physical Activity and Track Participation in Physical Activities).
2. Have the cadets perform and score the Cadet Fitness Assessment IAW CATO 14-18.

Have the cadets complete the Cadet Fitness Assessment in pairs. Conduct the 20-m Shuttle Run Test first; conduct the remaining stations as a circuit.

3. Have the cadets participate in a cool-down session as per Annex B of EO MX04.01 (Participate in 60 Minutes of Moderate- to Vigorous-Intensity Physical Activity and Track Participation in Physical Activities).

SAFETY

- Ensure a designated first-aider and first aid kit are available.
- Ensure water is available for the cadets throughout this activity.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in the Cadet Fitness Assessment will serve as the confirmation of this TP.

Teaching Point 2 **Conduct an activity where the cadets identify how to improve their personal physical fitness.**

Time: 30 min Method: Practical Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets identify how to improve their personal physical fitness.

RESOURCES

- Cadet Fitness Assessment and Incentive Level Results from EO MX04.02 (Identify Strategies to Improve Participation in Physical Activities and Participate in the CFA), and
- Strategies to Improve My Personal Fitness handout located at Annex A.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Distribute the Strategies to Improve My Personal Fitness handout located at Annex A to each cadet.
2. Have each cadet review their Cadet Fitness Assessment and Incentive Level Results and complete the Strategies to Improve My Personal Fitness handout.
3. With the help of assistant instructors, discuss each cadet's individual results with them and assist them with completing the handout.

A list of example physical activities cadets can do to improve their personal fitness is located at Annex B.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 2

The cadets' participation in the activity will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the activity will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

The Cadet Fitness Assessment is a great tool that can help you determine how physically fit you are in the three components of physical fitness (cardiovascular endurance, muscular strength, and muscular flexibility). Knowing where you need to improve will help you target your efforts.

INSTRUCTOR NOTES / REMARKS

The purpose of the Cadet Fitness Assessment is to have cadets measure their personal fitness to help them set individual goals for improvement. Each of the three components of fitness (cardiovascular, muscular strength, and muscular flexibility) are measured, and cadets are assessed using criterion-referenced standards as to whether they are in the healthy fitness zone (HFZ) within each of these components.

The HFZ is the level of fitness needed for good health. Cadets who do not fall within the HFZ for certain components should be coached and encouraged to set goals that will help them improve towards achieving the HFZ in the future.

The Cadet Fitness Assessment shall be set up prior to conducting this EO.

Assistant instructors will be required for this lesson.

The Cadet Fitness Assessment shall be conducted IAW CATO 14-18.

REFERENCES

CATO 14-18 Director Cadets 3. (2010). *Cadet fitness assessment and incentive program*. Ottawa, ON: Department of National Defence.

Meredith, M., & Welk, G. (Eds.). (2005). *Fitnessgram / activitygram: Test administration manual (3rd ed*.). Windsor, ON: Human Kinetics.

The Cooper Institute. (n.d.). *Fitnessgram / activitygram test administration kit: Fitnessgram 8.0 stand-alone test kit*. Windsor, ON: Human Kinetics.

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STRATEGIES TO IMPROVE MY PERSONAL PHYSICAL FITNESS

1. Based on CFA results, which component of fitness do I need to improve the most?

Cardiovascular Endurance? ☐
Muscular Strength? ☐
Muscular Flexibility? ☐

2. What physical activities could I do on a regular basis to help me improve that component of fitness?

_____

_____

_____

3. Set a SMART goal to help improve that component of fitness.

_____

_____

_____

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PHYSICAL ACTIVITIES CADETS CAN DO TO IMPROVE THEIR PERSONAL FITNESS

Examples of physical activities that can help to improve the **cardiovascular endurance component:**

- aerobics,
- basketball,
- cross-country skiing,
- dancing,
- floor hockey,
- hiking,
- ice skating,
- lacrosse,
- orienteering,
- ringette,
- rollerblading,
- running,
- skipping rope,
- snowshoeing,
- soccer, and
- ultimate Frisbee.

Examples of physical activities that can help improve the **muscular strength component:**

- balance ball exercises,
- Pilates,
- resistance exercises using bands,
- resistance exercises using the body,
- weighted ball exercises,
- weighted bar exercises, and
- yoga.

Examples of physical activities that can help improve the **muscular flexibility component:**

- stretching,
- tai chi, and
- yoga.

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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

PERSONAL FITNESS AND HEALTHY LIVING

SECTION 4

EO CX04.01 – PARTICIPATE IN THE CADET FITNESS ASSESSMENT AND IDENTIFY STRATEGIES FOR IMPROVING PERSONAL PHYSICAL FITNESS

Total Time:	One session (3 periods) = 90 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO. REFER TO THE INSTRUCTIONAL GUIDE FOR EO MX04.03 (PARTICIPATE IN THE CADET FITNESS ASSESSMENT AND IDENTIFY STRATEGIES FOR IMPROVING PERSONAL PHYSICAL FITNESS).

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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

PERSONAL FITNESS AND HEALTHY LIVING

SECTION 5

EO CX04.02 – PARTICIPATE IN ACTIVITIES THAT REINFORCE THE THREE COMPONENTS OF PHYSICAL FITNESS

Total Time: One session (3 periods) = 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

This IG supports EO CX04.02 (Participate in Activities that Reinforce the Three Components of Physical Fitness) located in A-CR-CCP-801/PG-001, *Royal Canadian Air Cadets Proficiency Level One Qualification Standard and Plan*, Chapter 4.

Select one or two muscular flexibility activities from Annex A, one or two cardiovascular endurance activities from Annex B, and one or two muscular strength activities from Annex C.

Gather the required equipment as per the selected activities.

Print the documents required to conduct the activities.

Refer to the warm-up and the cool-down located at Annexes A and B of EO MX04.01 (Participate in 60 Minutes of Moderate- to Vigorous-Intensity Physical Activity and Track Participation in Physical Activities).

Ensure a designated first-aider and first aid kit are available.

Ensure water is available for the cadets throughout this activity.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A practical activity was chosen for this lesson as a fun and interactive way to stimulate interest in the three components of physical fitness.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this activity the cadet shall have participated in activities that reinforce the three components of physical fitness.

IMPORTANCE

It is important for cadets to participate in physical activities that reinforce the three components of physical fitness to help them follow the *Canadian Physical Activity Guidelines for Youth* and *Canadian Sedentary Behaviour Guidelines for Youth* and lead a healthy active lifestyle.

ACTIVITY

1. Have the cadets participate in a warm-up session as per of EO MX04.01 (Participate in 60 Minutes of Moderate- to Vigorous-Intensity Physical Activity and Track Participation in Physical Activities).

2. Conduct the selected activities from Annexes A, B and C.

The Three Components of Physical Fitness

Cardiovascular Endurance. The ability of the body's cardiovascular and respiratory systems to supply oxygen and blood during sustained physical activity (eg, the ability to run a long distance).

Muscular Strength. The ability of a muscle or muscle group to contract many times without tiring (eg, rowing a boat).

Muscular Flexibility. The range of motion of joints or a group of joints. It also refers to the freedom and efficiency in which a joint moves. (eg, the shoulder flexibility required to scratch your back.)

3. Have the cadets participate in a cool-down session as per Annex B of EO MX04.01 (Participate in 60 Minutes of Moderate- to Vigorous-Intensity Physical Activity and Track Participation in Physical Activities).

CONCLUSION

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Finding activities that are enjoyable is a great way to follow the *Canadian Physical Activity Guidelines* and *Canadian Sedentary Behaviour Guidelines*, and to lead a healthy active lifestyle.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

ISBN 0-934387-29-X Panicucci, J. (2008). *Achieving Fitness: An Adventure Activity Guide*. Beverly, MA: Project Adventure, Inc

FLEXIBILITY ACTIVITY 1:
THE ARTISTS

OBJECTIVE: This activity is designed to help cadets improve their muscular flexibility.

TIME: 10–20 min

PRE-ACTIVITY INSTRUCTIONS:

Gather the required resources:

- Four images (eg, a provincial / territorial flag, image from a colouring book, famous person)
- Paper,
- Pen / pencil, and
- Masking Tape.

ACTIVITY INSTRUCTIONS:

1. Divide the cadets into groups of two or three.
2. Have each group tape a piece of paper to the floor.
3. Explain to the cadets that:
   (a) The aim of the activity is to draw the best possible picture, as a group.
   (b) Legs and arms must remain as straight as possible.
   (c) The pen or pencil must be held by all team members.
   (d) Each group will have to draw the image provided.
4. Supervise as the cadets participate in the activity.
5. As time allows, have cadets repeat the activity, with a different image, in different groups.

FLEXIBILITY ACTIVITY 2:
CIRCLE THE CIRCLE

OBJECTIVE: This activity is designed to help cadets improve their muscular flexibility.

TIME: 10–20 min

PRE-ACTIVITY INSTRUCTIONS:

Gather hula hoops (one per team).

ACTIVITY INSTRUCTIONS:

1. Divide the cadets into equal teams of four or more cadets.
2. Have the cadets in each team stand in a circle and grasp each other's forearms.
3. Explain to the cadets that they will have to pass a hula hoop around the circle without letting go of each other's arms.
4. Give the signal to start and supervise as the cadets participate in the activity. Allow the cadets to repeat the activity so they can improve their performance.
5. Divide the cadets into different teams. Repeat the activity.
6. As time allows, have the cadets perform the activity as one large team with multiple hula hoops going around the circle.

FLEXIBILITY ACTIVITY 3:
BEAR SOCCER

OBJECTIVE: This activity is designed to help cadets improve their muscular flexibility.

TIME: 10–20 min

PRE-ACTIVITY INSTRUCTIONS:

1. Gather the required resources:
   (a) Two goals (eg, hockey nets, pylons, taped outline on a wall, books, etc.),
   (b) Boundary markers (eg, pylons, tape, etc.),
   (c) Light ball (eg, soccer, nerf, dodge, tennis, beach, etc.), and
   (d) Whistle.
2. Set up a goal on each side of the playing area and identify the centre of the field.

ACTIVITY INSTRUCTIONS:

1. Divide the cadets into two teams.
2. Explain to the cadets that :
   (a) The objective is to score more goals than the opposite team.
   (b) To move around players must assume the bear position: hands and feet on the floor with their buttocks in the air.
   (c) Only feet (no hands!) can be used to stop or move the ball.
   (d) Play is stopped for a goal or an infraction (indicated with a whistle blow). In this case, possession of the ball is switched to the other team. Players of both teams retreat to their side of the playing field and the ball is placed in the centre of the playing field. All players must be on their side of the field until the ball is touched. The team in possession of the ball must be given 10 feet of room until the ball is touched.
   (e) Infractions include: touching the ball with the hands, kicking the ball out of bounds, standing up, or poor conduct.
3. Start the game and supervise as the cadets participate in the activity.

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CARDIOVASCULAR ENDURANCE ACTIVITY 1:
STRIKEFORCE TAG

OBJECTIVE: This activity is designed to help cadets improve their cardiovascular fitness.

TIME: 10–20 min

PRE-ACTIVITY INSTRUCTIONS:

Nil.

ACTIVITY INSTRUCTIONS:

1. Divide the cadets into groups of at least four.
2. Explain to the cadets that :
   (a) The goal of this activity is to avoid being tagged by “STRIKEFORCE”.
   (b) A cadet is designated “STRIKEFORCE” and the remaining cadets join hands and form a small circle.
   (c) One of the cadets in the circle is identified as the target of “STRIKEFORCE”. Cadets in the circle must work together to keep the target cadet from being tagged by “STRIKEFORCE”.
   (d) Once the target is tagged, that cadet becomes the new “STRIKEFORCE”. The cadet that was “STRIKEFORCE” joins the circle of cadets. A new cadet becomes the target (not the cadet who was just “STRIKEFORCE”).
3. Ask for a volunteer to be “STRIKEFORCE”.
4. Start the game and supervise as the cadets participate in the activity.

CARDIOVASCULAR ENDURANCE ACTIVITY 2:
OVER UNDER RELAY

OBJECTIVE: This activity is designed to help cadets improve their cardiovascular fitness.

TIME: 10–20 min

PRE-ACTIVITY INSTRUCTIONS:

1. Gather the required resources:
   (a) One ball per team (basketball, dodge, volleyball, tennis, medicine, etc), and
   (b) Whistle.
2. Determine the number of legs / length of the race and playing field size prior to beginning the activity.

ACTIVITY INSTRUCTIONS:

1. Divide the cadets into teams of three and issue a ball per team.
2. Explain to the cadets that :
   (a) The goal of this activity is to be the first team to complete the race.
   (b) All cadets in a team must stand in line, all facing the direction opposite to where they are headed. The cadet in front must pass the ball over their head to their partner in the back, who passes the ball behind their legs to the partner behind them.
   (c) As soon as they have passed the ball, cadets must run to the back of the line.
   (d) This continues until the team travels the distance indicated. (Announce the distance required to complete the race.)
   (e) Both cadets must touch the ball for a proper pass (it cannot be thrown or tossed).
3. Start the race and supervise as the cadets participate in the activity.

CARDIOVASCULAR ENDURANCE ACTIVITY 3:
BRITISH BULLDOG

OBJECTIVE: This activity is designed to help cadets improve their cardiovascular fitness.

TIME: 10–20 min

PRE-ACTIVITY INSTRUCTIONS:

1. Gather the required resources:
   (a) Boundary markers (tape, pylons, rope, etc), and
   (b) Whistle.
2. Set up the boundaries: A large rectangle of the open space.

ACTIVITY INSTRUCTIONS:

1. Explain to the cadets that:
   (a) One cadet is designated as the bulldog; they stand in the center of the open space.
   (b) The remainder of the cadets line up at one end of the playing area.
   (c) The blowing of a whistle signals the cadets to run across the area to the other line.
   (d) The bulldog(s) tries to tag as many cadets as possible.
   (e) Any of the cadets tagged also become bulldogs.
   (f) If someone runs out of bounds, they become a bulldog. (Point out the boundaries of the activity).
   (g) The game continues until only one cadet remains untagged. This cadet is declared the winner.
2. Identify one cadet as the bulldog.
3. Have the cadets line up at one end of the playing area.
4. Start the activity and supervise as the cadets participate in the activity.

CARDIOVASCULAR ENDURANCE ACTIVITY 4:
MONEY GRAB

OBJECTIVE: This activity is designed to help cadets improve their cardiovascular fitness.

TIME: 10–20 min

PRE-ACTIVITY INSTRUCTIONS:

1. Gather the required resources:
   (a) Hula hoops (one per team),
   (b) Monopoly money, and
   (c) Whistle.
2. Prepare the activity area, by spreading hula hoops on the playing area evenly.
3. Deposit $1000 in each hula hoop using different denominations ($100x6, $50x4, $20x5, $10x10).

ACTIVITY INSTRUCTIONS:

1. Divide cadets into equal teams.
2. Explain to the cadets that:
   (a) Each team of cadets has a hula hoop: it is called the bank.
   (b) The aim is to be the team who ends up with the most money in their bank.
   (c) Cadets can withdraw money from the other teams' bank and deposit it in their own.
   (d) A cadet can only hold one bill at a time.
   (e) This continues until time runs out.
3. Start the game and supervise as the cadets participate in the activity.
4. When time has run out, ask each team to count the money in their bank and announce a winning team.

CARDIOVASCULAR ENDURANCE ACTIVITY 5:
RUBBER CHICKEN BASEBALL

OBJECTIVE: This activity is designed to help cadets improve their cardiovascular fitness.

TIME: 10–20 min

PRE-ACTIVITY INSTRUCTIONS:

1. Gather the required resources:
   (a) Rubber chicken (or suitable substitute),
   (b) Boundary markers (tape, pylons, rope, etc), and
   (c) Whistle.
2. Identify the playing field boundaries: A large open space.

ACTIVITY INSTRUCTIONS:

1. Divide the cadets into two equal teams.
2. Explain to the cadets that:
   (a) There are two teams: HOME and AWAY.
   (b) The HOME team begins the game by throwing the chicken within the playing area.
   (c) The AWAY team begins Fielding the Chicken first.
   (d) The AWAY team runs up to the chicken and forms a single file, facing the chicken.
   (e) The AWAY team passes the chicken over under through their file. The first cadet passes the chicken between their legs to the cadet behind them, who passes it over their head to the next cadet in line, and so on.
   (f) Once the chicken has passed through the entire team, the last cadet crows like a rooster.
   (g) During that time the HOME team forms a line and races around the AWAY team. Each complete lap around the AWAY team before they crow is scored a run.
   (h) After the rooster crows, the rooster throws the chicken anywhere in the playing area and the roles are reversed; the AWAY team becomes the HOME team and vice versa.
   (i) If the chicken is thrown out-of-bounds, that team has to pass the chicken through their line again.
   (j) The team with the most runs wins.
3. Randomly designate one team of cadets HOME, and the other team AWAY.
4. Start the game and supervise as the cadets participate in the activity.

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MUSCULAR STRENGTH AND ENDURANCE ACTIVITY 1:
WHEELBARROW RELAY

OBJECTIVE: This activity is designed to help cadets improve their muscular strength and endurance.

TIME: 10–20 min

PRE-ACTIVITY INSTRUCTIONS:

1. Gather the required resources:
   (a) Items to be carried (eg, balls, books, shoes), and
   (b) Whistle.
2. Set up the boundaries of the race area.
3. Set up the items to be carried for each team. Note: Each item in the pile means that one cadet will have to carry it across the race area.

ACTIVITY INSTRUCTIONS:

1. Divide the cadets into pairs.
2. Explain to the cadets that:
   (a) All items in the pile need to be delivered to the other side of the field.
   (b) Items can only be delivered via the back of a cadet in the wheelbarrow position.
   (c) Only one item may be brought at a time.
   (d) Cadets must alternate positions (wheelbarrow and holder), until all items have been brought to the other side of the field.
   (e) When an item is dropped midway, it must be brought back to the start.
3. Start the game and supervise as the cadets participate in the activity.

MUSCULAR STRENGTH AND ENDURANCE ACTIVITY 2:
SOUP CAN PYRAMID

OBJECTIVE: This activity is designed to help cadets improve their muscular strength and endurance.

TIME: 10–20 min

PRE-ACTIVITY INSTRUCTIONS:

Gather the required resources:

- A minimum of three cans (eg, soup, vegetables, etc.) per cadet,
- Whistle.

ACTIVITY INSTRUCTIONS:

1. Divide the cadets into pairs.
2. Explain to the cadets that:
   (a) Cadets must use their feet to move cans together.
   (b) Legs must remain straight.
   (c) The team must create a line of cans and then stack them until they form a pyramid.
   (d) Only one can be moved at a time.
   (e) Cadets must dismantle their pyramid before continuing to their next appendage.
   (f) Cadets must then build a pyramid using their other foot.
   (g) The activity can be repeated with cadets using their hands while lying on their stomach.
3. Have the cadets lay down on their backs on the floor.
4. Have each cadet place the bottoms of their feet against their partner's feet.
5. On either side of the legs of each team of cadets, place a collection of cans.
6. Blow the whistle to start the game.
7. Supervise as the cadets participate in the activity.

Canned food could be donated to the local food bank.

MUSCULAR STRENGTH AND ENDURANCE ACTIVITY 3:
YURT CIRCLES

OBJECTIVE: This activity is designed to help cadets improve their muscular strength and endurance.

TIME: 10–20 min

PRE-ACTIVITY INSTRUCTIONS:

Nil.

ACTIVITY INSTRUCTIONS:

1. Divide the cadets into two teams of at least three cadets each.
2. Have the teams form circles.
3. Explain to the cadets that:
   (a) All cadets in one team will perform a leg squat at the same time, while holding arms. Cadets will raise one leg while performing the squat and then the other leg.
   (b) Each team will attempt the same thing while holding hands or forearms.
   (c) Then, both teams will squat to see which team can hold the squat the longest.
   (d) As time allows, have the cadets attempt the activity again as one large group or in different teams.
4. Supervise as the cadets participate in the activity.

MUSCULAR STRENGTH AND ENDURANCE ACTIVITY 4:
CRAB SOCCER

OBJECTIVE: This activity is designed to help cadets improve their muscular strength and endurance.

TIME: 10–20 min

PRE-ACTIVITY INSTRUCTIONS:

1. Gather the required resources:
   (a) Two goals (eg, hockey nets, pylons, taped outline on a wall, books, etc.),
   (b) Boundary markers (eg, pylons, tape, etc.),
   (c) Light ball (eg, soccer, nerf, dodge, tennis, beach, etc.), and
   (d) Whistle.
2. Set up a goal on each side of the playing area and identify the centre of the field.

ACTIVITY INSTRUCTIONS:

1. Divide the cadets into two teams.
2. Explain to the cadets that:
   (a) The objective is to score more goals than the opposing team.
   (b) To move around players must assume the table position: hands (behind the back) and feet on the floor with the torso up.
   (c) Only feet (no hands!) can be used to stop or move the ball.
   (d) Play is stopped for a goal or an infraction (indicated with a whistle blow). In this case, possession of the ball is switched to the other team. Players of both teams retreat to their side of the playing field and the ball is placed in the centre of the playing field. All players must be on their side of the field until the ball is touched. The team in possession of the ball must be given 10 feet of room until the ball is touched.
   (e) Infractions include: touching the ball with the hands, kicking the ball out of bounds, standing up, or poor conduct.
3. Start the game and supervise as the cadets participate in the activity.

COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

PERSONAL FITNESS AND HEALTHY LIVING

SECTION 6

EO CX04.03 – PARTICIPATE IN A COOKING CLASS

Total Time:	One session (3 periods) = 90 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO. REFER TO THE LESSON SPECIFICATION LOCATED IN A-CR-CCP-801/PG-001, *ROYAL CANADIAN AIR CADETS PROFICIENCY LEVEL ONE QUALIFICATION STANDARD AND PLAN*.

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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

PERSONAL FITNESS AND HEALTHY LIVING

SECTION 7

EO CX04.04 – ATTEND A PERSONAL FITNESS AND HEALTHY LIVING PRESENTATION

Total Time:	One session (3 periods) = 90 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO. REFER TO THE LESSON SPECIFICATION LOCATED IN A-CR-CCP-801/PG-001, *ROYAL CANADIAN AIR CADETS PROFICIENCY LEVEL ONE QUALIFICATION STANDARD AND PLAN*.

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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

PERSONAL FITNESS AND HEALTHY LIVING

SECTION 8

EO CX04.05 – ATTEND A LOCAL AMATEUR SPORTING EVENT

Total Time:	One session (3 periods) = 90 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO. REFER TO THE LESSON SPECIFICATION LOCATED IN A-CR-CCP-801/PG-001, *ROYAL CANADIAN AIR CADETS PROFICIENCY LEVEL ONE QUALIFICATION STANDARD AND PLAN*.

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CHAPTER 5

PO X05 – PARTICIPATE IN PHYSICAL ACTIVITIES

COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

PHYSICAL ACTIVITIES

SECTION 1

EO MX05.01 – PARTICIPATE IN PHYSICAL ACTIVITIES

Total Time:	3 sessions (9 periods) = 270 min

PREPARATION

PRE-LESSON INSTRUCTIONS

This IG supports EO MX05.01 (Participate in Physical Activities) located in A-CR-CCP-801/PG-001, *Royal Canadian Air Cadets Proficiency Level One Qualification Standard and Plan*, Chapter 4.

Refer to the warm-up and the cool-down located at Annexes A and B of EO MX04.01 (Participate in 60 Minutes of Moderate- to Vigorous-Intensity Physical Activity and Track Participation in Physical Activities).

Select a physical activity to conduct.

Gather the required equipment as per the selected activities.

Assistant instructors / specialists may be required based on the activity selected.

Suggested physical activities are located at the attachments to this IG as follows:

Cardiovascular Activities, including:

- Attachment A - Aerobics,
- Attachment B - Cross-Country Skiing,
- Attachment C - Hiking,
- Attachment D - Ice Skating,
- Attachment E - Instructor-Led Dancing,
- Attachment F - Orienteering,
- Attachment G - Rollerblading,
- Attachment H - Running,
- Attachment I - Skipping Rope,
- Attachment J - Snowshoeing, and
- Attachment K - Swimming.

Muscular Strength Activities, including:

- Attachment L - Muscular Strength Exercises using the Body, Balance Balls, Resistance Bands, and Weighted Balls and Bars,
- Attachment M - Pilates,

Muscular Flexibility Activities, including:

- Attachment N - Stretching,
- Attachment O - Tai Chi, and
- Attachment P - Yoga.

Recreational Team Sports, including:

- Attachment Q - Baseball,
- Attachment R - Basketball,
- Attachment S - Floor Hockey,
- Attachment T - Football (Flag or Touch),
- Attachment U - Lacrosse,
- Attachment V - Ringette,
- Attachment W - Soccer,
- Attachment X - Soccer Baseball,
- Attachment Y - Softball,
- Attachment Z - Ultimate Frisbee, and
- Attachment AA - Volleyball.

Other Physical Activities, including:

- Attachment AB - Active Games,
- Attachment AC - Circuit Training,
- Attachment AD - Martial Arts, and
- Attachment AE - Tabloids.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A practical activity was chosen for this lesson as it allows the cadets to participate in physical activities in a safe and controlled environment.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall be expected to have participated in physical activities.

IMPORTANCE

It is important for cadets to participate in physical activities to identify activities that are fun and to promote lifelong participation in physical activity.

Teaching Point 1 **Have the cadets participate in physical activities.**

Time: 9 x 30 min Method: Practical Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to provide the cadets an opportunity to participate in physical activities.

RESOURCES

- Equipment / safety equipment required for the selected physical activity, and
- First aid equipment.

ACTIVITY LAYOUT

Activity layout will depend on the selected physical activity.

ACTIVITY INSTRUCTIONS

1. Introduce the selected physical activity, to include:
   (a) which component(s) of fitness are improved through participation in the selected physical activity, and
   (b) techniques for participating in the selected physical activity.
2. Have the cadets participate in a safety briefing, to include:
   (a) rules / regulations of the selected physical activity,
   (b) requirement for safety equipment for the selected physical activity,
   (c) location of first aid post, and
   (d) boundaries or route information.
3. Have the cadets participate in a warm-up session as per Annex A of EO MX04.01 (Participate in 60 Minutes of Moderate- to Vigorous-Intensity Physical Activity and Track Participation in Physical Activities).
4. Have the cadets participate in the selected physical activity.
5. Have the cadets participate in a cool-down session as per Annex B of EO MX04.01 (Participate in 60 Minutes of Moderate- to Vigorous-Intensity Physical Activity and Track Participation in Physical Activities).

SAFETY

- Ensure constant supervision throughout the activity.
- Ensure a first aid post / kit is readily accessible.
- Ensure a first-aider is identified at the start of the activity and is available at all times.
- Ensure cadets remain hydrated throughout the activity.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in the physical activity will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the physical activity will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Participating in physical activities can help you:

- improve your health;
- do better in school;
- improve your fitness;
- grow stronger;
- have fun being active with friends;
- feel happier;
- maintain a healthy body weight;
- improve your self-confidence; and
- learn new skills.

INSTRUCTOR NOTES / REMARKS

The aim of this lesson is for cadets to have fun participating in physical activities. Choose activities the cadets will enjoy. Survey cadets to determine those physical activities in which they are interested.

Several physical activities may be conducted concurrently. Choice is an important factor when it comes to enjoying physical activity. The more varying types of physical activities cadets are exposed to, the more likely they are to find an activity they will be interested in pursuing on a regular basis.

Choose activities based on human and material resources accessible to the corps / squadron.

Fitness videos (conducted by a certified trainer), certified trainers and Canadian Forces Personnel Support Programs (PSP) staff may be used to conduct this training.

Activities chosen for this training are not limited to the lists presented above but must be age appropriate, safe, and in-line with the aim of promoting physical fitness.

Physical activity periods may be conducted consecutively to provide the cadets an opportunity to participate in longer, varied physical activities.

REFERENCES

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AEROBICS

INTRODUCTION

Aerobic exercise is physical exercise of relatively low intensity and long duration, which depends primarily on the aerobic energy system.

EQUIPMENT

The equipment required will vary based on the selected type of aerobic activity.

ACTIVITY GUIDELINES

Aerobic activities shall be tailored to accommodate a variety of fitness levels. Encourage cadets to participate at their highest level to fully maximize the benefits of aerobic activities.

EXAMPLES OF AEROBIC ACTIVITIES

Step Exercises. Step exercises usually involve an elevated step that the participant steps on and off of. Intensity can be increased by increasing movement speed or the height of the step being used.

Exercise Equipment. Exercise equipment can be used to provide individual aerobic training or in organised classes such as spin class (a group class that uses exercise bikes). Examples include exercise bikes, elliptical trainers, rowing machines, step machines, and treadmills.

Jazzercise. Jazzercise was created in 1969 by Judi Sheppard Missett. It combines aspects of dance with resistance training, Pilates, yoga, and kickboxing. Jazzercise is ranked one of the top fitness programs in the world with over 7800 instructors in 38 countries.

Tae Bo. Made popular in the 1990s, Tae Bo is an exercise routine that uses martial arts at a quick pace to increase the heart rate. It was developed by Billy Banks, an actor turned fitness consultant.

SUGGESTED RESOURCES

Judi Sheppard Missett, Certified Jazzercise Instructor. *Jazzercise Core: Target & Tone Muscle, Fat Burning, Strength Building*. 2009. [DVD]

Judi Sheppard Missett, Certified Jazzercise Instructor. *Jazzercise: Live*. 2008. [DVD]

Billy Banks, Certified Tae Bo Instructor. *This is Tae Bo*. 2010. [DVD]

Billy Banks, Certified Tae Bo Instructor. *Cardio Explosion*. 2010. [DVD]

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CROSS-COUNTRY SKIING

INTRODUCTION

Cross-country skiing is a sport that requires very little skill. However, understanding stroke mechanics and techniques will make skiing more efficient and enjoyable.

EQUIPMENT

Skis. The chart below is a rough guide to follow when selecting a ski length.

Ski Length	Carrying Capacity
168 cm	90–130 lb
168, 178 cm	130–150 lbs
178, 188 cm	150–180 lbs
188 cm	180–220 lbs

Ski Boots. Skis are guided and controlled through the boots, so it is important that they fit well. Boots are made from a variety of materials, from all leather to modelled plastic to a combination of materials. Lighter boots provide more freedom but offer less support. Heavier boots provide more support but usually restrict movement and are harder to fit. Boots that are too tight / loose may cause the skier incredible discomfort and may result in injuries such as blisters.

Ski Poles. Ski poles are an integral part of cross-country ski equipment. Most techniques in cross-country skiing require the skier to not only use their skis, but their arms (poles) as well. Ski poles help the skier maintain balance while climbing inclines, when going downhill and when going forward.

ACTIVITY GUIDELINES

Cross-country skiing shall be limited to new fallen snow, powder snow, and wind-packed snow. It shall also be conducted on novice / beginner trails.

New Fallen Snow. Very loose and light. The snowflakes still have multiple branches. If new snow is dry, it is feathery; if damp, it quickly consolidates into a stage of settled snow.

Powder Snow. New, untouched freshly fallen soft snow. It can give the feeling of floating in a weightless environment. Powder snow can be packed in thick layers that form a natural pillow. Powder snow has a low moisture content, as almost 97 percent of it is air.

Wind-Packed Snow. Snow blown from one direction, compacted by the force of the wind. Wind-packed snow is created by the pressure exerted by wind, causing a form of cold-heat hardening.

The following types of snow should be avoided when conducting cross-country skiing:

Sun Crust Snow. Snow that has had the upper layer melt and then refreeze. Usually on top of powder snow, sun crust snow is stronger than the powder snow below it due to the refreezing. This snow can be dangerous to cross-country ski on if on a slope; the crust may give way and a person may lose their footing. Cross-country skiing on a flat surface over sun crust snow can be difficult as the skis break through the crust and can hook into the crust on the return. The constant hooking and breaking in sun crusted snow can quickly tire the cross-country skier.

Corn Snow. Corn snow occurs after thawing, usually in the spring. It is produced during the cycle of melting and refreezing in the accumulated snow. The structure of the snow is very grainy. Corn snow can be strong enough to carry weight, but can also indicate the presence of rotten snow, which is very dangerous.

Rotten Snow. Caused by repeated melting and freezing and is found mostly on the south side of hills, or in lower levels of snow. Water will seep to the lower layers and will not freeze because it is insulated from the weather by the covering snow layer. Rotten snow can resemble very small icicles, or candle ice. This snow is dangerous. Sudden drops and holes may exist under the surface of the snow. Falling and injury are highly possible.

Slush Snow. When the air temperature becomes warmer than the freezing point, the snow begins to melt and the water content becomes high. Slush snow absorbs water from melting snow. Slush snow is recognizable by depressions in the snow with darker or bluish snow areas. These areas show holes in the ice or an accumulation of water on the surface of the ice.

CROSS-COUNTRY SKIING TECHNIQUES

Falling Down

Falling down is a common occurrence when cross-country skiing. It is not the falling that is difficult when cross-country skiing; getting up after the fall is what most struggle with.

When losing balance and about to fall:

1. Check the area for rocks or tree stumps to avoid, if possible.
2. Sit down to one side or the other of the skis.
3. Keep the legs below the rest of the body.
4. Dig the skis into the snow to stop any forward momentum.

To get up after a fall:

1. Roll onto the back and stick legs, arms, skis and poles into the air to untangle them.
2. Bend the knees and place the skis flat on the ground, concurrently sliding the hips towards the feet and the backs of the skis under the behind.
3. Come to one knee (plant the poles at the sides to assist).
4. Stand up.

Stopping

For their own safety and for the safety of those around them, it is extremely important that cadets are able to slow down and stop themselves on flat ground and on hills. The principles for both are the same and require the cadet to have constant control of their body and their skis. A cross-country ski glides most effectively when it is flat on the ski base. A ski begins to lose forward momentum as soon as it is tipped to either edge.

Therefore, to stop, the skier must tip the ski to the edge—this is called edging.

The wedge position is sometimes referred to as the snowplow position. Some may be more familiar with this term as it is also used in downhill skiing.

There are two types of wedging:

- the half wedge, and
- the full wedge.

To slow down / stop using the half wedge:

1. Decide which ski to move into the half wedge position.
2. Keep the skis parallel to each other.
3. Move into the half wedge position by:
   (a) bringing the knees together;
   (b) keeping the tips of the skis together; and
   (c) moving the tail of the desired ski outward by pushing the heel out and the toes inward.
4. Angle the inside edge of the wedged ski into the snow by rolling the ankle inward (the more the edge is angled into the snow, the faster the skier will slow down / stop).

To slow down / stop using the full wedge:

1. Sink into a crouch.
2. Bring the knees together and point them toward the tips of the skis.
3. Keep the tips of the skis together (but not touching).
4. Move the tails of the skis outward by pushing the heels outward and the toes inward.
5. Angle the inside edges of the skis into the snow by rolling the ankles inwards (the more the edge is angled into the snow, the faster the skier will slow down / stop).

Changing Direction

Whenever on cross-country skis there is always a requirement to change direction of travel. It is a fairly simple process that requires practice in order to perfect.

Changing direction can be carried out by picking up the tip, the tail or the entire ski, one at a time, and moving it toward the new direction of travel—then repeating the process with the other ski. Depending on the degree of the turn, the skier may need to complete this process a number of times before reaching the desired direction.

To change direction:

1. Assume the half-sitting position.
2. Move the left (right) ski forward until the left (right) boot toe is just ahead of the right (left) boot toe.
3. Lift the tip of the left (right) ski about 30 cm (1 foot) off the ground.
4. Move the lifted ski slightly to the left (right), about an arc of 30 degrees.
5. Place the left (right) ski on the ground and transfer the weight to it.
6. Bring the right ski around, in the same manner, to meet the left ski.
7. Repeat Steps 2–6 until facing the desired direction.

Poling

There are two different poling techniques that a cross-country skier can use, to include:

Diagonal Poling. Uses the pole opposite of the gliding ski to create additional forward motion of the skier. The skier plants and pushes with only one pole at a time.

Double Poling. Simultaneously uses both poles to propel the skis and skier forward. Used to go down gentle slopes in order to gain speed and on flats when the skier is not using the diagonal stride.

The following poling principles should be considered:

- Poles cannot push forward unless they are angled to the rear.
- The skier gets a stronger push when their arms are bent rather than straight.
- Pushing the pole back rather than down converts more of the skier's energy into forward motion at the end of a stroke.
- The skier should use their body weight, not just their arms, and pull with their core to move forward.

To diagonal pole:

1. Assume the half-sitting position.
2. Move the left ski so that it is forward of the right ski.
3. Lean forward.
4. Transfer the weight to the left ski.
5. Plant the right pole just ahead of the left ski boot (to the right of the path that the right ski will take).
6. Simultaneously push off with the left ski and push the right pole.
7. Recover by lifting the left pole.
8. Repeat the process with the other pole.

To double pole:

1. Assume the half-sitting position.
2. Keep the elbows close to the body.
3. Lean forward to round the back.
4. Plant the poles just ahead of the ski boots.
5. Contract the abdominal muscles.

6. Push forward and extend the arms back.
7. Stand up.
8. Allow the arms and poles to swing forward.
9. Prepare for the next pole plant.

Executing the Diagonal Stride

When cross-country skiing, the most frequently used technique to move forward is by executing the diagonal stride. It is called the diagonal stride because the right leg and the left pole (and vice versa) work together to move the skier forward. The diagonal stride technique makes for greater forward thrust and easy balance.

Ascending Hills

The biggest factor that affects a skier's ability to traverse up a hill is grip. Grip comes from the skier staying over their feet and pushing their skis straight down into the snow. There are two different techniques that can be used to ascend hills: herringbone and side step.

Herringbone. A technique used to climb straight up a hill on the inside edges of the skis with the tips farther apart than the tails. A skier using the herringbone technique to ascend a hill leaves an imprint that resembles the skeleton of a fish.

To use the herringbone technique to ascend a hill:

1. Place skis into a 'V' formation with the tails close together.
2. Turn the legs out.
3. Transfer the weight onto the left (right) foot.
4. Lift up the right (left) ski and move it forward.
5. Plant the left (right) pole behind the left (right) ski.
6. Repeat until reaching the top of the hill.

Side step. A technique where the skier places their skis horizontal to the hill and moves upward using short side steps. A skier uses the side step when a hill gets too steep, the snow becomes too deep, or the herringbone becomes too tiring.

To use the side step technique to ascend a hill:

1. Place the skis horizontal to the hill to be ascended.
2. Keep the body upright and centred over the skis.
3. Move the torso sideways and up the hill.
4. Plant the pole ahead of them.
5. Lift and move the ski up.
6. Dig the edge of the ski into the snow.
7. Repeat until the top of the hill is reached.

Descend a Hill

The most important factors to descending a hill safely are balance and control. A skier should never just turn their skis downhill and go—the descent must always be controlled. In other words, the skier must always be ready to slow down or stop.

When descending a hill:

1. Adopt the half-sitting position.
2. Keep the head up and look forward.
3. Move the skis so that they are just under shoulder-width apart.
4. Ensure the feet are flat on the skis.
5. Look down the slope to make sure there are no obstacles.
6. Drop the hands to thigh level.
7. Hold the pole shafts toward the back, keeping the tips off the snow.
8. Glide down the hill.
9. Slow down / stop by executing a full wedge.

SUGGESTED RESOURCES

ISBN 0-88011-652-8 Gaskill, Steven. (1998). *Fitness cross-country skiing*. Windsor, ON: Human Kinetics.

HIKING

INTRODUCTION

Hiking is an activity of vigorous walking in the outdoors / wilderness on an unpaved trail, either on a path or navigating along an unmarked route. It offers an alternative learning environment and allows cadets to explore the outdoor surroundings. The level of challenge can be adjusted by varying the location / terrain of the hikes.

EQUIPMENT

Water Carrier. Carrying water during a hike requires a lightweight water bottle with a tight lid that is easily refillable. Choose a water bottle that can withstand the temperatures of frozen or hot liquids.

Extra Food. It is always advisable to bring extra food on a hike. Snacks such as granola bars, GORP (good old raisins and peanuts), chocolate bars, and dried fruit will provide the hiker with an energy boost. In an emergency situation they may also increase chances of survival.

Extra Clothing. Extra clothing includes an additional layer of warm clothing and a rain coat. A light down vest, sweater, or fleece jacket will provide insulation should the weather be cooler than expected, and during breaks when sweat evaporates and the body cools. Rain coats may also be used in building a shelter in an emergency situation.

Sunscreen. The skin will burn when the amount of exposure to the sun, or ultraviolet light source, exceeds the ability of the body's protective pigment to protect the skin. According to the Canadian Dermatology Association a minimum of SPF 15 with UV-A and UV-B protection should be worn.

Sunglasses. Hikers should always wear sunglasses to protect their eyes against damage from the sun's light. This is especially important in the winter, as snow blindness is a prevalent injury.

Hat. A wide-brimmed hat will protect the back of the neck, ears, and face from burning. A toque in the winter will keep the hiker's ears warm and stop the escape of heat from the head.

Insect Repellent. Mosquitoes and black flies can spread disease and have a negative impact on a hike. Wear loose-fitting clothing with closed cuffs and apply insect repellent to ward off unwanted insects.

Survival Kit. Having a survival kit is a must during any hiking trip. It should include water purification tablets, a light source, waterproof matches, a signalling device and first aid materials.

Notebook and Pencil. Having a notebook and pencil will allow cadets to keep a log of the hike, such as route details, trail condition, trail difficulty, and general observations. This will provide the cadets with beneficial information for planning other hikes. It will also provide a record of the experience.

ACTIVITY GUIDELINES

Terrain Difficulty

A-CR-CCP-951/PT-002, *Royal Canadian Army Cadets Adventure Training Safety Standards*, uses the Yosemite Decimal System (YDS) to rate trail difficulty levels. YDS has a scale from 1–5 and it rates the hardest / most technical section on a terrain / route. It also provides ratings for travel over flat terrain.

Class 1. Hiking, usually on a trail.

Class 2. Simple scrambling, crossing obstacles with the occasional use of hands, requires route-finding skills, may be backcountry dense bush.

Class 3. Angle is steep enough that hands are required for balance; scrambling on rocks using hands and feet, a rope might be carried.

Class 4. Simple climbing, often with exposure requiring a rope belay. A fall could be serious or fatal. Natural protection can usually be easily found.

Class 5. Technical rock climbing begins. Climbing involves the use of ropes, belays, and the placement of natural or artificial protection for the leader in case of a fall. An open-ended decimal extension to Class 5 exists for rating climbs within this category.

Types of Terrain

Easy Terrain. Terrain is flat and footing is secure. Forest roads, trails following streams and rolling hills are generally easy walking.

Moderate Terrain. Terrain with a trail that is mostly solid under foot with either one fairly steep hill or a series of small hills or forest floors with light underbrush.

Difficult Terrain. Any terrain in which a person ascends or descends over 150 m in 1 km. It can also consist of patches of dense forests, thick vegetation and rocky trails / root-covered trails.

Terrain for this activity shall be limited to Class 1 terrain difficulty, and to Easy or Moderate type of terrain.

HIKING TECHNIQUES

An average day of hiking will consist of periods of hiking and periods of rest. The combination of good hiking rhythm, hiking speed, and fixed rest intervals separate beginners from experienced hikers. Enthusiasm often tends to cause one to start too fast, get tired quickly, take an early rest, and start off too fast again.

Stride Rhythm and Speed

A steady hiking rhythm is generally more enjoyable as one over-exerts themselves less and keeps the physical strain at comfortable levels. Having a steady rhythm will enable the cadets to stick to a fixed schedule and lessen the strain put on the body.

Developing a Hiking Rhythm

A hiking rhythm is very personal and is developed over the course of many hikes. Here is how:

- Choose a specific stride rhythm and speed and keep to it. A good rhythm is one that allows the cadet to hike at the same intensity level for at least one hour without having to take a break.
- Adjust rhythm to terrain, weather and weight. The point where a cadet can no longer carry on a conversation indicates that they have gone beyond a comfortable rhythm.
- Make the rhythm a full-body movement where breathing and swinging of the arms happen in harmony. Uneven surfaces (eg, uphill / downhill) can make it difficult to maintain a steady rhythm.

Controlling Fatigue

The purpose of resting is to slow down the heart rate and breathing. Resting gives the body time to get rid of the lactic acids built up in muscles, and to recover from hot spots or sores.

Resting guidelines:

- Rest in regular intervals; try 10 minutes for every hour hiked (make them part of the rhythm). 10 minutes is the most effective rest duration for body recovery.
- Take off backpacks, rest in the shade, and sit down during rests.
- Use only lunch and dinner (supper) breaks as extended rest periods. During these extended breaks, allow feet to rest and dry by removing shoes, and airing out footwear.

Full Body Synchronization

Hiking rhythm is a full body affair. Just like marching, hiking requires coordinated movements where every action has a reaction. The swinging of arms provides momentum, breathing controls pace, etc. To properly control rhythm, one must first learn what body parts work in unison. To employ full body synchronization during hiking, the arms should be in motion at a natural swing, opposite the forward foot.

SUGGESTED RESOURCES

ISBN 0-7566-0946-1 Berger, K. (2005). *Backpacking & hiking*. New York, NY: DK Publishing, Inc.

ISBN 978-0-7153-2254-3 Bagshaw, C. (Ed.). (2006). *The ultimate hiking skills manual*. Cincinnati, OH: David & Charles.

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ICE SKATING

INTRODUCTION

Ice skating increases the body's flexibility and endurance with very low impact. It boosts the cardiovascular system while also improving balance and agility.

EQUIPMENT

- Helmets, and
- Ice skates.

ACTIVITY GUIDELINES

Ice skating shall be conducted at an established ice skating venue such as an ice rink.

ICE SKATING TECHNIQUES

Walking. Many rinks will have a rubber mat on which the cadets can practice walking in skates. When walking in skates, it is recommended to have the skate guards on the ice skates.

First Time on Ice. Have the first-time ice skaters move along the ice around the perimeter, so they can use the walls for support. There may be skating aids available to new ice skaters.

Practice falling. If a fall is anticipated, bend the knees and squat. When falling, hands should be quickly clenched into a fist to minimize the risk of injury from passing skaters.

Getting Up. To get up, ice skaters should get on their hands and knees and place one foot between their hands. Repeat with the other foot and lift up to the standing position.

Moving. To move, ice skaters should lean on their weak leg, and then push in a diagonal direction outwards with the strong leg, pretending they are shovelling snow behind and to the right.

Stopping. To stop, bend the knees slightly inward and then push out with one or both feet. This creates pressure on the ice causing the feet to not slide out.

SUGGESTED RESOURCES

Nil.

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INSTRUCTOR-LED DANCING

INTRODUCTION

Dancing is a social activity that encourages the development of cardiovascular endurance as well as developing strength and flexibility. The intensity of the dance can be modified to accommodate varying levels of fitness as well as ability.

EQUIPMENT

Equipment will vary depending on the selected type of dance.

ACTIVITY GUIDELINES

Dancing shall be structured, well supervised and conducted by a certified instructor or using a video that is conducted by a certified instructor.

This activity shall not be conducted as a social cadet dance.

SUGGESTED TYPES OF DANCE

- Foxtrot,
- Highland Dancing,
- Hip Hop,
- Jitterbug (Swing),
- Line Dancing,
- Salsa, and
- Waltz.

SUGGESTED RESOURCES

Jennifer Galardi. Certified Fitness Instructor. *Dance off the inches: Hip hop party*. 2007. [DVD]

Kristina Milova. Certified Fitness Instructor. *Dance off the inches: Dance it off ballroom*. 2008. [DVD]

Amy Blackburn. Certified Fitness Instructor. *Dance off the inches: Country line dance*. 2008. [DVD]

Desiree Bartlett. Certified Fitness Instructor. *Dance and be fit: Latin groove*. 2008. [DVD]

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ORIENTEERING

INTRODUCTION

By participating as an individual or as a member of an orienteering team, the cadets are given the opportunity to be active in a sport that will contribute to their living a healthy, physically active lifestyle.

EQUIPMENT

- Prepared point-to-point orienteering course,
- Prepared point-to-point orienteering course map,
- Scorecards / control cards,
- Punches
- Description sheets,
- Stopwatches,
- Whistles,
- String / twine,
- Hand-held radios,
- Table,
- Chairs, and
- Marker tape.

ACTIVITY GUIDELINES

Orienteering should be well supervised and conducted by an experienced instructor.

BACKGROUND KNOWLEDGE

Point-to-Point Orienteering

Also known as cross-country orienteering, point-to-point orienteering requires cadets to determine their own routes from one known control to the next, in a specific order. The winner is the cadet(s) who completes the course in the shortest elapsed time.

Point-to-point orienteering is the most popular of orienteering events. One reason is that it is a battle of physical stamina and quickness of mind against other participants.

Scoring Equipment

Control Markers. Found at control points on an orienteering course, control markers consist of three squares joined together to form a hollow triangular shape. Control markers are divided diagonally bottom left to top right into two triangles. The top left-hand triangle is white and the bottom right-hand triangle is an orange-red colour.

Controls may be marked with a control identifier. This identifier may be some type of number / letter or combination of both. The identifier will be written in the top left triangle of the marker and will inform the orienteerer that the correct control has been located.

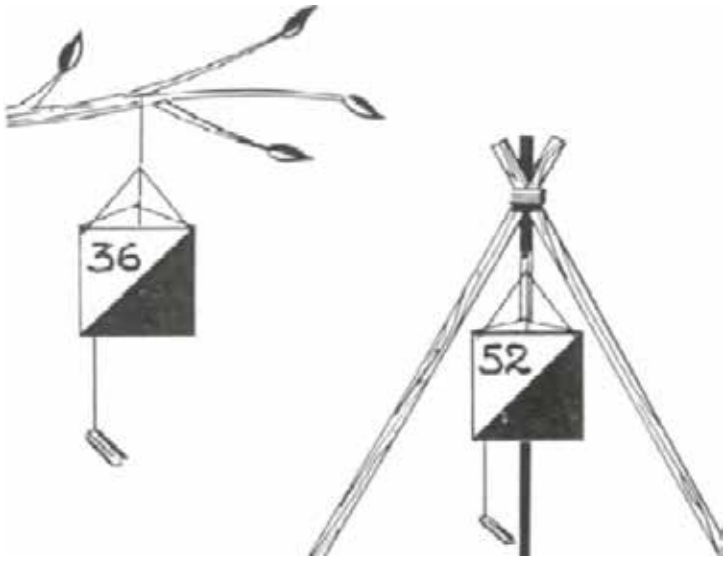

Figure F-1 Control Markers

Orienteering control markers can be created by using cardboard or plastic jugs.

Punches (Clippers). Attached to the control markers, the punch will often hang from the control marker. Each punch on an orienteering course is different and aids an orienteering competition by having the competitors use the punch on their scorecards in a specified order. Each punch has a different series of numbers or letters.

Description Sheets. The description sheets contain all the information on the competitor and their race, as well as International Orienteering Federation (IOF) symbols or written descriptions of the control points.

Scorecards. Also known as the control card, it is what the competitor uses to collect the stamps of the control markers on the course. It is handed in at the end of the race.

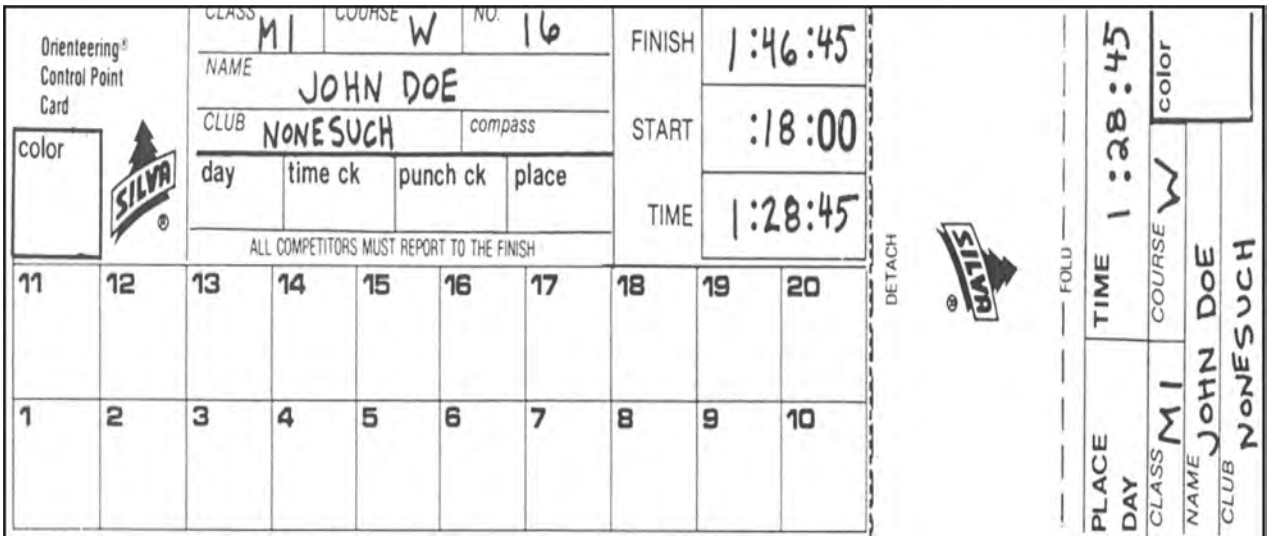

Figure F-2 Scorecard

Orienteering Maps

The map scale is found at the bottom of the map title. The most common scales for topographical maps in Canada are 1:25 000 and 1:50 000. Common orienteering map scales are 1:5 000, 1:10 000, 1:15 000 and 1:20 000. This means that on a 1:5 000 scale map one unit on the map represents 5 000 units on real terrain. The smaller the map scale, the smaller the area is, and the more detail there is available to the competitor.

Orienteering Techniques

Folding and Holding the Map. Folding the map involves the orienteerer gently folding the map so the route is showing, running along the direction of travel, with everything else folded out of the way. It helps the orienteerer see only the information pertaining to them at the time.

Orienting the Map by Inspection. A map is oriented when north on the map is aligned with north on the terrain. The orienteerer should pick two or three objects around them and then locate them on the map. The real landmarks and the ones on the map should line up.

Thumbing Position. The orienteerers should be holding the map so their thumb is placed on the map to mark their position, adjusting their thumb position to their location each time they stop to reference the map. It saves time, helping to quickly determine where the orienteerer is, no matter how many times they have to stop and look at their map. Two steps involved in this process are ensuring the map is held properly and holding the map so it is oriented north.

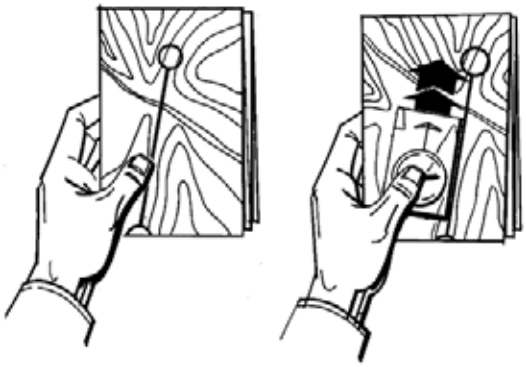

Figure F-3 Thumbing Position

Determining Distance. Orienteerers should not rely on features for judging distance; they may no longer exist though they still appear on the map. The best way is step counting or pacing. This is determined by knowing how many steps or paces an individual takes in 100 m. To save time, an orienteerer should know this before beginning.

Checking Off Features. The orienteerer identifies linear features that appear before the control that will alert the orienteerer the control is nearby. As an orienteerer navigates toward the control, they have a mental checklist of the features as they come upon them.

Handrails. A handrail is a prominent linear feature that runs parallel to the direction the participant is supposed to go and leads to the control. A path between two points would be a handrail.

Catching or Collecting Features. Catching or collecting features is a technique for route evaluation that helps the orienteerer make a mental checklist of all the features they must collect or catch before they can get to their control. It is a large distinct feature situated across the line of travel on the route to, or beyond, the control. It must be a feature that is easy to recognize in the terrain, such as a large pond or power line. If it is situated in front of the control, it acts as an alert to the control. When situated beyond the control, it alerts the orienteerer that they have travelled past the point of the control.

Attack Points. Some points are located on small features that are not easily found. For this, the orienteerer might locate a larger feature as close to the control as possible. The orienteerer will look for this feature, called the attack point, run toward this point and then look for the control close by.

Attacking From Above. A control located on the side of a slope is easier for the orienteerer to find when they are coming down the slope. The orienteerer gets a better view of the terrain by looking down on it and is therefore able to find the best route to the control.

Height Assessment Versus Detouring Around. When a hill is between controls, a decision must be made by the orienteerer whether to go over or around. It must be decided if it is easier for the individual to climb the slope and possibly expend more energy, or to go around, which may be a longer route but easier to run due to level ground. The elevation of the slope may be a deciding factor.

Long Easy Route Versus Short Tough Route. A competitor must take into consideration the distance to travel both routes, and how quickly they will be able to travel over the terrain. This will be dependent on the vegetation that will be encountered.

Route Evaluation Techniques Using The CART Acronym

A systematic approach to map reading, represented by an acronym meaning:

- **Control.** What control is the orienteerer trying to find?
- **Attack point.** What is an attack point that is easy to identify? It should be close to and before the marker, distinct, prominent and easy to reach.
- **Route choice.** What is the best route to the attack point? This will depend on the nature of the terrain, the distance to be covered and the skills and abilities of the orienteerer.
- **Technique.** What is the best technique to use on each leg of the competition? This will depend on the terrain, distance and the individual orienteerer, but must be decided before starting the leg.

This may seem overwhelming for the novice orienteerer, but point out to the cadets that they would naturally use some of these techniques without realizing it.

Start and Finish Routine

At the start of the event, the cadets will move to the starting line and wait for a blast from the instructor's whistle. At this point, a departure time must be written down on the recording sheet (as illustrated in Figure B6-5).

Usually at the beginning of the event there will be an area called the starting grid. This gives the participants a three-minute preparation period prior to starting the event.

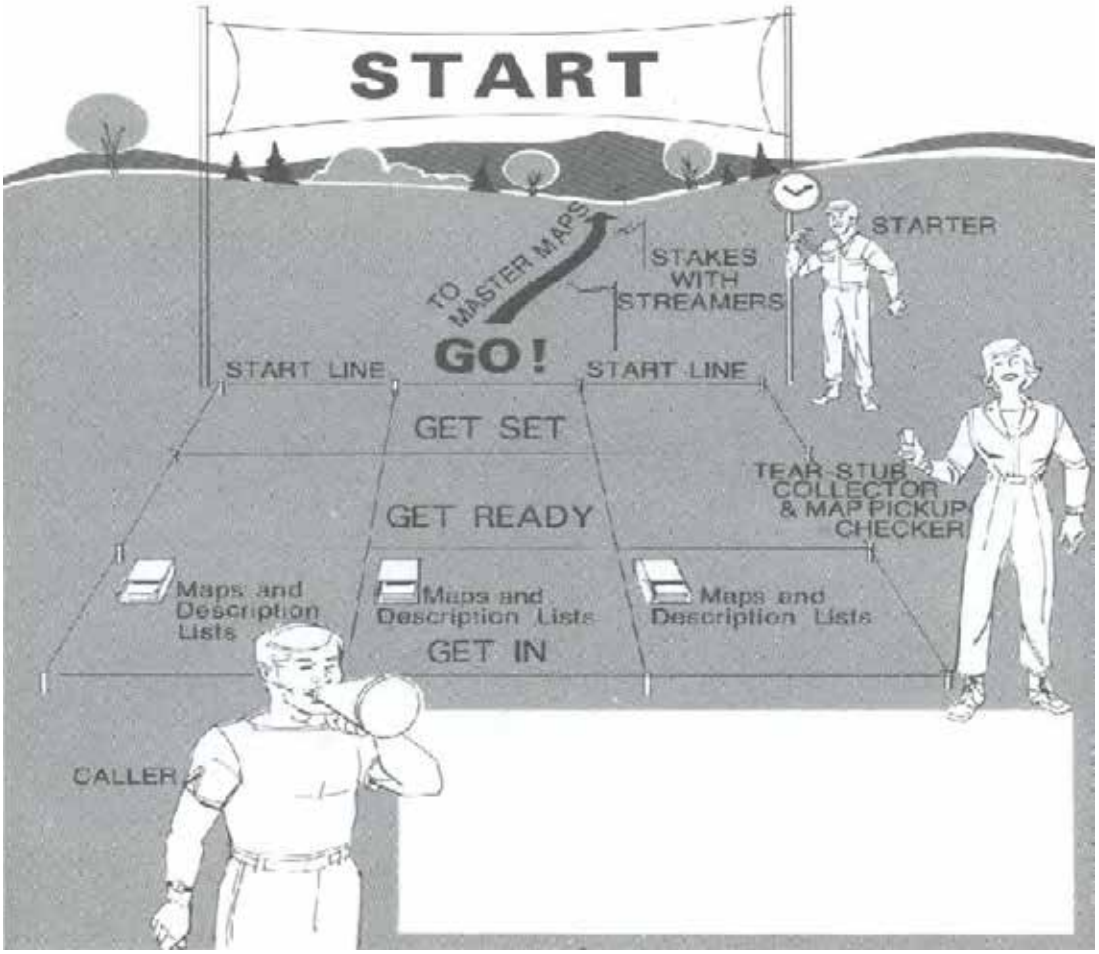

Figure F-4 Starting Grid

Three minutes before the cadet is to start, they are called to the “Get In” row of the starting grid. A minute later, upon hearing a whistle, the cadets move forward to the “Get Ready” row, where they review a copy of the description list and the map (if it is not a pre-marked map). One minute before the start, the cadets move to the “Get Set” row, where pre-marked maps are distributed, but they are not allowed to be looked at until they hear the “Go” whistle.

On the zero-minute, there will be a “Go” whistle, signaling the cadets to begin. It is at this point that the departure time is recorded on the recorder’s sheet.

RECORDING SHEET

EVENT _____ PLACE _____ DATE _____

NAME	No.	Team	Class	Start Time	Finish Time	Time Used	Controls Missed	Position

Figure F-5 Recording Sheet

Cadets are to be given pre-marked maps at this level.

Course Layout

A point-to-point type of orienteering (also known as cross-country or free orienteering) event will be conducted to allow the cadets to assist with orienteering. This type of orienteering is considered the ultimate challenge for orienteerers. The course and markers are placed in a circular configuration where every competitor must visit the same control in the same order in the shortest amount of time. This challenges the competitor to choose the best possible route and maintain stamina.

The layout of the course is based on the competitor level of experience and usually consists of 8–12 controls situated in varying degrees of difficulty and distance.

RULES AND REGULATIONS

Orienteering meets expect competitors to follow basic rules and regulations that also deal with ethics and safety when participating in a point-to-point orienteering activity.

Technical Rules

- Participants shall not damage, remove or hide any controls during an event.
- Participants shall only use the map provided by the organizer plus a compass during an event.
- Participants shall visit the controls in the specified order in a point-to-point orienteering event.
- Participants must not enter / cross areas marked on the map as uncrossable or out of bounds.
- Participants shall not damage property such as fences or equipment.
- Participants shall not enter / cross gardens, newly-planted fields or those with growing crops.

Safety Rules

- Cadets should wear clothing that covers the full body.
- Cadets must carry a whistle during the event.

- Cadets should be familiar with the international distress signal (three blasts on a whistle).
- Cadets must report to the finish official and hand in their map and control card whether or not they complete the course.
- Cadets must aid injured persons they encounter during the event.
- Cadets must observe traffic rules when crossing roads or railways.
- Organizers shall provide safety bearing information.

Ethical Rules

- Cadets should not follow others.
- Cadets should not discuss the course with others while on the course.
- Cadets who ask for assistance should be shown their location on the map and then report it to an official at the finish.
- Cadets who have finished their course should not divulge information about the course, map or terrain to others who have not started.
- Cadets shall respect the land and environment.

SCORING AND TIMING

The finish line is where all scoring and timings will take place. It is important that the finish area allows officials to properly complete their tasks. Officials will have to record, calculate times and verify each orienteerer visited each control on the course.

When competitors finish, officials are responsible for four main tasks:

1. collecting control cards in order of finish,
2. calculating and recording finish times,
3. verifying control card punch patterns, and
4. displaying results.

SUGGESTED RESOURCES

ISBN 0-02-029265-1 Kjellstrom, B. (1994). *Be Expert With Map & Compass: The Complete Orienteering Handbook*. New York: Hungry Minds, Inc.

Stott, W. (1987). *Armchair Orienteering II: A Practical Guide to Route Planning*. Winnipeg: Manitoba Orienteering Association.

ROLLERBLADING

INTRODUCTION

Rollerblading increases the body's flexibility and endurance with very low impact. It boosts the cardiovascular system while also improving balance and agility.

EQUIPMENT

- Rollerblades,
- Knee pads, elbow pads, wrist guards, and
- Helmet.

ACTIVITY GUIDELINES

Rollerblading shall be conducted on smooth, paved surfaces such as established paths.

ROLLERBLADING TECHNIQUES

Start on Carpet or Grass. Have new rollerbladers start on carpet or grass because the wheels will not roll. This allows them to get used to the increased height and its affect on their centre of balance.

Falling and Getting Up. Have new rollerbladers fall forward, sliding on their knee pads and wrist guards. If they feel like falling backwards, have them grab their knees. This will pull them forward, so they will either stay upright, or fall forward. Make sure the wrist guards impact at a sliding angle—not straight down, as this may cause a jarring impact that can cause injury.

Practice Moving. Have new rollerbladers get a feel for how to move. Have them take a few steps. Also have them move one foot forward while gradually increasing pressure on that foot until there is almost no pressure on the other. Have them do the same with the other foot until they are able to "glide" back and forth a few times.

Move to a Hard Surface. Concrete is ideal because the wheels will find friction easily while allowing movement more freely than carpet. Asphalt is not recommended for beginners because its smoother surface will force the wheels to roll more easily.

Experiment. Experiment. Practice turning, balancing on one skate, and walking.

Braking. Just like driving riding a bike, or even running, have the cadets anticipate where they want to stop. To brake, move one foot forward and bend the knee slightly and apply pressure on the heel.

SUGGESTED RESOURCES

Nil.

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RUNNING

INTRODUCTION

Running is one of the most common activities to develop cardiovascular fitness. Running may be done at a variety of speeds, which enables the cadets to vary the intensity of the training session.

EQUIPMENT

Running shoes.

ACTIVITY GUIDELINES

Running shall be conducted in a dry, safe environment or indoors on an established running track.

RUNNING TECHNIQUES

There are six main techniques for running, used to cover the distance at maximum speed with minimum effort; they are:

Poise of the Head and Balance of the Body. The poise of the head controls the balance of the body. The head should be held in alignment with the trunk, the neck muscles relaxed, and eyes looking ahead. The chest and hips should be kept square to the front. There should be no bending at the hips, either forward or backward. A conscious effort to maintain alignment may be necessary.

Leg Action. The legs are the driving forces behind the body, as well as the supporting power. When running, the toes should be pointed straight ahead, the knees should be lifted forward, and hip rolling should be avoided. The lower leg should be kept completely relaxed as it swings forward; the foot just clearing the ground. Do not use a bouncing or bounding stride in which the body weight is shifted upwards unnecessarily.

Arm Action. While running, the arms act as speed and balance controllers. The most efficient direction for the swing of the arms is forward and inwards, partly following the direction of the body and partly in towards the centre of gravity of the body. Shoulder movement should be reduced to a minimum. Shoulder rolling and shoulder shrugging should be avoided. Avoid contracting the muscles of the neck. Each person will find the most comfortable height for carrying the hands.

Limb Coordination and Rhythm. These come automatically to maintain body balance and ensure smooth movement. A change or break of rhythm leads to less efficiency and greater fatigue.

Relaxation. A certain degree of relaxation comes naturally, but increasing relaxation of the upper body during running may take practice and concentration. When increases in relaxation occur during running, more efficient motion will take place, resulting in distance being covered in less time.

Breathing. Breathing in and out should be done through both the nose and the mouth. Inhale mostly through the nose and exhale mostly through the mouth. Breathing should follow an automatic rhythmical rate set by limb movement.

Duration of a Training Session

All running activities should begin with a warm-up. The main part of a running training session may be a straight distance run, around a track, on a road, or cross-country. A minimum of 15 and preferably 20 minutes of sustained running is required to increase cardiovascular fitness. Running for time or distance will aid in increasing fitness levels. The cool-down should include slowing the pace of the run and flexibility exercises. It is essential that the heart rate is brought below 100 beats per minute before the cool-down is considered complete.

Alternating Terrain

Running on alternating terrain may be conducted on a course laid out along roads, across fields, over hills, through woods, or on any irregular ground. Running on alternating terrain provides a break in routine. Many runners prefer to follow cross-country trails rather than run on tracks or roads.

SUGGESTED RESOURCES

ISBN 0-684-85455-4 Bingham, John. (1999). *The courage to start: A guide to running for your life*. New York, NY: Fireside.

SKIPPING ROPE

INTRODUCTION

Skipping will help improve cardio-respiratory (heart and lungs) fitness, flexibility and co-ordination. As a high-impact exercise, skipping is great for building bones and a good exercise to lose weight and define muscle mass.

EQUIPMENT

- Running shoes, and
- Skipping rope.

ACTIVITY GUIDELINES

To help prevent injury, running shoes shall be worn during skipping rope exercises.

Skipping to music, combining different foot combinations and also adding circuit exercises helps maintain interest while skipping.

SKIPPING ROPE TECHNIQUES

Running on the Spot. Run on the spot with the rope passing underneath between each step.

Side Rope Swings. Push the skipping rope to the side by moving both hands to one side. On the next skip, bring the rope back to the middle so it goes around the body. This movement is great for transitioning from one combination to another and can be used to relieve arm tension.

High knees. After each skip, bring the knee up to the chest. Attempt to bring each knee up as high as possible to activate the hip flexors and extenders and the abdominal musculature.

Heel to Toe. Alternate landing on the toes of your feet and on the heels of your feet. Be careful when landing on the heel—it should be a soft landing.

Split Jumps. On each skip, alternate one foot forward and one foot back. Land on the toes of each foot.

Criss-Cross. The feet cross and uncross each jump. Alternate between crossing the left foot with the right foot and the right foot with the left foot. Use different combinations of each cross-over. This improves your coordination and focus.

Figure I-1 Criss-Cross Pattern

Double Jumps. Jump high enough and swing the rope fast enough so the rope goes around twice for each jump.

One Foot Jumps. Skip on one foot instead of two. This version works the calf muscles. The number of jumps per foot (double jumps) or the way you land on each foot (heel to toe) can be varied to create and maintain interest.

One + Combo. This is a combination of the one foot jumps and the side rope swing. Do one one-foot-jump on each foot, then do a side swing. Do two one-foot-jumps on each foot then a side swing. Next are three one-foot-jumps and a side swing. Continue progressively increasing the number of jumps.

Two-By-Two Combo. Jump twice on the right foot and twice on the left foot; continue alternating. This combo can be increased to a three-by-three combo or a five-by-five combo.

Figure I-2 Split Jumps Pattern

SUGGESTED RESOURCES

Heart and Stroke Foundation of Canada. (2011). *Skipping skills posters*. Retrieved November 10, 2011 from http://www.jumpropeforheart.ca/Content/Files/SkillsPosters_2011_E.pdf

SHOWSHOEING

INTRODUCTION

Snowshoeing is an aerobic activity that involves walking through the snow and is an easy skill to learn. It tones your entire body while providing an excellent cardiovascular workout; it strengthens leg and heart muscles and improves delivery of oxygen to muscles. People can immediately walk on snowshoes even if they have never worn them before. Snowshoeing helps improve the cardiovascular and muscular strength components of fitness.

EQUIPMENT

Snowshoes. The chart below is a rough guide to follow when in a standard condition of wet powder snow.

Snowshoe Size	Carrying Capacity
20 cm by 56 cm (8 inch by 22 inch)	68 kg (150 lbs)
20 cm by 63 cm (8 inch by 25 inch)	90 kg (200 lbs)
22 cm by 43 cm (9 inch by 34 inch)	113 kg (250 lbs)
24 cm by 86 cm (9.5 inch by 36 inch)	136 kg (300 lbs)

The smaller the snowshoe, the better it will be for climbing over blow downs (fallen trees and bushes) and through brush. The larger the snowshoe, the better flotation on top of snow.

Bindings. The binding attaches the foot to the snowshoe securely, preventing the heel from sliding from side to side, even when travelling across a slope. Bindings most often fit a wide range of boot sizes. In any category of snowshoe, the binding should be made of hardy, flexible rubberized nylon straps, with buckles that do not loosen or freeze and are easily manipulated even when wearing mittens. The bindings must not be fastened too tightly where circulation may be cut off, as the chances of frostbite will increase.

Poles. Telescoping trekking poles are the most versatile choice for snowshoeing. These poles provide better balance and reduce the amount of stress on the knees, shoulders and back. They absorb some of the impact the body would otherwise absorb. The poles, rather than the body, absorb shock, reduce arm and leg fatigue and improve endurance. While snowshoeing, they help a person keep balance while climbing inclines or when backing out of an area in deep snow. Although trekking poles are generally not required when snowshoeing, they are a helpful accessory.

ACTIVITY GUIDELINES

Snowshoeing shall be limited to new fallen snow, powder snow, and wind-packed snow. Refer to the Skiing section for more information on types of snow. The same types of snow as skiing should be avoided when snowshoeing.

SNOWSHOEING TECHNIQUES

Snowshoeing is a very easy skill to learn. People can immediately walk on snowshoes even if they have never worn them before. However, there are techniques that will greatly improve these abilities while snowshoeing over snow-covered terrain.

Striding

To conserve energy when snowshoeing on soft snow, lift the snowshoe to clear the snow and thrust forward to complete each pace. The rest step allows for momentary pauses between steps. With practice, one can adjust the length of the pause to the state of fatigue. As one steps forward, thrust the front snowshoe out and let it plop down, or stamp it firmly into place. Straighten and lock the rear knee joint so the tendons and cartilage are holding weight and pause and relax the thigh muscles, using the poles to maintain balance. Bring the rear leg ahead, thrust the snowshoe out, place it, lock what is now the rear leg, relax momentarily and repeat. The effect is to rest the legs during the time they are actually working hard. A couple of seconds of work with a couple of seconds of rest make it possible to keep going steadily without long stops.

Executing Kick Turns

Kick turns are performed when a change in direction is required. It is commonly used in an enclosed area along the trail. The steps in performing a kick turn are:

1. Lift one leg and swing it back, and then kick it forward and upward.
2. At the top of the kick, just as the tail of the snowshoe clears the snow, turn the foot 180 degrees.
3. Lower and plant the foot in the snow, with the front of the foot facing to the rear.
4. Shift the body weight to the foot facing 180 degrees to the rear and then lift the other foot.
5. Bring the foot over the trailing edge of the planted snowshoe and face the new direction.

Crossing Obstacles

Obstacles such as fallen trees, logs, tree stumps, ditches and small streams can be stepped over. Care must be taken not to place too much strain on the snowshoe ends by bridging a gap, since the frame may break. In shallow snow, there is a danger of catching and tearing the webbing on tree stumps or snags that are only slightly covered. Never bridge two obstacles together with the snowshoes. When jumping over obstacles do not let the tails of the snowshoes fall downward. If the tail of the snowshoe is vertical upon landing, it will strike the snow first and may result in a fall. When possible, find an alternate route around the obstacle.

Ascending Hills

The method chosen to walk uphill will depend on the angle of the incline and the condition of the snow. The following techniques can be used when navigating uphill.

Step kick. When going straight up a hill, this is the most efficient method on firm or hard packed snow where traction is not a concern. Kick the toe of the snowshoe in the snow ensuring that it is firmly planted before shifting weight to the snowshoe.

Edging. Used when walking up a steep slope. Performed by kicking the snowshoe sideways into the slope, or moving the boot heel as far toward the uphill side of the slope as possible. Stamp the snowshoe down, forcing the outside edge of the snowshoe into the slope. When edging, the body will be perpendicular to the slope.

Switchbacking. Used to travel a slope that is fairly steep and is covered in deep powder snow. Ascend the hill by walking across the slope at an angle that is comfortable and not steep enough to allow the snowshoes to slip. To turn back (switchback) to the right, firmly stamp the left snowshoe in the snow and make sure it will hold. Shift the weight to the left foot, face the slope, and then swing the right snowshoe around to point it in the direction of the next switchback and firmly stamp it into the snow. Ensure that the tail of the right snowshoe is not placed on the left snowshoe. Stamp the right web into the snow and gently shift the body weight to step on it. To make a left turn, reverse the procedure.

Descending Hills

The method that is chosen to walk downhill will depend on the angle of the incline and the condition of the snow. The same techniques for ascending hills are used to descend. When descending a hill a person should follow the following guidelines:

- Do not lean forward by bending at the waist. This is a normal tendency for beginners and will increase the chance of falling forward.
- Avoid leaning back on the snowshoes, as if digging in the heels. This will increase the chance of the snowshoes sliding out from under the snowshoer.
- To assume a safe posture, stand straight up, balance the body straight over the foot, slightly bend the knees to compensate for changes, and then relax.

Breaking Snow

In loose snow, the trailbreaker may have several extra pounds of snow on the snowshoes. The snow falls on top of the webbing when walking and sinking in deep snow. This extra weight will exhaust the trailbreaker at a faster rate than the followers. When the trailbreaker feels they can no longer move forward at a progressive pace, they should step to the side and drop to the rear as the rest of the party moves past.

SUGGESTED RESOURCES

Edwards, S. & McKenzie, M. (1995). *Outdoor pursuits series: Snowshoeing*. ISBN 0-87322-767-0. Windsor, ON: Human Kinetics Inc.

Savignano, P. (2001). *Basic essentials: Snowshoeing*. ISBN 0-7627-0629-5. Guilford, CT: The Globe Pequot Press.

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SWIMMING

INTRODUCTION

Swimming is a fun activity that can include doing laps, playing games and aqua aerobics.

EQUIPMENT

The equipment required will depend on the selected swimming activity.

ACTIVITY GUIDELINES

This activity shall be conducted IAW A-CR-CCP-030/PT-001, *Water Safety Orders*, Chapter 6.

SWIMMING GAMES / ACTIVITIES

Whirlpool. Have the cadets stand in a circle holding hands, in the shallow end of the pool. Have the group start walking in a clockwise direction, moving faster and faster creating a whirlpool. Once the group has gained momentum, count to three and have the cadets let go. The whirlpool will spin the cadets outwards.

Sharks and Minnows. This is a game of tag, where one cadet is designated the “shark” and the rest “minnows”. The minnows must constantly move in the water trying to avoid being tagged by the shark.

Aqua Aerobics. Aqua aerobics is an excellent activity for those who have suffered injury or are beginning cardiovascular fitness training as it causes little stress on the joints. If it is selected, it shall be conducted by a certified instructor or using a video that is conducted by a certified instructor.

SUGGESTED RESOURCES

Karen Westfall, Aqua Fitness Expert. *Aqua Combo Splash*. N.D. [DVD]

Katz, Jane. (2003). *Your water workout: No-impact aerobic and strength training from yoga, Pilates, tai chi and more*. ISBN 978-0767914826. USA: Broadway Books.

Kidspot. (2011). *Pool water*. Retrieved November 28, 2011, from www.kidspot.com.au/kids-activities-and-games/Pool-Water+8.htm

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MUSCULAR STRENGTH EXERCISES USING THE BODY, BALANCE BALLS, RESISTANCE BANDS, AND WEIGHTED BALLS AND BARS

INTRODUCTION

Well-structured resistance training can provide youth many health benefits, such as preventing injuries, increasing strength / endurance / power, and assisting to build strong, healthy bones.

EQUIPMENT

- One balance ball per cadet, and/or
- Resistance bands / weighted balls / weighted bars (various resistance levels / weights), and
- One mat per cadet.

ACTIVITY GUIDELINES

Activities using equipment shall be conducted by a F&SI trained in its use or a certified trainer.

Choose a training area that has adequate space (eg, balance balls may roll around very easily).

Conduct each new exercise using the following method (If the exercises are used as part of a circuit, introduce them all before the cadets start the circuit):

1. Demonstrate the complete exercise.
2. Demonstrate the starting position and have the cadets adopt the starting position.
3. Demonstrate the subsequent movements and have the cadets complete each movement.
4. Demonstrate the complete exercise and have the cadets complete the entire exercise.

Safety

To avoid injury and maximize the effectiveness of the exercise, have the cadets complete the movements in a slow, deliberate, and controlled manner. Have them use lightweight equipment.

Ensure the balance balls are sized to the cadets. Cadets should be able to sit on the ball with their feet touching the ground and legs at a 90-degree angle or slightly more.

Instruct the cadets to maintain a good grip on the equipment and to not let go of resistance bands during the exercises as they might snap back and cause injury.

EXAMPLES OF RESISTANCE EXERCISES USING THE BODY

Push Up. Lay face down and place the hands under or slightly wider than the shoulders with fingers stretched out. Straighten the legs with feet slightly apart and tuck the toes under the shins. Push up with the arms until they are straight, keeping the legs and back aligned. Lower the body using the arms until the elbows bend at a 90-degree angle and the upper arms are parallel to the floor.

Figure L-1 Push Up

Curl Up. Lay on the floor with the back and head down. Place the feet flat and legs slightly apart. Feet should be extended as far as possible from the buttocks while still allowing feet to remain flat on the floor. Rest the palms on the mat with the arms straight, parallel to the trunk, and fingers stretched out. Curl up slowly, keeping the heels in contact with the floor.

Figure L-2 Curl Up

Lunge. Stand with one leg forward and one backward. Slowly bend the knees, lowering into a lunge while keeping the front knee and back knee at 90-degree angles. Keeping the weight in the heels, push back up to starting position.

Figure L-3 Lunge

Squat. Stand with feet shoulder-width apart. Push the hips back while bending at the knees, as if sitting into a low chair. Push through the heels and extend the knees to return to the start position.

Figure L-4 Squat

Bridge. Lay on the floor with hands by the sides, knees bent and feet flat on the floor. Keeping the head and shoulders on the floor, raise the hips up to create a straight line from the knees to the shoulders. Hold for 20–30 seconds.

Figure L-5 Bridge

SUGGESTED RESOURCES

ISBN 978-0-7360-6675-4 Corbin, C., & Lindsey, R. (2007). Fitness for life: Updated fifth edition. Windsor, ON: Human Kinetics.

EXAMPLES OF BALANCE BALL EXERCISES

Ball Crunch. Lie on top of the ball with the lower back resting on the ball, fingers behind the ears. Pull the stomach in and curl the head and torso up towards the knees. Lower to the start position.

Figure L-6 Ball Crunch

Ball Plank. Place the forearms on the ball and raise the chest, so the elbows are under the shoulders. Extend the legs behind on the floor. The body should form a straight line from ankles to head. Pull the shoulder blades back and down, and brace the abs. Hold this position for 30 to 60 seconds.

Figure L-7 Ball Plank

Ball Push Up. Begin with the hands set slightly wider than and in line with your shoulders, and shins resting on the ball, forming a straight line with the body from shoulder to ankles. Lower the upper body towards the floor by bending the elbows. Push the upper body back to the original position by straightening the elbows. An alternate for this exercise is to complete the push up with the hands on the ball, placed under the shoulders and pushing up.

Figure L-8 Ball Push-Up

Ball Jackknife. Begin with the hands set slightly wider than and in line with your shoulders, and shins resting on the ball, forming a straight line with the body from shoulder to ankles. Roll the ball towards the chest by raising the hips and slightly rounding the back while pulling the ball forward with the feet. Pause, and then return the ball to the starting position by rolling it backwards.

Figure L-9 Ball Jackknife

Ball Hand-to-Feet Pass. Begin lying on the back with the ball held up with the hands above the chest. Raise the legs towards the ball with knees slightly bent and pass the ball from the hands to the feet. Move the ball towards the floor by lowering the legs. Raise the ball up towards the hands and pass the ball from the hands to the feet.

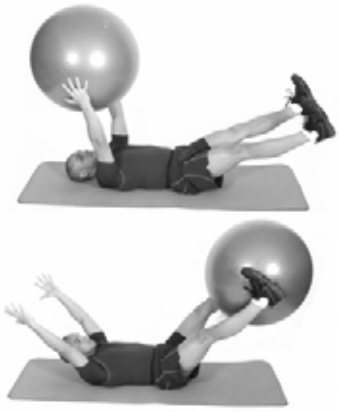

Figure L-10 Ball-to-Feet Pass

SUGGESTED RESOURCES

Mari Winsor, Certified Pilates instructor. *Winsor Pilates ball workout*. 2005. [DVD]

Allie DelRio Pointer, Firm Master Instructor. *The Firm: Core stability ball*. 2006. [DVD]

ISBN 9781856486637 Flett, M. (2003). *Swiss ball: For strength, tone, and posture*. New York, NY: Sterling Publishing Limited.

EXAMPLES OF RESISTANCE BAND EXERCISES

Bicep Curl. Stand on the band with knees bent, holding the handles (or the ends) with the palms facing forward. While keeping the abs in, bend the arms bringing the palms toward the shoulders. Widen the stance on the band to add tension to the band. Return to start and repeat.

Figure L-11 Bicep Curl

Triceps Extension. Hold the band in both hands at shoulder level with the arms bent in front of the chest. Keeping the left hand stationary, straighten the right arm out to the side. Return to start. Repeat for the left arm.

Figure L-12 Triceps Extension

Rear Delt Fly. Hold the band in both hands, a few inches apart, with arms straight out in front at shoulder level. Squeeze the shoulder blades together and pull the band so that the arms are out to the sides like an airplane. Return to the start and repeat, keeping tension on the band the entire time.

Figure L-13 Rear Delt Fly

Overhead Press. Place both feet on the band and grasp handles / ends, bring the hands up just over shoulders with elbows bent and palms facing towards the ears. Press arms up over the head and then lower.

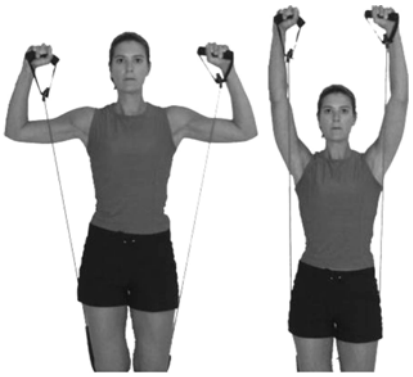

Figure L-14 Overhead Press

Squats. Stand on the band with feet shoulder-width apart, keep tension on the band by holding the ends of the band in each hand with the arms bent halfway up. Lower into a squat (as if sitting in a chair) keeping the knees behind toes. Pull on the band to add tension. Return to the start and repeat.

Figure L-15 Squats

SUGGESTED RESOURCES

Paul Katami, Certified Fitness Instructor. *Paul Katami's A.S.A.P. Band Camp*. 2009. [DVD]

Alison Davis-McLain, Certified Group Fitness Instructor. *The Firm: Pilates Band*. 2006. [DVD]

ISBN 9781856487245 James, M. (2004). *Resistance band workout: A simple way to tone and strengthen your muscles*. New York, NY: PRC Publishing Limited.

EXAMPLES OF RESISTANCE EXERCISES USING WEIGHTED BALLS

Triceps Extension. Stand with feet spread shoulder width apart (or sit on a chair / balance ball). Hold the weighted ball over the head with the elbows tucked in near the ears. Bend the elbows backward to lower the weighted ball behind the head. Raise the ball to the original position.

Figure L-16 Triceps Extension

Figure of Eight. Hold the weighted ball with the arms extended over the right shoulder and the knees bent. In one continuous motion bring the weighted ball down in front as if chopping wood, finishing when the ball is toward the left foot. Raise the weighted ball straight up over the left shoulder. Bring the weighted ball down in front using the same motion as the first part of the movement, finishing when the ball is toward the right foot. Repeat in a continuous figure of eight motion.

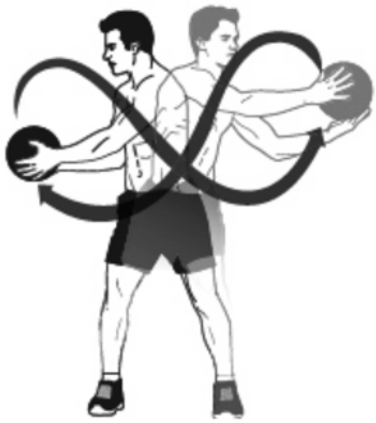

Figure L-17 Figure of Eight

Weighted Ball Obliques. Lay on the back with the knees bent up towards the chest. Place a weighted ball between the knees and hold in place with the knees. Slowly rotate the legs to one side. Return the legs to the centre. Repeat the movement for the other side.

Figure L-18 Weighted Ball Obliques

Reverse Curls. Lay on the back with the knees bent and feet parallel to the floor. Place a weighted ball between the knees and hold in place with the knees. Slowly raise the ball towards the chest. Slowly return the feet to the original position.

Figure L-19 Weighted Ball Twist

Weighted Ball Twist. Sit on the floor with knees bent and feet placed flat on the floor. Hold a weighted ball straight in front with the arms in line with the shoulders. Keeping the back straight, lean back slightly. Slowly and in a controlled form, pull the abdominal muscles in and rotate the torso to the side. Return to the centre. Repeat the movement for the other side.

Figure L-20 Weighted Ball Twist

SUGGESTED RESOURCES

Patrick Goudeau, National Academy of Sport Medicine (NASM) certified trainer. Patrick Goudeau's Play Ball. 2008. [DVD]

ISBN 9781585189007 Mediate, P. & Faigenbaum, A. (2004). Medicine ball for all training handbook. Montery, CA : Healthy Learning.

EXAMPLES OF RESISTANCE EXERCISES USING WEIGTHED BARS

Bicep Curl. Begin by grasping the weighted bar with an underhand grip about shoulder width apart. Begin with the bar resting at the thighs with the elbows slightly in front of the body. Bend the elbows to bring the bar up towards the shoulders without letting the elbows move behind the body. Return to the starting position.

Figure L-21 Bicep Curl

Shoulder Hold Squat. With feet about hip distance apart, bring the weighted up and over the head to and rest it on the back of the shoulders. Push the hips back while bending at the knees, as if sitting into a low chair. Push through the heels and extend the knees to return to the start position. Be sure not pull on the bar during the squat, but rest the hands lightly on the underside of the bar during the movement.

Figure L-22 Shoulder Hold Squat

Bent Over Row (Overhand). Begin with the feet hip-width apart (or wider), grasping the weighted bar with an overhand grip. Tilt at the hips and let the bar hang at the knees. Hands should be just outside the knees to begin. Bend the elbows and pull back to bring the bar in towards the crease of the hip. Elbows should be tucked in close to the sides. Extend the elbows to return to the starting position.

Figure L-23 Bent Over Row (Overhand)

Two Arm Chest Press. Lay on the floor with knees bent so both feet are on the floor. Grasp the weighted bar in an overhand grip with hands slightly wider than shoulder width. Ensure the weighted bar begins directly over the chest with arms straight. Bend the elbows out to the sides to bring the bar towards the chest. Extend elbows to return to starting position.

Figure L-24 Two Arm Chest Press

Reverse Abdominal Curl. Lay on the floor with knees bent so both feet are on the floor. Place the bar underneath the knees and lift feet off the floor. Curl the bottom away from the floor to execute the reverse curl. Return to the starting position.

Figure L-25 Reverse Abdominal Curl

SUGGESTED RESOURCES

Rob Glick, Bachelor of Science in Exercise Science. Body bar: Deep definition. 2003. [DVD]

ISBN 978-1-4027-3190-7 Cook, Greg & d'Almeida-Cook, F. (2006). Body bar: 133 moves for full body fitness. New York, NY: Sterling Publishing Co.

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PILATES

INTRODUCTION

Pilates was created by Joseph H. Pilates in the 1920s. This type of exercise focuses on strengthening the core muscles. This muscle-strengthening activity is also helpful for managing weight as it strengthens and lengthens core muscles without adding bulk. Pilates helps improve the muscular strength and muscular flexibility components of fitness.

EQUIPMENT

One mat per cadet.

ACTIVITY GUIDELINES

Pilates shall be conducted by a certified instructor or using a video that is conducted by a certified instructor.

SUGGESTED RESOURCES

Ellen Barret, Certified Pilates and fitness instructor. *Crunch: Pick your spot Pilates*. 2002. [DVD]

Kristin McGee, Pilates master instructor. *Pilates for beginners with Kristin McGee*. 2009. [DVD]

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STRETCHING

INTRODUCTION

Stretching involves performing exercises to lengthen the muscles and improve flexibility. There are three types of stretching:

- **Static Stretching**. Stretching without movement. An example would be a shoulder stretch done by pulling the arm across the body and holding the arm still for a minimum of 10 seconds.
- **Proprioceptive Neuromuscular Facilitation**. Contracting the muscles before statically stretching them, eg. using a towel to help with a calf stretch and contracting the calf by pushing the toes against the towel; followed by pulling on the towel to stretch the calf muscle.
- **Ballistic Stretching**. Using bobbing or bouncing causing the muscles to stretch. This type of stretching is not recommended for beginners as it can lead to injury if done improperly.

EQUIPMENT

One mat per cadet.

ACTIVITY GUIDELINES

Have the cadets wear loose clothing that allows free, unrestricted movement. Have them participate in a general warm-up consisting of light cardiovascular activities that will help raise the heart rate and warm the muscles prior to doing any stretches.

STRETCHES

Sample stretches are located at Attachment B of EO MX04.01 (Participate in 60 minutes of MVPA and Track Participation in Physical Activities). The stretches shall be conducted as static stretches. At no time shall any be conducted as ballistic stretches.

SUGGESTED RESOURCES

ISBN 0-936070-22-6 Anderson, B. (2000). *Stretching: 20th anniversary* (Rev. ed.). Bolinas, CA: Shelter Publications, Inc.

Bob Anderson, Graduate of California State University in Physical Education. *Stretching with Bob Anderson*. 1987. [DVD]

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TAI CHI

INTRODUCTION

In China it is believed that tai chi can delay aging and prolong life, increase flexibility and strengthen muscles and tendons. Tai chi is a centuries-old Chinese martial art that descends from qigong, an ancient Chinese discipline that has its roots in traditional Chinese medicine. It involves a series of slow, meditative body movements that were originally designed for self-defense and to promote inner peace and calm. Tai chi helps improve the muscular flexibility component of fitness.

EQUIPMENT

One mat per cadet.

ACTIVITY GUIDELINES

Tai Chi shall be conducted by a certified instructor or using a video that is conducted by a certified instructor.

Have the cadets wear clothing that allows free, unrestricted movement.

Keep training at a beginner level to allow all cadets to participate safely.

SUGGESTED RESOURCES

Samuel Barnes. Certified Tai Chi Instructor. *Element: Tai Chi for Beginners*. 2008. [DVD]

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YOGA

INTRODUCTION

Yoga is a popular activity that includes attention to flexibility, relaxation, breathing, and strengthening. Through various yoga poses flexibility and range of motion can be improved. Yoga helps improve the muscular flexibility and muscular strength components of fitness.

EQUIPMENT

One yoga mat per cadet.

ACTIVITY GUIDELINES

Yoga shall be conducted by a certified instructor or using a video that is conducted by a certified instructor.

Have the cadets wear clothing that allows free, unrestricted movement.

Keep training at a beginner level to allow all cadets to participate safely.

SUGGESTED RESOURCES

Colleen Saidman & Rodney Yee. Certified Yoga Instructors. *Rodney Yee's Yoga for Beginners*. 2009. [DVD].

Elena Brower, Certified Yoga Instructor. *Element: AM & PM Yoga for Beginners*. 2008. [DVD].

Elena Brower, Certified Yoga Instructor. *Element: Yoga for Beginners*. 2007. [DVD].

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BASEBALL

OBJECTIVE

While trying to prevent the opposing team from scoring runs, each team tries to score as many runs as possible.

SCORING

One point is awarded as a member completes a circuit around the bases.

DEFINITIONS

Ball. A pitch that is outside the strike zone.

Bunt. When the batter drops the ball as a soft ground ball on the infield.

Double play. When two outs are made on the same play.

Fair ball. The ball when it is legally in play.

Fly ball. A ball batted high into the air.

Force play. When a runner is forced to move to the next base because the batter becomes a runner.

Foul ball. A ball that is hit into foul territory (as illustrated in Figure Q-1).

Foul territory . The area outside the foul lines (as illustrated in Figure Q-1).

Home run. When a batter hits a fair ball over the fence, or circles all bases on a hit inside the fence without getting an out on their way around.

Inning. Consists of a top and a bottom half, during which each team will get to bat and field.

Out. An out can be given due to strikeout, force-out, tag-out, and fly-out:

- **Fly-out.** When a fly ball is caught before it touches the ground or fence.
- **Force-out.** When a fielder touches the base with the ball in their possession before the runner reaches the base during a force play.
- **Strikeout.** When a batter has three strikes.
- **Tag-out.** When a fielder tags a runner with the ball when they are not on a base.

Strike. A pitch, in the strike zone at which the batter does not swing, at which the batter swings and misses, or that the batter hits into foul territory during their first two hits. A foul ball on the third is not considered a strike.

Strike zone. The area over the home plate, between the batter's knees and the midpoint between the top of their shoulders and the top of their pants.

Walk. A batter is awarded first base if four “balls” are pitched to the batter during one time up to bat.

NUMBER OF PLAYERS

Nine players per team.

EQUIPMENT

- Bases (four),
- Bats (two),
- Batter's helmets (two),
- Baseball (extras should be on hand),
- Various gloves, and
- Baseball / softball field.

BASIC RULES

The game consists of nine innings, with three outs per inning (for each team). In the case of a tie, the game will continue for additional innings until a team scores an additional run, breaking the tie. Innings may be reduced due to time constraints.

One team takes the field first, taking up the various positions, to include: pitcher, catcher, first baseman, second baseman, third baseman, shortstop, left fielder, centre fielder, and right fielder.

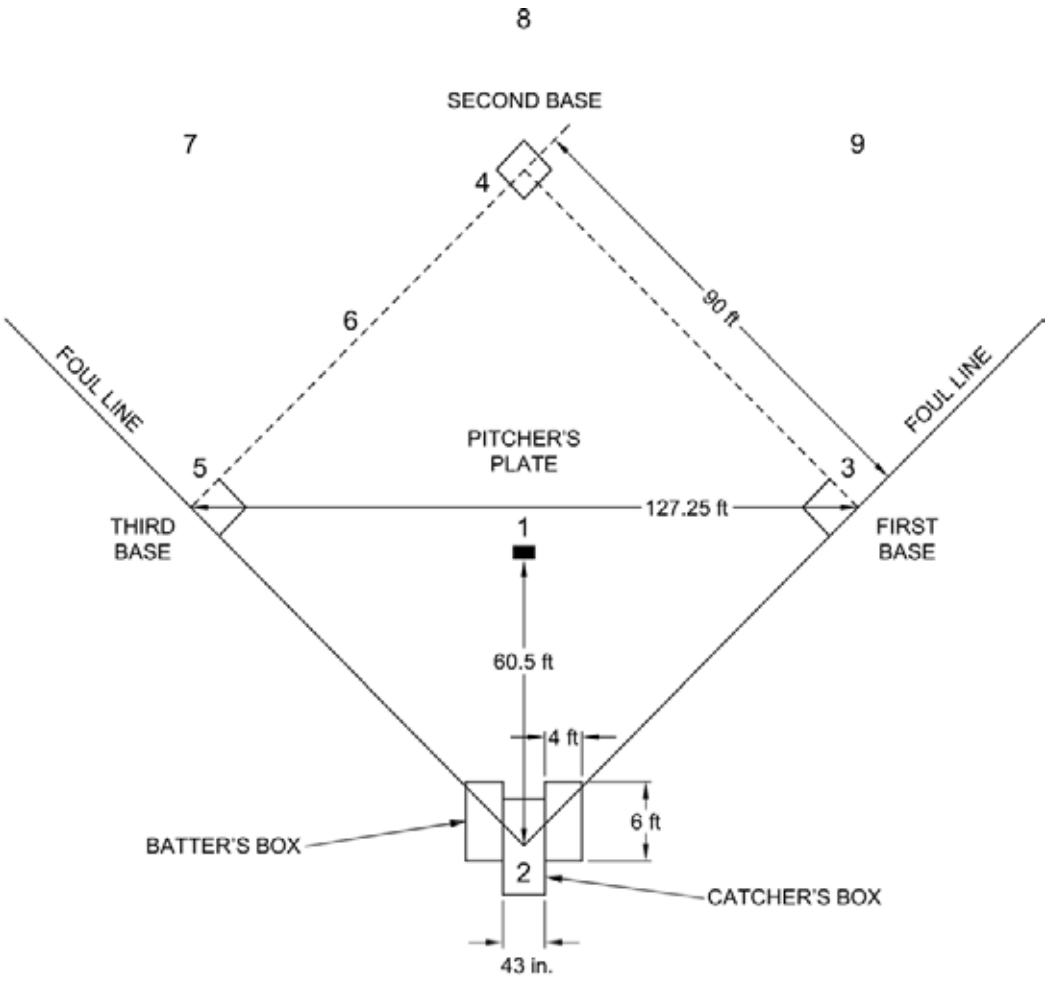
The other team bats first in the top half of the inning, according to the batting order for their players.

The pitcher attempts to get the batter out, preventing him or her from reaching first base and the subsequent bases. A batter is out if they receive a strikeout, force-out, tag-out, or fly-out.

The batter's objective is to get around the bases before the ball reaches the base. The batter has to attempt to get to first base before the ball reaches the base. While the ball is in play the batter can attempt to reach subsequent bases. Once their play is over the next batter is up.

A team scores a run when a player has safely touched all three bases and has made it back to home base, or hits the ball over the fence resulting in a home run.

Further details on the sport of baseball can be found in *The Sports Rules Book: Essential Rules for 54 Sports* (1998), pp. 25–35.



LEGEND

1. Pitcher
2. Catcher
3. First Baseman
4. Second Baseman
5. Third Baseman
6. Shortstop
7. Left Fielder
8. Centre Fielder
9. Right Fielder

Note. From The Sports Rules Book: Essential Rules for 54 Sports (p. 31), by T. Hanlon, 1998, USA: Human Kinetics Publishers, Inc. Copyright 1998 by Human Kinetics Publishers, Inc.

Figure Q-1 Baseball Diamond

BASEBALL SCORE SHEET

Team A	Team B
NAMES	NAMES

Record the number of runs scored by each team for each inning.

	Inning 1	Inning 2	Inning 3	Inning 4	Inning 5	Inning 6	Inning 7	Inning 8	Inning 9	TOTAL
Team A										
Team B										

Note. The scorekeeper must sign the back of the score sheet when completed.

BASKETBALL

OBJECTIVE

Teams attempt to score as many points as possible by passing the basketball through the opposing teams' basket. The team with the highest score at the end of the game is the winner.

SCORING

Field goal. A basket worth two points if scored inside the three-point line and three points if scored from outside the line (as illustrated in Figure R-1).

Free throw. A basket worth one point.

DEFINITIONS

Dribble. Dribbling consists of bouncing the ball on the floor, using only one hand at a time. This can be done while moving on the court or while the player is stationary. Once a player stops dribbling and holds the ball, they cannot dribble again until another player touches the ball.

Double dribble. Dribbling with both hands at once is a violation that results in a turnover or when a player is dribbling, stops and begins again.

Field goal. A two or three-point basket.

Foul. A foul is awarded to a player or coach for misconduct and includes the following:

Away from the ball. Committed by a player in a play not involving the player with the ball.

Blocking and charging. Blocking is illegal contact by a defender, impeding the progress of an offensive player. Charging is illegal contact by an offensive player, pushing or moving into the defender's torso.

Delay of game. When a player prevents the ball from being promptly put into play.

Double personal. Occurs when two opposing players commit personal fouls at the same time.

Double technical. When two opposing players commit technical fouls at the same time.

Elbow. When a player elbows a member of the opposing team.

Excessive timeout. When a team calls a timeout when they have no timeouts left, they are granted a technical foul, but the timeout is allowed.

Face guarding. When a defender places a hand in the face or eyes of an opponent they are guarding from the rear, if the opponent does not have the ball.

Fighting and flagrant fouls.

- **Hand checking.** When a defender uses their hands to check the progress of offensive players when those players are in front of them.
- **Hanging on the rim.** When a player hangs off the rim of the basket, unless it is to protect themselves or another player.
- **Offensive.** If a defender has established legal position in a dribbler's path, the dribbler cannot make contact with the opponent.
- **Personal.** A wide variety of contact fouls including holding, pushing, charging, tripping, and illegally interfering with a player's progress.
- **Player-control.** When the dribbler commits an offensive by charging into a defender who has established legal position, this is called charging.
- **Technical.** Can be on a player, coach, etc. and does not involve contact with the opponent while the ball is alive. Some include profanity, delay of game, excessive time outs, unsportsmanlike conduct, and hanging on the rim.
- **Unsportsmanlike conduct.** Includes actions such as disrespectfully addressing an official; trying to influence an official's decision; arguing with an official; taunting an opponent; etc.

Free throw. A shot given to a player from the free throw line as a result of a foul. It is worth one point.

Pass. The movement of the ball by a player to another player by throwing, batting, or rolling the ball.

Pivot. When a player holding the ball pivots with one foot kept at a point of contact with the floor, while stepping in other directions with the other foot.

Rebound. When a player controls possession of a missed shot, either by a teammate or an opponent.

Sideline pass. When a player throws the ball in from the sidelines of the court.

Traveling. When a player advances on the court with the ball without dribbling it.

Violations. When a player breaks a rule without contact. These include: basket interference and goaltending, double dribble, faking a free throw, kicking or hitting the ball, out of bounds, shot clock, traveling and throw in.

NUMBER OF PLAYERS

Five players per team on the court at a time.

EQUIPMENT

- Basketball,
- Gymnasium / outdoor court, and
- Nets (two).

BASIC RULES

The game consists of four 8-minute quarters.

Teams will consist of a point guard, an off guard / shooting guard, a small forward, a power forward and a centre / post.

The game begins with what is known as a “jump ball”. A player from each team will meet face to face at the centre of the court. When the official tosses the ball straight up between them, both players will attempt to catch or hit the ball to a teammate.

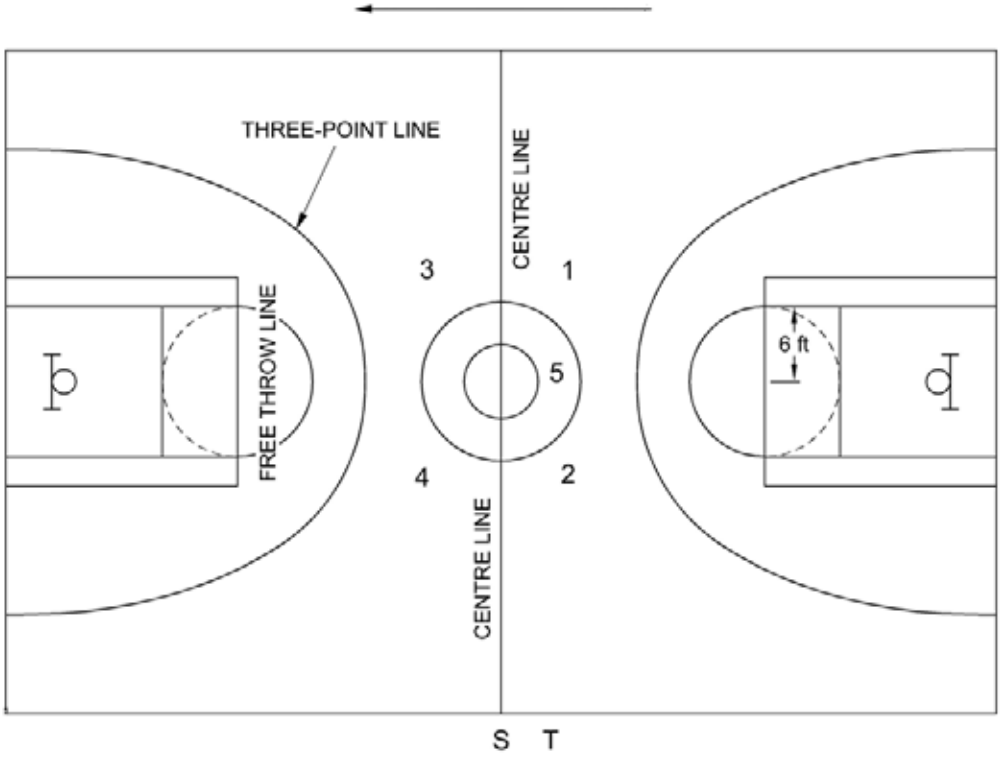
Once the game has begun, the player in possession of the ball must dribble at all times in order to continue to move forward along the court. The player may pass the ball at any time to a teammate.

If a player in possession of the ball stops moving, they may only pivot on the spot or take a maximum of three steps and then pass or shoot the ball towards the basket.

If a team scores, the opposing team will gain possession of the ball. The opposing team throws the ball inbounds to put the ball back into play. On this throw-in, the thrower cannot step on or over the line while still in possession of the ball.

During the game, if the ball is tossed out of bounds or a person is fouled, the opposite team will gain the ball where a free throw will be awarded or a sideline pass will take place.

Further details on the sport of basketball can be found in *The Sports Rules Book: Essential Rules for 54 Sports* (1998), pp. 37–46.



LEGEND

1. Point Guard
2. Off Guard or Shooting Guard
3. Small Forward
4. Power Forward
5. Centre or Post

S Scorekeeper
T Timekeeper

Note. From The Sports Rules Book: Essential Rules for 54 Sports (p. 41), by T. Hanlon, 1998, USA: Human Kinetics Publishers, Inc. Copyright 1998 by Human Kinetics Publishers, Inc.

Figure R-1 Basketball Court

BASKETBALL SCORE SHEET

Team A	Team B
NAMES	NAMES

Record the number of points awarded to each team within each quarter.

A basket is worth two points if it is scored inside the three-point line and three if scored from outside the line and a free throw is worth one point.

First Quarter		Second Quarter		Third Quarter		Fourth Quarter	
Team A	Team B	Team A	Team B	Team A	Team B	Team A	Team B
TOTAL		TOTAL		TOTAL		TOTAL	

Note. The scorekeeper must sign the back of the score sheet when completed.

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FLOOR HOCKEY

OBJECTIVE

Teams attempt to score as many points as possible by shooting the ball into the opposing team's net. The team with the highest score at the end of the game is the winner.

SCORING

A player shooting the ball off their stick into the net, scores a goal.

DEFINITIONS

Faceoff. When two players meet to try to gain possession of the ball when the referee drops it.

Goal. A point / goal is scored when a player gets the ball across the goal line.

Rebound. A ball that bounces off the goalkeeper or the goal post.

Save. When the goalkeeper prevents a goal from being scored.

NUMBER OF PLAYERS

Six players per team on the floor at one time.

EQUIPMENT

- Hockey ball,
- Hockey sticks for the number of players,
- Goalie sticks (two),
- Goalie equipment, and
- Hockey nets (two).

BASIC RULES

A game consists of three 20-minute periods.

Teams will consist of a goalkeeper, three forwards—centre, left wing, and right wing—and two defencemen.

A game begins with a faceoff between two opposing players where an official drops the ball at the centre of the playing field / gymnasium.

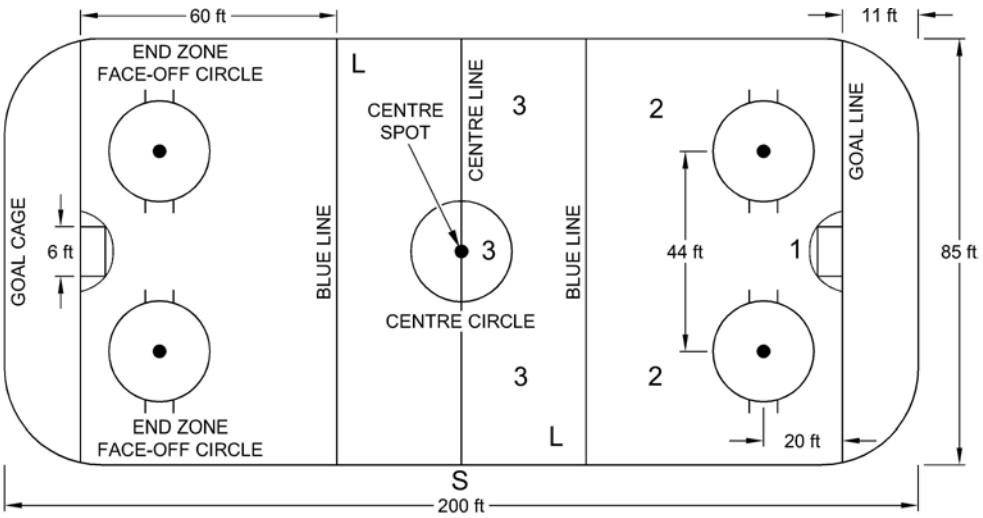
Players advance with the ball while stickhandling the ball or passing it to fellow teammates. The ball must be in motion at all times.

Every time a goal is scored, the players return to the initial set-up for a faceoff at the centre of the area of play.

If an attacker in the team's attacking zone causes the play to stop, a faceoff will occur at the nearest faceoff spot in the neutral zone (the central portion between the blue lines).

If a defender in the team's defensive zone causes the play to stop, a faceoff occurs at the point of stoppage.

Further details on the sport of hockey can be found in *The Sports Rules Book: Essential Rules for 54 Sports* (1998), pp. 159–168. These rules then must be adapted for floor hockey.



LEGEND

1. Goalkeeper
2. Defenseman
3. Forward

S Scorekeeper
L Linesman

Note. From The Sports Rules Book: Essential Rules for 54 Sports (p. 162), by T. Hanlon, 1998, USA: Human Kinetics Publishers, Inc. Copyright 1998 by Human Kinetics Publishers, Inc.

Figure S-1 Hockey Set-Up

FLOOR HOCKEY SCORE SHEET

Team A	Team B
NAMES	NAMES

Record the number of goals achieved by each team within each period.

First Period		Second Period		Third Period	
Team A	Team B	Team A	Team B	Team A	Team B
TOTAL		TOTAL		TOTAL	

Note. The scorekeeper must sign the back of the score sheet when completed.

FOOTBALL (FLAG / TOUCH)

OBJECTIVE

Teams attempt to score as many points as possible through touchdowns. The team with the highest score at the end of the game is the winner.

SCORING

Touchdown. Worth six points and scored when a player carries the ball into the opponent's end zone or catches the ball in the opponent's end zone before it touches the ground. After a touchdown has been scored, the scoring team can make a one-point convert attempt from the 5-yard line (approximately 4-1/2 m / 15 feet) or a two-point convert attempt from the 10-yard line (approximately 11 m / 36 feet).

Safety. An interception return to the opponent’s end zone, on any extra-point play by the defence, will result in the defence scoring two points, plus they will gain possession for the next series at their own 5-yard (4-1/2 m / 15 feet) line.

Rouge. A team is awarded one point when they legally kick the ball into the opponent's end zone and the ball is not brought out of the end. To score off a kick off, the ball must land in the field of play or in the end zone before it goes out of bounds.

DEFINITIONS

Convert. A pass or a run attempt; no kicking allowed.

Dead ball. When the ball is no longer in play and the play is over.

First down. Is a new set of three downs. Each team, when they are the offence, get three downs in which to make a play.

Forward pass. When the ball is intentionally thrown or handed towards the opponent's goal line.

Fumble. When a player loses possession of the ball while the play is still in progress.

Punt. When the ball is deliberately dropped and then kicked with the foot or leg before the ball touches the ground.

Scrimmage line. The line where the players line up for the snap.

Snap. When a player designated as the centre passes the ball between the legs to the quarterback.

Touchback. Occurs when the ball is dead on or behind a team’s own goal line, provided the ball’s force came from an opponent and it is not a touchdown.

NUMBER OF PLAYERS

Seven players per team on the field at one time for touch football. Eight players per team on the field at one time for flag football.

EQUIPMENT

- Football,
- Flags / ribbons,
- Field, and
- Safety / protective equipment.

BASIC RULES

The game consists of four 15-minute quarters.

Whichever team takes first possession of the ball is the offence. The other team becomes the defence.

The offence has three downs to obtain 10 yards, keep possession of the ball, and attempt to score. If they do not gain 10 yards and a first down, possession of the ball changes and that team then becomes the offence.

To begin the game, a team will kickoff from their own 45-yard line (or on a non-regulation field, ten yards back from the centre line). The remaining players of the team must stay behind the kickoff line until the ball has been kicked.

At the kickoff, all players of the receiving team must be at least 20 yards away from the kickoff line.

To begin a series of three downs, the ball will be placed on the ground at the point where the ball carrier was touched after the kickoff. All members of the offensive team will line up on or behind the line of scrimmage. A player designated as the centre will begin the play by snapping the ball between the legs to the quarterback who must receive the ball from a minimum of five yards behind the line of scrimmage.

The defensive players must be at least one yard from the line of scrimmage on the opposite side during the snap.

All players on the offence, with the exception of the centre, can be in motion prior to the snap. They may not cross the line of scrimmage until after the snap.

In touch football, play is terminated when a defender touches the ball carrier with the hand. In flag football, play is terminated when a defender removes the ball carrier's flag.

The defensive team will have one player during scrimmage play, called the rusher, who will pursue the quarterback after the ball is snapped. The rusher must be at least five yards away from the line of scrimmage at the time the ball is snapped and cannot be lined up directly with the centre of the opposing team.

No player is permitted to block or obstruct the rusher in the direct path to the quarterback.

Teams are only permitted one forward pass on each scrimmage play. Forward passes are not permitted on kickoffs or after punts.

The team that plays defence at the beginning of the first half receives possession at the start of the second half.

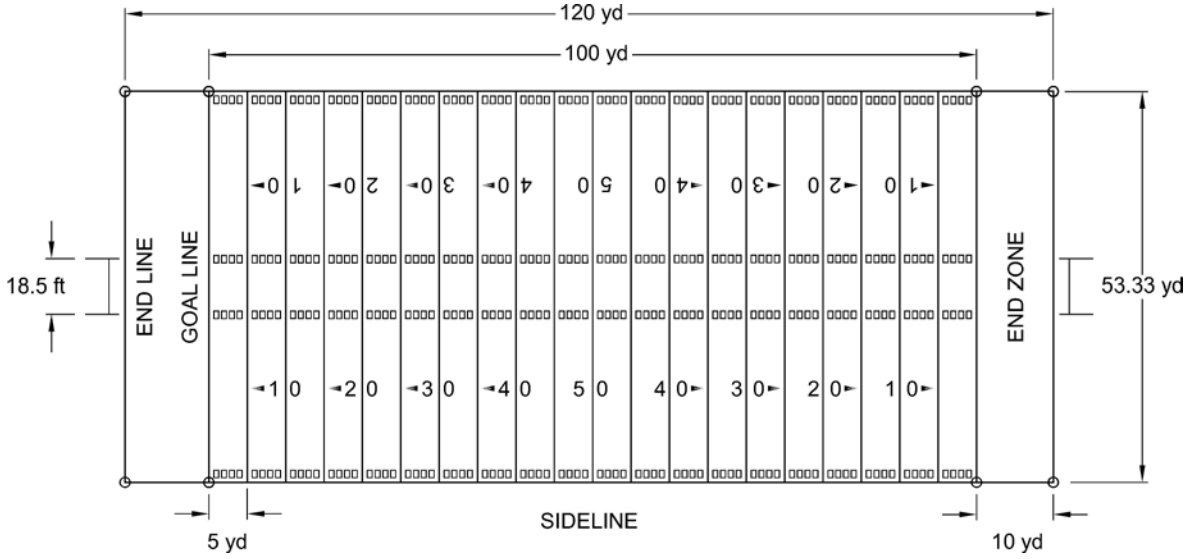
If a team fails to make it across midfield within three plays, possession of the ball changes.

Once a ball is punted, the team gives up possession of the ball.

There are no fumbles in touch football.

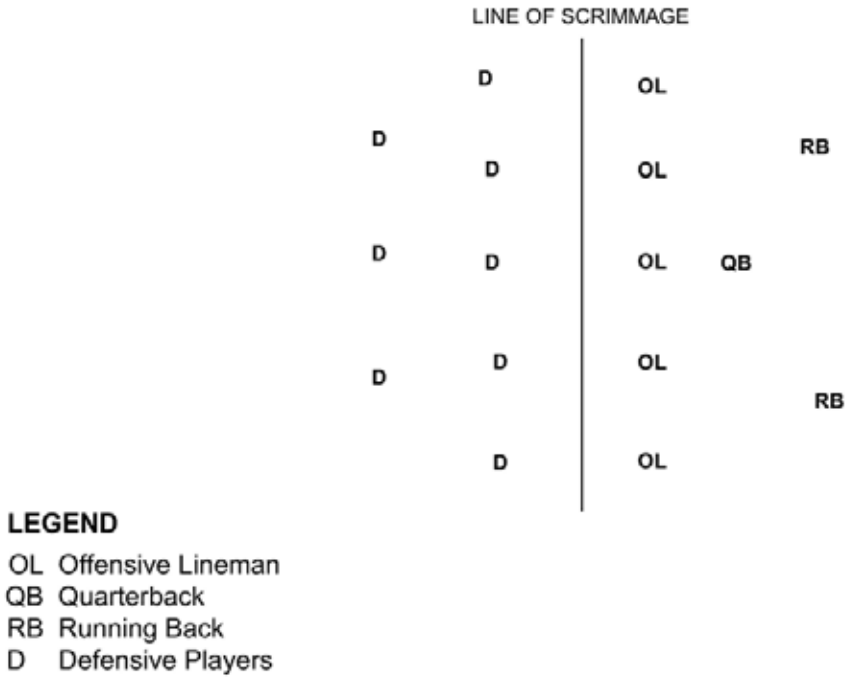
Must be played as non-contact. Blocking and tackling are not allowed.

Further details on the sport of football can be found in *The Sports Rules Book: Essential Rules for 54 Sports* (1998), pp. 125–136. These rules must be adapted for flag / touch football. Some of these modifications can be found on pp. 132–133. Further rules may be found in the *National Football Federation's Touch Football Rule Book*.



Note. From The Sports Rules Book: Essential Rules for 54 Sports (p. 129), by T. Hanlon, 1998, USA: Human Kinetics Publishers, Inc. Copyright 1998 by Human Kinetics Publishers, Inc.

Figure T-1 Football Field



Note. Created by Director Cadets 3, 2007, Ottawa, ON: Department of National Defence.

Figure T-2 Line of Scrimmage

FOOTBALL SCORE SHEET

Team A	Team B
NAMES	NAMES

Record the number of points awarded to each team within each quarter.

A touchdown is worth six points. A safety is worth two points. A rouge is worth one point.

First Quarter		Second Quarter		Third Quarter		Fourth Quarter	
Team A	Team B	Team A	Team B	Team A	Team B	Team A	Team B
TOTAL		TOTAL		TOTAL		TOTAL	

Note. The scorekeeper must sign the back of the score sheet when completed.

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LACROSSE

OBJECTIVE

Teams attempt to score as many points as possible by passing the ball into the opposing team's goal. The team with the highest score at the end of the game is the winner.

SCORING

A goal is scored when the ball passes completely over the goal line, between the posts and under the cross bar of the opponent’s goal.

DEFINITIONS

Blocking. Occurs when one player moves into the path of an opponent with the ball without giving the opponent a chance to stop or change direction without contact.

Critical scoring area. An area at each end of the field, where the attacking team shoots for a goal.

Deputy. A player on the defensive goalkeeper’s team who may enter the goal circle when his or her team is in possession of the ball and the goalkeeper is out of the goal circle.

Draw. With two opposing players toeing the centreline, holding their crosses in the air, parallel to the centreline. The umpire places the ball between the players and when they call ready the players pull their sticks up and away, lifting the ball into the air. All other players must be outside the centre circle for the draw.

Free space to goal. The path to the goal within the critical scoring area.

Marking. Guarding an opponent within a stick’s length.

Penalty lane. The path to the goal that is cleared when a free position is awarded to the attacking team within the critical scoring area in front of the goal line.

Pick. A technique used by a player without the ball to force an opponent to take a different direction. The player must give the opponent time to see the pick and react to it.

Throw. Two players of opposing teams stand 1 m (3-1/3 feet) apart; the umpire stands 4–8 m (13–26 feet) away, and throws the ball into the air and the players take it as they move toward the field. No other player can be within 4 m (13 feet) of the players taking the throw.

NUMBER OF PLAYERS

Twelve players per team on the field at one time.

EQUIPMENT

- Ball,
- Field crosses for the number of players,
- Goalkeeper's crosse (two),
- Goalkeeper's helmet, face mask, and throat and chest protector (two of each), and
- Mouth guards for the number of players.

BASIC RULES

The game consists of two 30-minute halves.

The team consists of a goalkeeper, point, cover-point, third man, left defence wing, right defence wing, left attack wing, right attack wing, third home, second home, first home, and centre (as illustrated in Figure Z-1).

The game begins with a draw.

The team in possession of the ball attempts to score goals by advancing the ball down the field. This is done by carrying, throwing, rolling, or batting the ball.

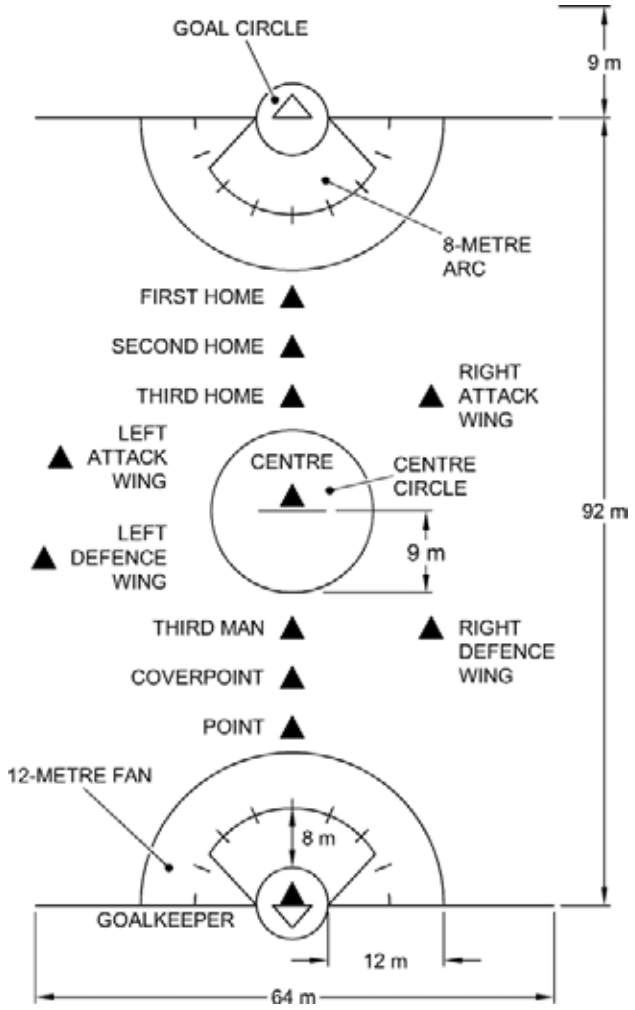
If the ball goes out of bounds, it is given to the closest player. If two players of opposing teams are an equal distance from the ball, the game is continued with a throw.

Only one player can be in the goal circle at a time. This can only be the goalkeeper or the deputy.

Within the goal circle, the goalkeeper must clear the ball within 10 seconds. This can be done with the goalkeeper's crosse, hands, or body.

After each goal, the ball is put back into play with a draw.

Further details on the sport of lacrosse can be found in *The Sports Rules Book: Essential Rules for 54 Sports* (1998), pp. 179–186.



Note. From The Sports Rules Book: Essential Rules for 54 Sports (p. 182), by T. Hanlon, 1998, USA: Human Kinetics Publishers, Inc. Copyright 1998 by Human Kinetics Publishers, Inc.

Figure U-1 Lacrosse Field

LACROSSE SCORE SHEET

Team A

NAMES

Team B

NAMES

Record the number of goals achieved by each team within each half.

First Half

Team A	Team B
TOTAL	

Second Half

Team A	Team B
TOTAL	

Note. The scorekeeper must sign the back of the score sheet when completed.

RINGETTE (OFF-ICE VERSION)

OBJECTIVE

Teams attempt to score as many points as possible by getting the ring in the opposing team's net. The team with the highest score at the end of the game is the winner.

SCORING

One point for every time a ring passes into the opposing team's net.

NUMBER OF PLAYERS

Six players per team on the floor at one time.

EQUIPMENT

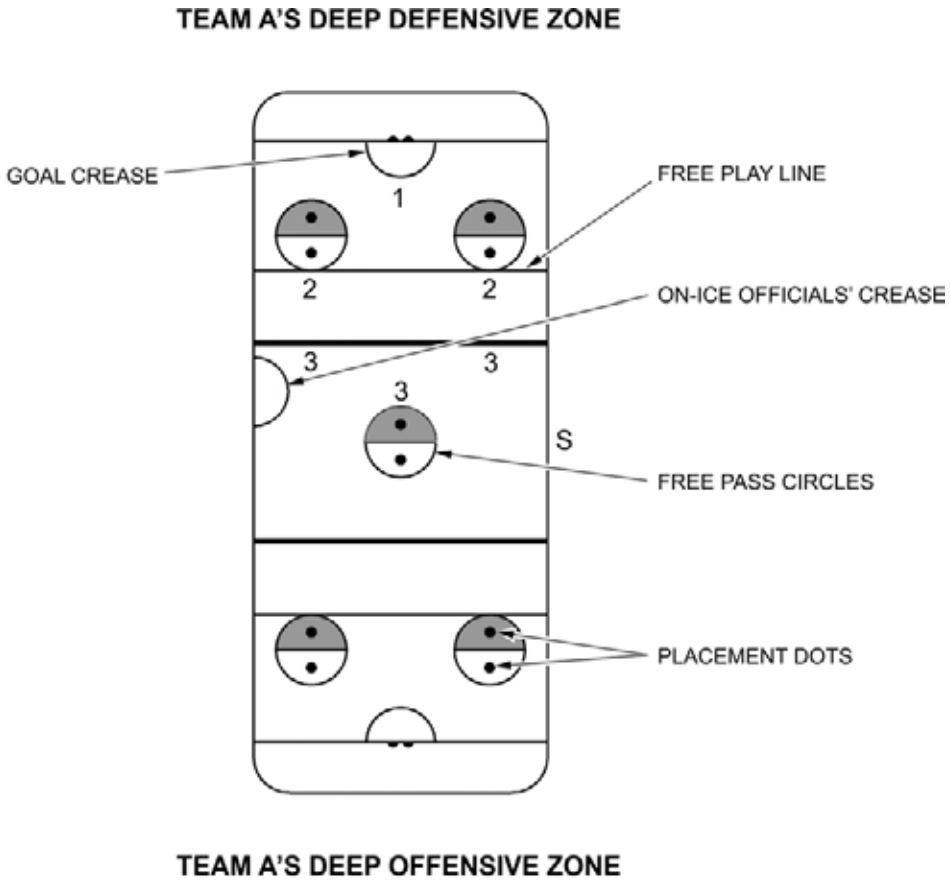
- Nets (two),
- Safety equipment,
- Rubber ring,
- Straight sticks for number of players, and
- Goalkeeper's sticks and masks (two of each).

BASIC RULES

The game is played in two 20-minute periods. Teams consist of a goalkeeper, two defencemen, and three forwards. The stick is placed inside the ring to play. The ring is passed up the playing area in order to get the ring in the opposing team's net.

Play begins with the visiting team being given a free pass in the centre free pass circle (which is like a faceoff circle in hockey). Free passes are used in ringette to restart play. The ring is placed in the free pass circle for this and one player gets to take possession, having five seconds to pass the ring to a teammate. Shots on goal are allowed from the free pass. If the ring is within the goal crease, the only player who is allowed to touch it is the goalie. The goalie will pick up the ring and throw it like a Frisbee to a teammate but it cannot be thrown beyond the blue line. The goalkeeper can also hit the ring with their stick or foot to move it out of the goal crease.

Further details on the sport of ringette can be found at http://www.ringette.ca



LEGEND

1. Goalkeeper
2. Defenceman
3. Forward

S Scorekeeper

Note. From How Ringette is Played, by Ringette Canada, n.d. Retrieved October 30, 2006, from http://www.ringette.ca/e/about/played.htm

Figure V-1 Ringette Ice / Playing Field

RINGETTE SCORE SHEET

Team A

NAMES

Team B

NAMES

Record the number of goals achieved by each team within each period.

First Period

Team A	Team B
TOTAL	

Second Period

Team A	Team B
TOTAL	

Note. The scorekeeper must sign the back of the score sheet when completed.

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SOCCER

OBJECTIVE

Teams attempt to score as many points as possible by getting the ball in the opposing team's net. The team with the highest score at the end of the game is the winner.

SCORING

A point is scored for every goal made into the net that completely crosses the goal line.

DEFINITIONS

Corner kick. Awarded to the opposing team when players kick the ball over their own goal line. All opposing players must be at least 10 yards (9 m / 29.5 feet) from the ball for a corner kick.

Dribble. To move the ball with the feet in a continuous motion by passing the ball from one foot to the other.

Foul. Results in a direct or indirect free kick for the opposing team at the spot where the foul occurred. Fouls include:

- kicking, tripping or pushing;
- jumping into an opponent;
- violently or dangerously charging an opponent;
- striking an opponent with the hand, arm, or elbow;
- holding an opponent's body or clothing;
- playing the ball anywhere on the arm;
- going offside;
- obstructing an opponent by deliberately blocking their path;
- kicking too high, putting an opponent in danger;
- bending low, putting themselves in danger;
- unsportsmanlike conduct;
- charging an opponent when the ball is no more than one step away;
- charging into the goalkeeper while in the goal area, preventing them from playing the ball or retaining possession of the ball; and
- the goalkeeper taking more than four steps before releasing the ball.

Free kick. Direct free kicks are awarded for fouls on a player; indirect free kicks are awarded for other violations made by the opposing team.

Goal kick. Occurs when a player kicks the ball over the opposing team's goal line. The opposing team is awarded the goal kick. Opposing players must be outside the penalty box area; either the goalkeeper or another player may kick the ball. The ball must be kicked beyond the penalty box area to be put into play. The player who performs the goal kick cannot touch the ball again until another player has done so.

Heads the ball. When a player hits the ball with their head.

Penalty kick. Is awarded to a team when an opposing player commits an intentional foul. All players, except the kicker and the goalkeeper, must stand outside the penalty area, at least ten yards (9 m / 29.5 feet) from the ball. The goalkeeper must stand on the goal line and not move their feet until the kick is made. If a goal is not scored and the ball goes out of bounds after being touched by the goalkeeper, the attacking team gets a corner kick.

Throw-in. Is awarded to a team when the ball goes over the sideline and was last touched by an opponent. A player throws the ball in from over their head, keeping both feet on the ground while releasing the ball. At least part of each foot must be on or behind the sideline.

NUMBER OF PLAYERS

Up to 11 players per team on the field at one time.

EQUIPMENT

- Soccer ball,
- Nets (two), and
- Field or gymnasium.

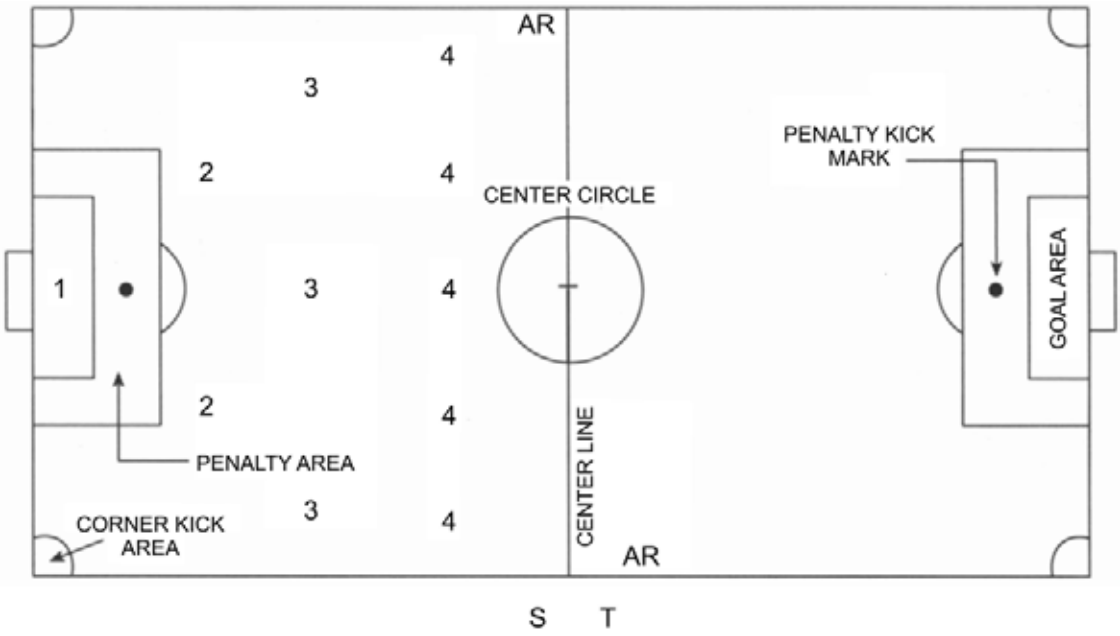
BASIC RULES

The game consists of two 45-minute halves. Teams will consist of a goalkeeper, defenders, midfielders, and forwards, or strikers. The game begins with a kickoff at the centre of the playing field, where the ball is placed in a stationary position at the centre spot. All players must be on their team's half of the playing field before the kickoff takes place. The player who kicks off may not touch the ball again until another player has. Players have to move the ball up the field with their feet, head, or chest. They may not touch the ball with their hands. The game continues in this manner, with players dribbling the ball and moving it toward the opposing team's goal in order to score.

When a goal is scored the play begins again with the team losing the goal taking the kickoff.

A goal may not be scored directly off a kickoff, goal kick, or throw-in.

Further details on the sport of soccer can be found in *The Sports Rules Book: Essential Rules for 54 Sports* (1998), pp. 237–245.



LEGEND

1. Goalkeeper
2. Defender
3. Midfielder
4. Forward

S Scorekeeper
T Timekeeper
AR Assistant Referee

Note. From The Sports Rules Book: Essential Rules for 54 Sports (p. 241), by T. Hanlon, 1998, USA: Human Kinetics Publishers, Inc. Copyright 1998 by Human Kinetics Publishers, Inc.

Figure W-1 Soccer Field

SOCCER SCORE SHEET

Team A

NAMES

Team B

NAMES

Record the number of goals achieved by each team within each half.

First Half

Team A	Team B
TOTAL	

Second Half

Team A	Team B
TOTAL	

Note. The scorekeeper must sign the back of the score sheet when completed.

SOCCER BASEBALL / KICKBALL

OBJECTIVE

While trying to prevent the opposing team from scoring runs, each team tries to score as many runs as possible. A run is scored when a team's player runs (in a counter-clockwise direction) and steps on all three bases and the home plate.

SCORING

One point is awarded as a member completes a circuit around the bases. A game lasts five innings where the team with the highest score wins, unless there is a tie. In the case of a tie the game will continue for additional innings until a team scores an additional run, breaking the tie.

DEFINITIONS

Double. A kick in which the batter safely runs to second base.

Double play. When two outs are made on the same play.

Fair ball. The ball when it is legally in play.

Force play. Occurs when a runner is forced to advance to the next base because the batter becomes a runner.

Foul play. Any ball hit into foul territory.

Foul territory. The area outside the foul lines.

Home run. When a batter kicks a fair ball over the fence or circles all bases on a kick that was inside the fence.

Lead off. When a runner leads off a base before the ball has left the pitcher's hand.

Legal touch. When a defensive player tags a runner with the ball while the runner is not on a base. This results in an out.

Out. There are a number of types of outs, which include:

- **Fly-out.** When a fly ball is caught before it touches the ground or fence.
- **Force-out.** When a fielder touches the base with the ball in their possession before the runner reaches.
- **Strikeout.** When a batter has three strikes.
- **Tag-out.** When a fielder tags a runner with the ball when they are not on a base. This is also known as a legal touch.

Steal. When a runner attempts to steal a base during a pitch to the kicker.

Tag-up rule. If the ball is caught in the air after the kicker has kicked it, the kicker is out. Other players who are on bases must touch the base they were on after the ball is caught before they can run to the next base.

NUMBER OF PLAYERS

Nine players per team on the field at one time.

EQUIPMENT

- Soccer ball,
- Baseball / softball field or a gymnasium or field, and
- Bases / pylons (four).

BASIC RULES

The game consists of five innings, with three outs per inning (for each team).

One team takes the field first, taking up the various positions, to include a pitcher, catcher, first baseman, second baseman, third baseman, shortstop, left fielder, centre fielder, right fielder, and other fielders depending on the number of players.

When pitching, the ball must touch the ground at least once and cannot be higher than one foot (30 cm) above the plate when it gets to the kicker. The ball should be pitched to roll as smoothly as possible.

A ball is put into play once the pitcher rolls the ball toward home plate and the kicker has attempted to kick the ball.

The kicker must wait for the ball to be within 1 m of the home plate before they can attempt to kick the ball.

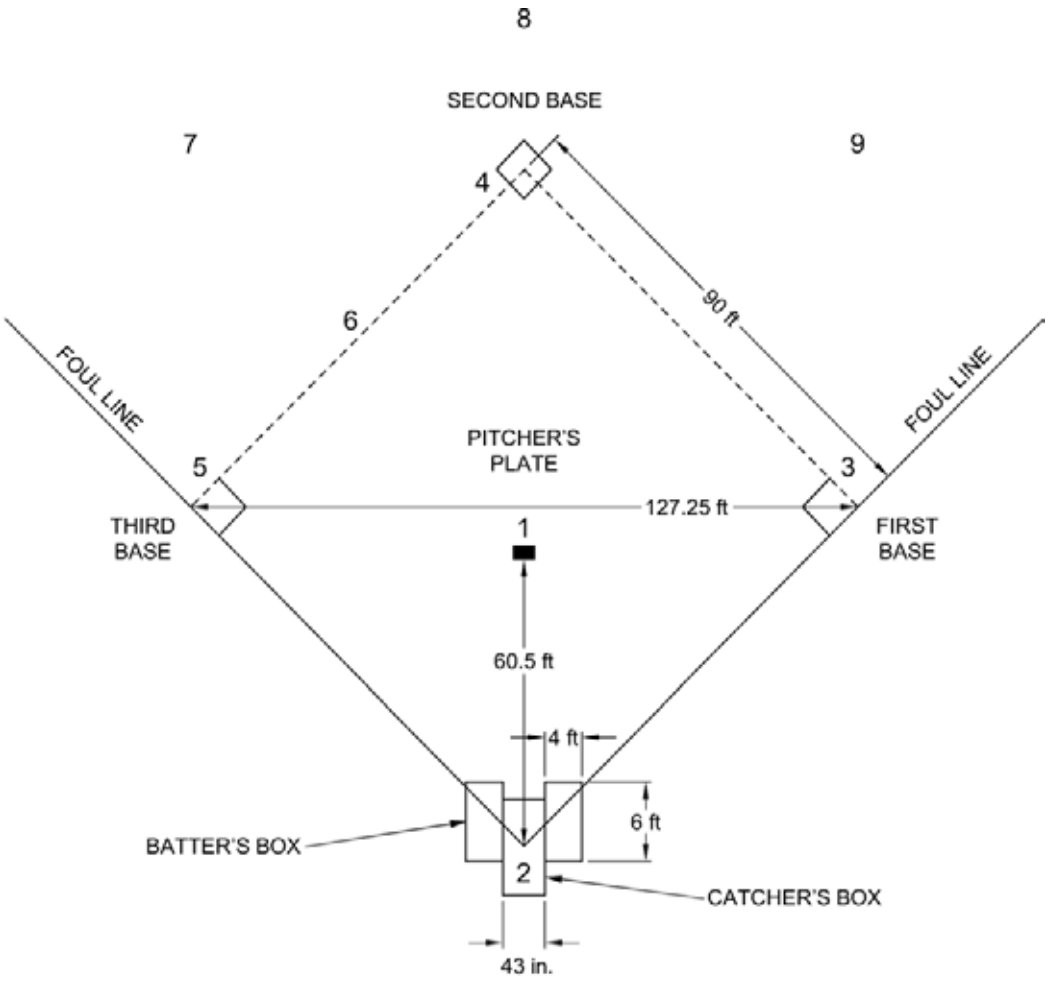
Leading off and stealing bases is not allowed. Bunts are not permitted.

The kicker at home plate must kick the ball with the leg (below the knee) or foot.

Field players can tag the runner out while either carrying the ball or throwing it at the runner and making contact. Thrown balls are to hit below the waist.

A runner who leaves their base before the pitch reaches home plate or before the pitch is kicked, is out and the ball is considered dead.

Further details on the sport of soccer baseball / kickball can be found at http://www.kickball.com



LEGEND

1. Pitcher
2. Catcher
3. First Baseman
4. Second Baseman
5. Third Baseman
6. Shortstop
7. Left Fielder
8. Centre Fielder
9. Right Fielder

Note. From The Sports Rules Book: Essential Rules for 54 Sports (p. 31), by T. Hanlon, 1998, USA: Human Kinetics Publishers, Inc. Copyright 1998 by Human Kinetics Publishers, Inc.

Figure X-1 Baseball Diamond (used for soccer baseball)

SOCCER BASEBALL / KICKBALL SCORE SHEET

Team A
NAMES

Team B
NAMES

Record the number of runs scored by each team for each inning.

	Inning 1	Inning 2	Inning 3	Inning 4	Inning 5	TOTAL
Team A						
Team B						

Note. The scorekeeper must sign the back of the score sheet when completed.

SOFTBALL

OBJECTIVE

While trying to prevent the opposing team from scoring runs, each team tries to score as many runs as possible. A run is scored when a team's player runs (in a counter-clockwise direction) and steps on all three bases and the home plate.

SCORING

One point is awarded as a member completes a circuit around the bases. A game lasts seven innings where the team with the highest score wins, unless there is a tie. In the case of a tie the game will continue for additional innings until a team scores an additional run, breaking the tie.

DEFINITIONS

Ball. A pitch that is outside the strike zone.

Bunt. When a batter hits the ball by letting the ball meet the bat to drop as a soft ground ball on the infield.

Double play. When two outs are made on the same play.

Fair ball. The ball when it is legally in play.

Fake tag. A form of obstruction of a runner by a fielder who neither has the ball nor is about to receive it. The umpire will award the runner the base they would have made, if the obstruction had not been made.

Fly ball. A ball batted high into the air.

Fly-out. A fly ball that is caught before it touches the ground or the fence.

Force play. When a runner is forced to advance to the next base because the batter becomes a runner.

Foul play. Any ball hit into foul territory.

Foul territory. The area outside the foul lines (as illustrated in Figure AD-1).

Home run. When a batter hits a fair ball over the fence or circles all bases on a ball that was hit inside the fence.

Inning. An inning consists of a top and a bottom. During either the top or bottom half each team will get the opportunity to bat and field accordingly.

Interference. This occurs when an offensive player impedes or confuses a defensive player as they are trying to make a play. Interference can be physical or verbal.

Lead off. When a runner leads off a base once the ball has been batted, touches the ground, or reaches home plate, but must return to the base if the ball is not hit.

Out. There are a number of types of outs, which include:

- **Fly-out.** When a fly ball is caught before it touches the ground or fence.
- **Force-out.** When a fielder touches the base with the ball in their possession before the runner reaches.
- **Strikeout.** When a batter has three strikes.
- **Tag-out.** When a fielder tags a runner with the ball when they are not on a base. This is also known as a legal touch.

Overslide. When a player over slides first base when running. It is allowed at first base, but at second and third base, the runner may be tagged out.

Steal. In fast-pitch, a runner may attempt to steal a base during a pitch to the batter.

Strike zone. The area over the home plate, between the batter's back shoulder and front knee.

Walk. A batter is awarded first base if four “balls” are pitched to the batter during one time up to bat.

NUMBER OF PLAYERS

10 players per team on the field at a time if team is not batting.

EQUIPMENT

- Bases (four),
- Bat,
- Batter’s helmets,
- Softball,
- Various gloves for the number of players, and
- Baseball / softball field.

BASIC RULES

The game consists of seven innings, with three outs per inning (for each team).

One team takes the field first, taking up the various positions, to include a pitcher, catcher, first baseman, second baseman, third baseman, shortstop, left fielder, centre fielder, right fielder, and extra fielder.

The other team bats first in the top half of the inning, according to the batting order for their players.

The pitcher attempts to get the batter out, preventing them from reaching first base and the subsequent bases.

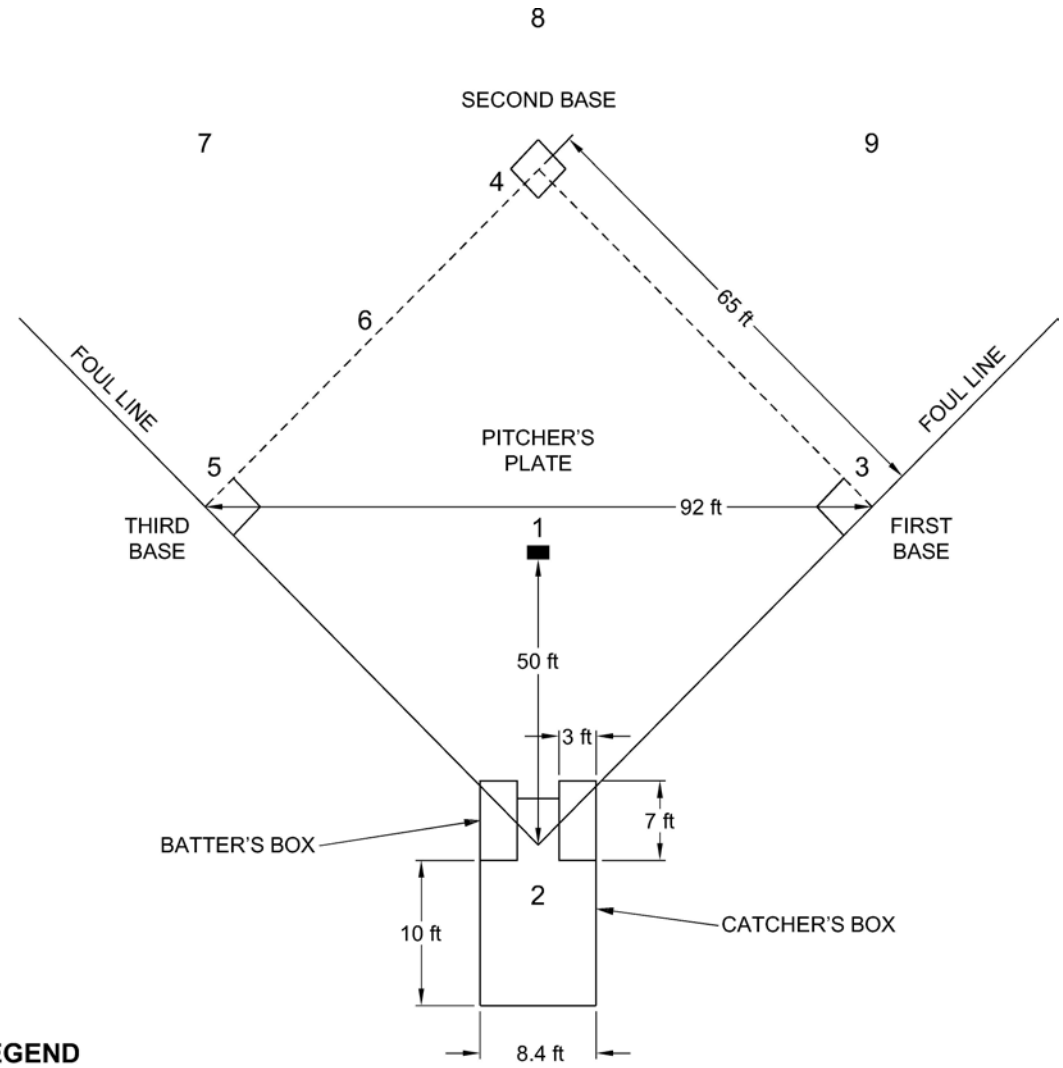
The pitcher must use an underhand pitch.

A batter is out if they receive a fly-out, force-out, strikeout or tag-out.

The batter's objective is to get around the bases without being tagged and before the ball reaches the base.

A team scores a run when a player has safely touched first, second, and third base, and has made it back home or hits the ball over the fence.

Further details on the sport of softball can be found in *The Sports Rules Book: Essential Rules for 54 Sports* (1998), pp. 247–259.



LEGEND

1. Pitcher
2. Catcher
3. First Baseman
4. Second Baseman
5. Third Baseman
6. Shortstop
7. Left Fielder
8. Centre Fielder
9. Right Fielder

Note. From The Sports Rules Book: Essential Rules for 54 Sports (p. 251), by T. Hanlon, 1998, USA: Human Kinetics Publishers, Inc. Copyright 1998 by Human Kinetics Publishers, Inc.

Figure Y-1 Softball Field

SOFTBALL SCORE SHEET

Team A

NAMES

Team B

NAMES

Record the number of runs scored by each team for each inning.

	Inning 1	Inning 2	Inning 3	Inning 4	Inning 5	Inning 6	Inning 7	TOTAL
Team A								
Team B								

Note. The scorekeeper must sign the back of the score sheet when completed.

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ULTIMATE FRISBEE

OBJECTIVE

Teams attempt to score as many points as possible by catching a pass in the opponent's end zone. The team with the highest score at the end of the game is the winner. Ultimate Frisbee helps improve the cardiovascular and muscular strength components of fitness.

SCORING

Points are awarded to a team when a player catches a pass in the opponent's end zone. A typical game is scored to 15 points.

DEFINITIONS

Clearing. To get out of the area where the thrower wants to pass the Frisbee.

Cut. An attempt to get free of other players in order to receive a pass.

Force. To make it difficult for the thrower to throw the Frisbee in a certain direction in an attempt to try to get them to pass it the other way.

Huck. A long high pass that is nearly the length of the field.

Layout. When a player dives to catch or intercept the Frisbee.

Poach. When a defender moves away from their marker to try to intercept a pass to another player.

Swing. A lateral pass across the pitch, instead of upfield.

Switch. When two defenders exchange the offensive players they were marking.

NUMBER OF PLAYERS

Seven players per team on the field at one time.

EQUIPMENT

- One Frisbee, and
- Pylons to mark boundaries.

BASIC RULES

The game is played in two halves. There is no time set for the halves. Halftime begins when one team reaches eight points.

Each team lines up on the front of their respective end zone line to initiate play. The defence will then throw the Frisbee to the offence.

The Frisbee may be played in any direction by passing to teammates. Players must remain stationary when they hold the Frisbee. It must be passed to other players on the field that is closer to the opponent's end zone.

A player cannot hold the Frisbee for longer than 10 seconds. The defender, who is guarding the player holding the Frisbee (staller), must count out the stall count.

When a pass is not completed due to being out of bounds, being dropped, blocked or intercepted, etc. the defence takes possession of the Frisbee and becomes the offence.

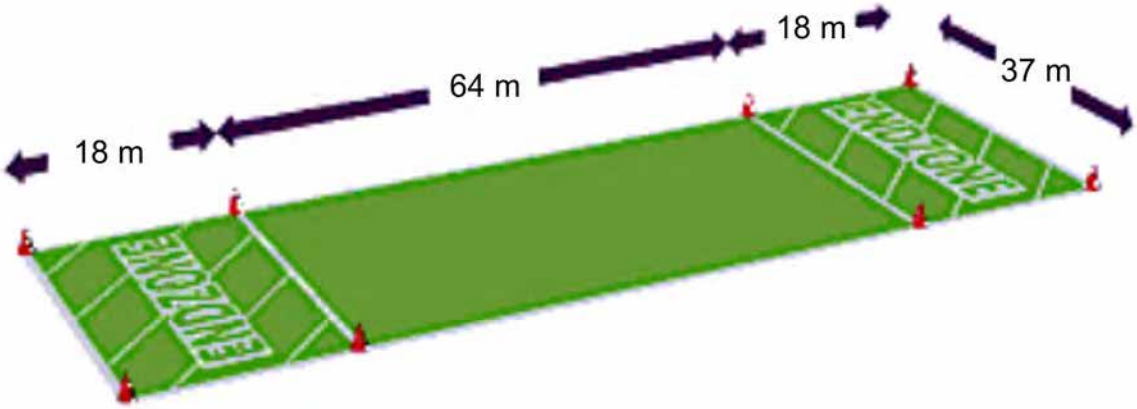
To bring the Frisbee back into play it must be brought to the point on the pitch where it went out, or the nearest point where a defender touched it.

There is no physical contact allowed between the players.

A throw can be made without stopping if it is within three steps of the catch. The thrower cannot change direction or speed up after catching the Frisbee.

After halftime the teams will switch ends of the playing field.

Further details on the sport of ultimate Frisbee can be found at http://www.whatisultimate.com or http://www.upa.org/ultimate



Note. From What is Ultimate Frisbee, by What is Ultimate, n.d. Retrieved October 30, 2006, from http://www.whatisultimate.com/what/what_game_en.html

Figure Z-1 Ultimate Frisbee Field

ULTIMATE FRISBEE SCORE SHEET

Team A

NAMES

Team B

NAMES

Record the number of points achieved by each team within each half to a total of 15. Points are achieved when a player catches the Frisbee within the opponent's end zone.

First Half

Team A	Team B
TOTAL	

Second Half

Team A	Team B
TOTAL	

Note. The scorekeeper must sign the back of the score sheet when completed.

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VOLLEYBALL

OBJECTIVE

Teams attempt to score as many points as possible by hitting the ball into the opposing team's portion of the court. The team with the highest score at the end of the game is the winner. Volleyball helps improve the cardiovascular and muscular strength components of fitness.

SCORING

One point is awarded every time the ball hits inside the boundary lines of the opposing team’s court; the opponents are unable to return the serve within three hits; the opponents hit the ball out of bounds; or the opponents commit a fault or foul when the team was the serving team.

DEFINITIONS

Attack hit. A hit aimed into the opponent’s court.

Attack lines. These separate each side of the court into a front zone and a back zone.

Block. Occurs when one or more players stop the ball before, or just after, it crosses the net.

Rally. The exchange of hits back and forth between the teams. The team that wins the rally gets the serve.

Rotation order. Each team has a rotation order that must be kept when it gains the serve. Each time a team gains a serve; players will rotate one position clockwise.

NUMBER OF PLAYERS

Six players per team on the court at one time.

EQUIPMENT

- Volleyball,
- Volleyball net, and
- Volleyball court.

BASIC RULES

The game continues until a team scores 21 points in a rally format (a point is awarded on each play of the game regardless of which team serves the ball) and has a two-point advantage.

The team has three players on the front of the court and three on the back of the court.

Players can hit the ball with their hands clasped together or with either an open or closed fist. Players can strike the ball overhand or underhand.

One team will start the serving, the other receiving. A player retains the serve until the other team wins the right to serve.

Upon completing the serve a team must rotate positions.

The server may stand anywhere behind the end line to serve.

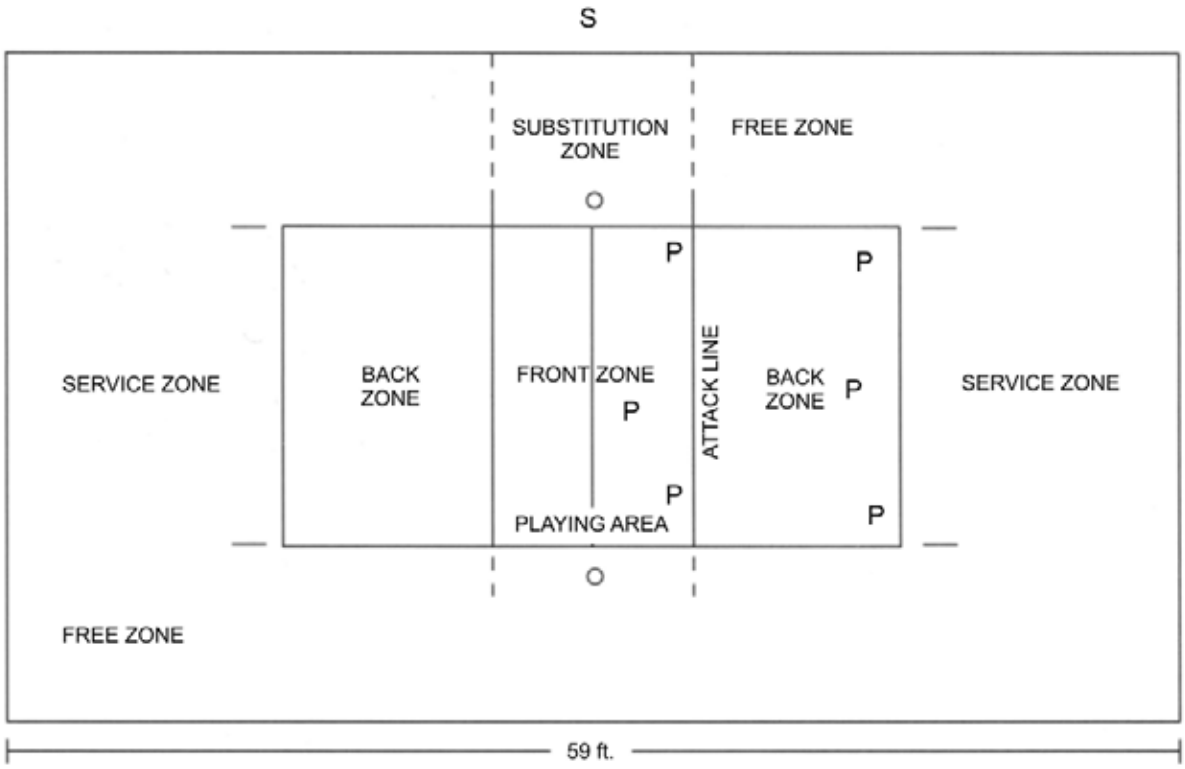
A service fault occurs if the ball touches a player of the serving team; fails to pass through the crossing space over the net; touches the net or any other object; or lands out of bounds.

If the team that is receiving stops their opponents from scoring, they are awarded the serve.

Each team has a maximum of three hits to get the ball over the net to return the ball. This is in addition to blocking.

Except on the serve, the ball is still in play if it touches the net.

Further details on the sport of volleyball can be found in *The Sports Rules Book: Essential Rules for 54 Sports* (1998), pp. 325–334.



LEGEND

P Player
S Scorekeeper

Note. From The Sports Rules Book: Essential Rules for 54 Sports (p. 327), by T. Hanlon, 1998, USA: Human Kinetics Publishers, Inc. Copyright 1998 by Human Kinetics Publishers, Inc.

Figure AA-1 Volleyball Court

VOLLEYBALL SCORE SHEET

Team A	Team B
NAMES	NAMES

Check off each point as it is awarded to a team.

Points	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Team A																					
Team B																					

Note. The scorekeeper must sign the back of the score sheet when completed.

ACTIVE GAMES

INTRODUCTION

Active games are a great way of incorporating multiple components of fitness. These physical activities make fitness fun and can spark an interest in maintaining lifelong fitness. Active games help improve various components of fitness depending on the selected game.

EQUIPMENT

The equipment required for these games will depend on which game is selected.

ACTIVITY GUIDELINES

Active games shall be well supervised.

Active games shall be conducted in a large training area or playing field that is free of obstructions.

Cadets shall wear appropriate physical activity clothing and footwear for this activity.

SUGGESTED ACTIVE GAMES

Battleship

This is a nautical themed active game where the playing area is broken down into different parts of a ship, to include:

- **Bow.** The front of the playing area,
- **Stern.** The back of the playing area,
- **Port.** The left side of the playing area, and
- **Starboard.** The right side of the playing area.

There are special actions to be completed when called during the game, such as:

- **Submarines.** Cadets run to the centre of the playing area, lie down on their back, and raise one foot in the air.
- **Lifeboats Port.** Cadets run to the left side of the playing area, form a single line, sit down and begin to row.
- **Lifeboats Starboard.** Cadets run to the right side of the playing area, form single line, sit down and begin to row.

1. Begin the game with the cadets standing in the centre of the area.
2. Have the leader call one of the above parts of the ship or special action.
3. Have the cadets run to the designated area or perform the special action.
4. Eliminate the last cadet to reach the designated spot or perform the special action, and have them move to help the leader.
5. Continue until a winner is designated.

Cardio Blob Tag

A fast-paced game using two pool noodles where cadets must move or be swallowed by the "blob".

1. Designate one cadet as the "blob".
2. Have the "blob" carry a pool noodle to use to tag other cadets (below the shoulders).
3. Have the first tagged cadet join hands with the "blob" and give them the other pool noodle.
4. Ensure that the two cadets making the "blob" always remain joined (holding hands) and move throughout the group tagging other cadets.
5. Have any newly tagged cadets join the "blob" by holding hands with the cadet who tagged them and taking the pool noodle.
6. Allow the "blob" to grow until all the cadets have joined the "blob".

Tag

There are many variations of tag games, such as cardio blob tag, everybody's it, and frozen tag. These types of games begin with one or more cadets being designated as "it". The "it" cadets must run and tag (touch) other cadets to either make them it, freeze them, or add them to the blob. There are many online resources and books for tag games. Select tag games that maximize movement and keep the cadets' heart rates up.

SUGGESTED RESOURCES

Ultimate camp resource. (n.d.). *Camp games*. Retrieved October 6, 2011, from http://www.ultimatecampresource.com/site/camp-activities/camp-games.html

ISBN 0-934387-29-X Panicucci, J. (2008). *Achieving fitness: An adventure activity guide*. Beverly, MA: Project Adventure, Inc.

CIRCUIT TRAINING

INTRODUCTION

Circuit training was developed in the late 1950s at the University of Leeds in England. Circuit training consists of a number of carefully selected and simple-to-perform exercises in a set order called the "circuit". Each exercise is performed in turn, either a set number of times or within a set time period (usually 30–60 seconds), after a brief recovery period. A rotation through all stations is a circuit. The circuit is normally repeated three times.

Timed circuit training allows the activity to be conducted within a specific time limit. They also prevent waiting at exercise stations. They allow each individual to develop their fitness level at their own pace. Circuits that are not timed must be conducted using the maximum number of repetitions that can be done continuously without setting a specific time limit.

Circuit training may be adapted to focus on any component of fitness and may also be used to practice and improve various sports skills.

EQUIPMENT

Circuit training equipment, based on the stations selected.

ACTIVITY GUIDELINES

Circuits shall be designed based on activities and exercises that are appropriate for cadets. Many of the activities and exercises listed in this instructional guide may be used as stations in a circuit (eg, skipping rope and weighted bar exercises).

CIRCUIT DESIGN

When designing a circuit, the following should be considered:

- Exercises in a circuit may focus on cardiovascular endurance (eg, skipping rope), muscular strength (eg, medicine balls), muscular flexibility (eg, stretching), or a combination of them.
- Exercises must be arranged in an order so that no group of muscles is worked consecutively.
- Each station should have enough equipment for all cadets at that station to participate at once.
- When at a recovery station, the cadets must keep walking, jogging or moving around. They should also drink water.
- The number of activities chosen depends on the time allocated to complete the circuit.

Sample General Circuit Training

Each station will last 45 seconds.

Station 1: Cardiovascular Endurance Exercise: Rope skipping Equipment: 6 skipping ropes	**Station 2: Recovery** Exercise: Jog on the spot Equipment: Nil.	**Station 3: Muscular Strength** Exercise: Curl-ups Equipment: Gym mats
Station 12: Recovery Exercise: Walk around the circuit Equipment: Nil.	**INSTRUCTOR**	**Station 4: Recovery** Exercise: Walk around the circuit Equipment: Nil.
Station 11: Muscular Strength Exercise: Squat thrusts Equipment: Nil.		**Station 5: Muscular Flexibility** Exercise: Spine twist stretch Equipment: 2 benches
Station 10: Recovery Exercise: Jog on the spot Equipment: Nil.		**Station 6: Recovery** Exercise: Jog on the spot Equipment: Nil.
Station 9: Muscular Flexibility Exercise: Knee to chest stretch Equipment: Gym mats	**Station 8: Recovery** Exercise: Walk around the circuit Equipment: Nil.	**Station 7: Cardiovascular Endurance** Exercise: Jumping jacks Equipment: Nil.

SUGGESTED RESOURCES

ISBN 978-0-7360-8118-4 Carpenter, J. & Sinclair, C. Eds. (2011). *Physical best activity guide: Middle and high school levels*, 3rd edition. Windsor, ON: National Association for Sport and Physical Education.

MARTIAL ARTS

INTRODUCTION

Martial arts combine multiple components of fitness, including cardiovascular, muscular strength and muscular flexibility, into a fun, disciplined physical activity.

EQUIPMENT

The equipment required will depend on the selected type of martial arts.

ACTIVITY GUIDELINES

Martial arts shall be conducted by a certified instructor or using a video that is conducted by a certified instructor.

TYPES OF MARTIAL ARTS

Aikido. A Japanese form of self defense that uses wrist, joint and elbow grips to disable an opponent.

Kick Boxing. A martial art that resembles boxing but allows the use of the feet.

Judo. A method of defending oneself without the use of weapons. This method stresses the athletic component of this martial art.

Jiujutsu. A method developed in Japan for defending oneself using the strength and weight of an opponent to disable them.

SUGGESTED RESOURCES

Jeanette Jenkins, Certified by the Thai Boxing Association of Canada. *Crunch: Super-charged kickbox party*. 2007. [DVD]

ISBN 0-8048-3284-6 Westbrook, A. & Ratti, O. (1970). *Aikido and the dynamic sphere: An illustrated introduction*. North Clarendon, VT: Charle E. Tuddle Co., Inc.

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TABLOIDS

INTRODUCTION

Tabloid meets consist of various small, easy to play games or relay events. Tabloid meets are a fun way to be active and cover multiple components of fitness in one activity.

Tabloid meets have numerous advantages:

- a large number of personnel can participate at the same time;
- a wide variety of activities can be conducted;
- can be planned around existing facilities and equipment; and
- emphasis can be placed on team effort rather than on high-calibre performance by a small number of individuals.

Tabloid meets are intended for the cadets to work as a team, communicate, cooperate and have fun.

EQUIPMENT

The equipment required for tabloids will depend on which events are selected.

ACTIVITY GUIDELINES

The size of the group, the number of staff, the time allocated for the meet, the facilities and the equipment are factors that will affect the events, the group sizes, the time allocated at each event and the overall design of the meet. When designing a tabloid, ensure that the selected events are energetic and promote physical activity.

In a tabloid meet, the cadets must rotate through events in a pre-arranged fashion. A diagram of the stations can be displayed or signs with station numbers can be placed at each station.

Size of the Group

The size of the group will determine the number of events required. For example:

- If there are 60 cadets and the organizer wants them in teams of five, there should be at least 12 events (if there is only one team / event) or six events (if there are two teams / event).
- If there are 30 cadets and the organizer wants them in teams of three, there should be at least 10 events (if there is only one team / event) or five events (if there are two teams / event).

Number of Staff

The number of staff available to run the event may affect the number of events. Many personnel may be involved in a novelty events tabloid meet, such as:

- master scorekeeper,
- timekeeper,
- official for each event,
- first-aider, and / or
- runners (could be cadets from each team who bring the results to the master scorekeeper after each event).

Each event is controlled by one official who remains at the event throughout the meet. Their duty is to ensure safety and that the competitors observe the rules. After each event is completed, the official will fill out the scoresheet and send it to the master scorekeeper's table.

The master scorekeeper transfers the information from the team scoresheet to the master scoresheet.

Time Allocated For The Meet

Time allocated for the meet has to take into account the set-up, warm-up, cool-down, tear down, and award ceremony (if applicable).

Events should be planned so they take the same amount of time to be completed. This maintains control of the meet and ensures that all teams are at the same stage of the event.

Facilities

The facilities may offer a variety of events or put restrictions on them (eg, when using a school gym, it may be forbidden to bring food or particular items that could damage the floor).

Sample Tabloid Events

Examples of typical events are as follows:

Events	Description
Accuracy Throw	Each team member has to toss a beanbag or similar item into a ring of concentric circles with various point values. This continues until the time has elapsed.
Ball Over and Under	The team forms a single file line. The first person passes the ball over their head to the next person who then passes the ball between their legs to the next person. This continues to the last member who then runs to the front and starts again.
Basketball Throw	Each team member has to throw a basketball into the net from a specific point. This continues until the time has lapsed.
Skipping	Each team member has to skip with a jump rope as many times as they can without stopping.
Volleyball Bump	The team stands in a circle and a volleyball is bumped from person to person continuously without it touching the floor until the time has lapsed.

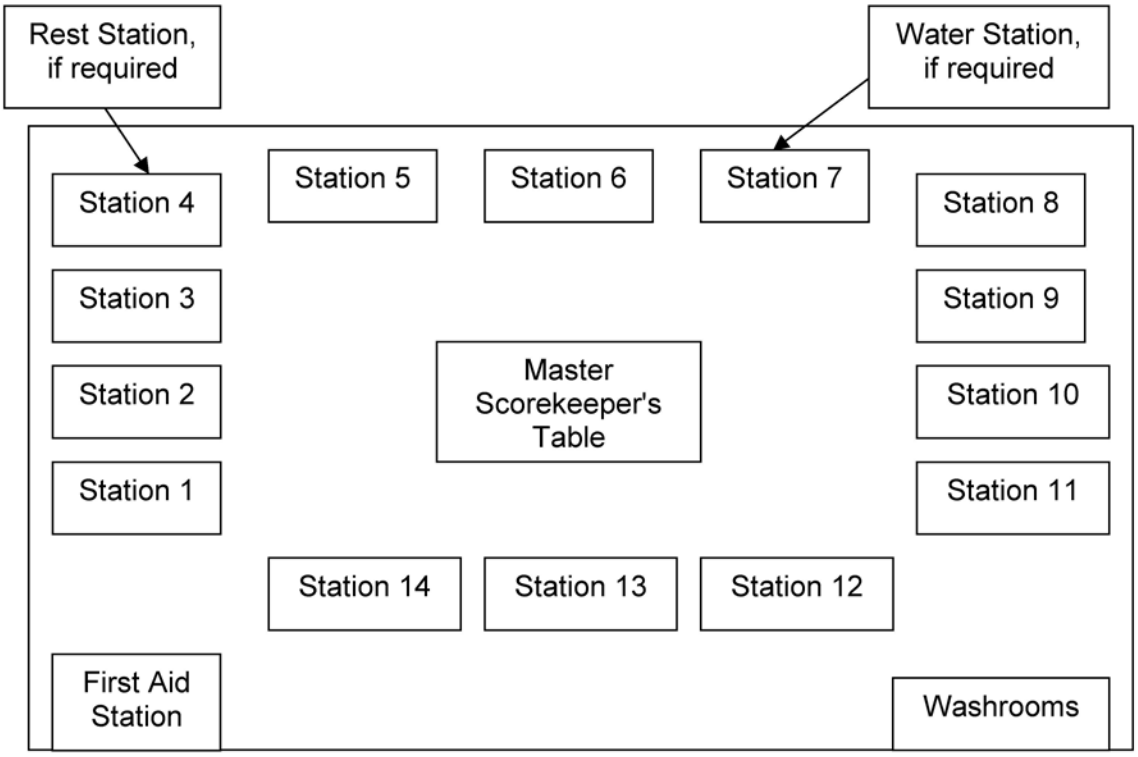

Figure AE-1 Layout of a Tabloid Meet

SUGGESTED RESOURCES

A-PD-050-015/PT-002 Directorate of Physical Education, Recreation and Amenities. (1989). *Physical fitness training in the Canadian Forces* (Vol. 2). Ottawa, ON: Department of National Defence.

The Canadian Association for Health, Physical Education, Recreation and Dance. (1983). *Basic skills series: Tabloid sports*. Calgary, AB: The Canadian Association for Health, Physical Education, Recreation and Dance.

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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

PHYSICAL ACTIVITIES

SECTION 2

EO CX05.01 – PARTICIPATE IN PHYSICAL ACTIVITIES

Total Time:	9 x 30 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO. REFER TO THE INSTRUCTIONAL GUIDE FOR EO MX05.01 (PARTICIPATE IN PHYSICAL ACTIVITIES).

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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

PHYSICAL ACTIVITIES

SECTION 3

EO CX05.02 – PARTICIPATE IN A TOURNAMENT

Total Time:	9 x 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

This IG supports EO CX05.02 (Participate in a Tournament) located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4.

Refer to EO MX05.01 (Participate in Physical Activities) for a list of sports to select from and rules associated with each.

Refer to the warm-up and the cool-down located at Annexes A and B of EO MX04.01 (Participate in 60 Minutes of Moderate- to Vigorous-Intensity Physical Activity and Track Participation in Physical Activities).

Select a tournament and refer to the following attachments for an overview of how to conduct the selected tournament:

- Attachment A–Round Robin,
- Attachment B–Ladder,
- Attachment C–Pyramid,
- Attachment D–Single Elimination, and
- Attachment E–Double Elimination.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A practical activity was chosen for this lesson as it allows the cadets to participate in a tournament in a safe and controlled environment.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have participated in a tournament.

IMPORTANCE

It is important for cadets to participate in a tournament because it is an activity that promotes camaraderie and a healthy lifestyle, while meeting the Cadet Program aim.

Teaching Point 1 **Have the cadets participate in a tournament.**

Time: 9 x 30 min Method: Practical Activity

BACKGROUND KNOWLEDGE

THE WARM-UP

Purpose of a Warm-Up

A warm-up session is composed of light cardiovascular activities and stretches designed to:

- gradually increase respiratory action and heart rate;
- raise the muscle temperature to facilitate reactions in muscle tissue; and
- stretch the muscles.

This part of the warm-up prepares the cardiovascular system for the physical activity. It is composed of activities such as brisk walking, light jogging, or simple games that elevate the heart rate. As a guide, allow 10 minutes to warm up for every hour of physical activity.

THE COOL-DOWN

Purpose of a Cool-Down

A cool-down is composed of light cardiovascular activities and stretches designed to:

- allow the body time to slowly recover from physical activity and to help prevent injury;
- prepare the respiratory system to return to its normal state; and
- stretch the muscles to help relax and restore them to their resting length.

Guidelines for Stretching

The following guidelines should be followed while stretching:

- Stretch all major muscle groups, including the back, chest, legs, and shoulders.
- Never bounce while stretching.
- Hold each stretch for 10–30 seconds to let the muscles release fully.
- Repeat each stretch two to three times.
- When holding a stretch, support the limb at the joint.

ACTIVITY

OBJECTIVE

The objective of this activity is to provide cadets the opportunity to participate in a tournament.

RESOURCES

- Sports / safety equipment required for the selected sport,
- First aid kit,

- Whistles,
- Stopwatch, and
- Schedule of competition.

ACTIVITY LAYOUT

Set up the training area for the selected sport.

ACTIVITY INSTRUCTIONS

1. Have the cadets participate in an introductory briefing, to include:
   (a) an overview of the sport(s) that will be played during the tournament,
   (b) type of tournament,
   (c) rules of the tournament,
   (d) organization of the draw, and
   (e) location of first aid post.
2. Have the cadets participate in a warm-up session composed of light cardiovascular activities and stretches.
3. Have the cadets participate in the selected tournament.
4. Have the cadets participate in a cool-down session composed of light cardiovascular activities and stretches.

SAFETY

- Ensure cadets are aware of the rules and regulations.
- Ensure constant supervision throughout the activity.
- Ensure a first aid station / kit is readily accessible.
- Ensure a first-aider is identified at the start of the activity and is available at all times.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in the tournament will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the tournament will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Tournaments are fun activities that promote physical fitness, which is part of the aim of the Cadet Program. Participating in physical activities can help you:

- improve your health;
- do better in school;
- improve your fitness;
- grow stronger;
- have fun being active with friends;
- feel happier;
- maintain a healthy body weight;
- improve your self-confidence; and
- learn new skills.

INSTRUCTOR NOTES / REMARKS

Activities chosen for this training are not limited to the list presented but must be age appropriate.

Activities should be chosen based on equipment and facilities accessible to the corps / squadron.

REFERENCES

A0-050 A-PD-050-015/PT-002 Directorate of Physical Education, Recreation and Amenities. (1989). *Physical fitness training in the Canadian Forces* (Vol. 2). Ottawa, ON: Department of National Defence.

C0-187 San Diego County Office of Education. *After school physical activity: Types of tournaments*. Retrieved October 3, 2008, from http://www.afterschoolpa.com/print/typesoftournaments.html

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ROUND ROBIN TOURNAMENT

Recommended Use for a Round Robin Tournament

Round robin tournaments are best for league play or one-day tournaments that guarantee a certain number of games. All participants / teams play each other at least once. If there are a large number of participants / teams, a second, third or even fourth pool may be used.

Pool. A group of contestants who compete against each other in a tournament for the right to advance.

The number of courts or fields usually determines the number of pools. This is easy for participants / teams because they play all their games in the same location. The participants / teams may be used as referees, scorekeepers and linesmen during the round robin tournament.

The smaller the number of participants / teams in the pool, the shorter time it takes to complete the pool. Four to six participants / teams per pool are best.

To ensure fairness is shown to participants / teams, when making the pool, names should be chosen randomly (eg, pull the names out of a hat) and placed in the draw.

When using a round robin for a one-day tournament it may be combined with a single elimination tournament. The pool winners and runners-up may fill out a single elimination bracket. These participants / teams will play for the championship.

A tiebreaker system may be put in place before the start of the tournament (eg, points for versus points against).

Sample Draws

To arrange the rounds and the game schedule for an event for an even number of entries, keep the first entry constant and rotate the remaining as follows:

Round 1	Round 2	Round 3	Round 4	Round 5	Round 6	Round 7
1 - 8	1 - 2	1 - 3	1 - 4	1 - 5	1 - 6	1 - 7
2 - 7	3 - 8	4 - 2	5 - 3	6 - 4	7 - 5	8 - 6
3 - 6	4 - 7	5 - 8	6 - 2	7 - 3	8 - 4	2 - 5
4 - 5	5 - 6	6 - 7	7 - 8	8 - 2	2 - 3	3 - 4

Note. Created by Director Cadets 3, 2007, Ottawa, ON: Department of National Defence.

Figure A-1 Round Robin Draw With an Even Number of Participants

Bye. A term used when a participant / team moves into the next round of competition without participating in the previous round due to an uneven number of teams.

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LADDER TOURNAMENT

Recommended Use for a Ladder Tournament

The ladder tournament is the most popular form of extended tournaments (eg, racquet clubs, league play). It is best with pairs or individual participants such as racquet sports. Ladders may be created by ability grouping (eg, beginner, intermediate or advanced). Players / teams challenge the player / team above them on the ladder.

If the challenger wins, they exchange places on the ladder with the loser. If the challenger loses the competition, they stay where they are on the ladder.

Even though the tournament coordinator may modify the rules to suit the nature of the competition, possible rules for planning a ladder tournament are:

- Each contestant is permitted to challenge the player immediately above him / her, or up to two or three above.
- Provided the player challenged is not already involved in a previous challenge, he / she must accept the invitation within a given period.
- If the challenger wins, or the challenge is not accepted, the positions on the board are switched.

Challenges must be accepted and played within a certain time limit, usually one week. If a participant / team does not challenge within the time limit, they move down the ladder. Usually participants / teams are not allowed to challenge the same participant / team twice in a row.

Sample Draw

To ensure fairness is shown to participants / teams, when making the pool, names should be chosen randomly (eg, pull the names out of a hat).

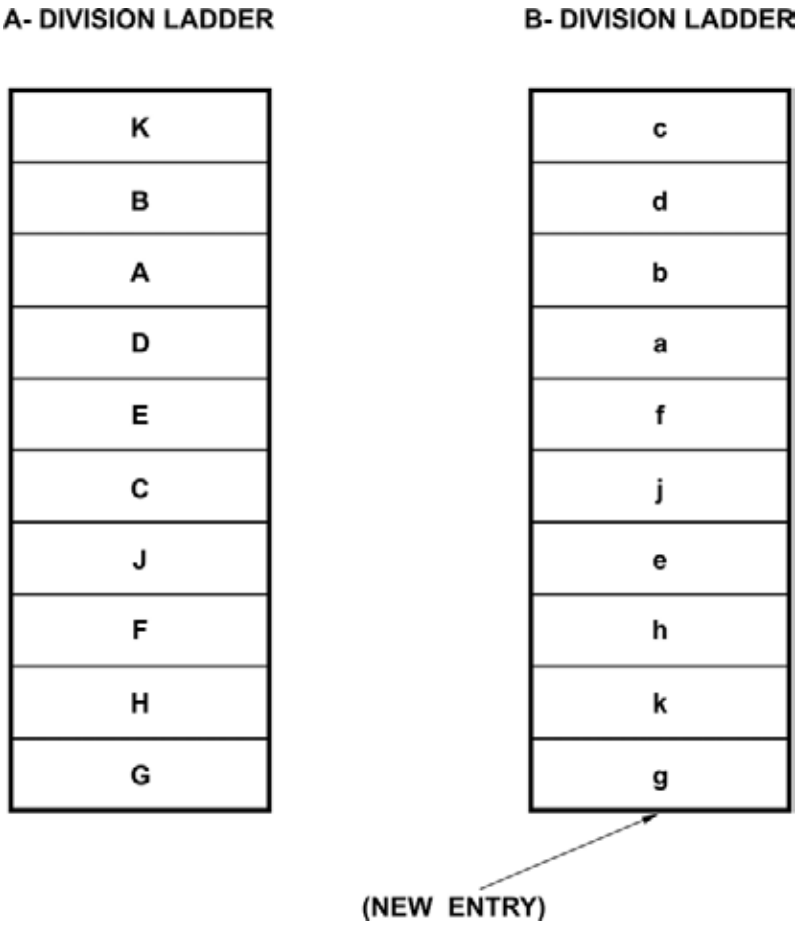
If the number of entries to a ladder tournament is large, more than one ladder may be used. A player wishing to enter the competition late must challenge the player at the bottom of the lowest ladder.

Upon reaching the top of the ladder, a contestant may challenge the player at the bottom of the next higher ladder.

A winner of a ladder tournament may be declared on a set date, or the tournament may continue until the participants / teams decide that the tournament is over (eg, the participant / team at the top of the ladder cannot be beaten).

Byes

There are no byes in a ladder tournament.



Note. Created by Director Cadets 3, 2007, Ottawa, ON: Department of National Defence.

Figure B-1 Ladder Draw

PYRAMID TOURNAMENT

Recommended Use for a Pyramid Tournament

The pyramid tournament is a popular form of an extended tournament (eg, racquet clubs, league play). A pyramid tournament is similar to a ladder tournament, but the board is in the form of a pyramid, with one participant / team at the top, two in the next row, three in the next, and so on. It is best with pairs or individual participants such as racquet sports. Players / teams challenge the player / team above them on the pyramid. A pyramid tournament gives participants / teams greater opportunity to challenge opponents because the step above them has more participants / teams listed.

If the challenger wins, they exchange places on the pyramid with the loser. If the challenger loses the competition, they stay where they are on the pyramid.

Challenges must be accepted and played within a certain time limit, usually one week. If a participant / team does not challenge within the time limit, they move down the pyramid. Usually participants / teams are not allowed to challenge the same participant / team twice in a row.

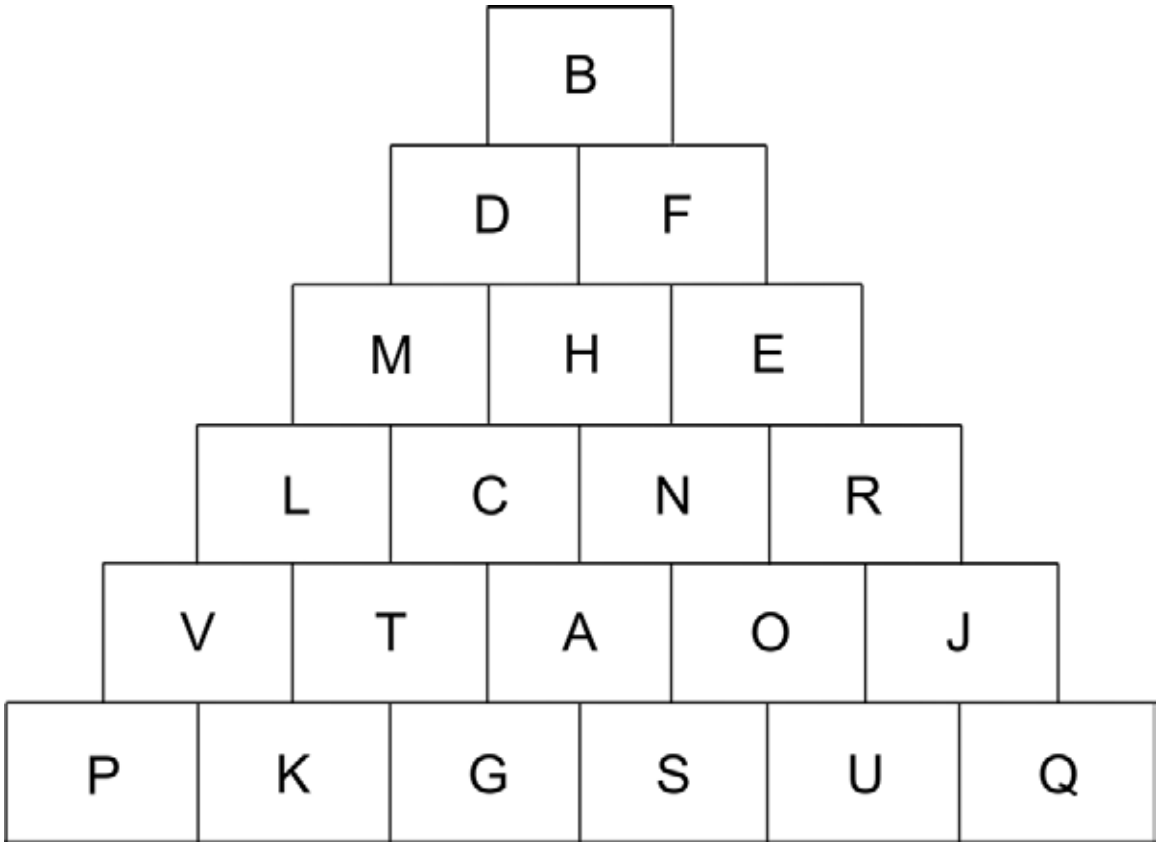
Sample Draw

To ensure fairness is shown to participants / teams, when making the pool, names should be chosen randomly (eg, pull the names out of a hat).

A winner of a pyramid tournament may be declared on a set date decided by the organizer, or the tournament may continue until the participants / teams decide that the tournament is over (eg, the participant / team at the top of the pyramid cannot be beaten).

Byes

There are no byes in a pyramid tournament.



Note. Created by Director Cadets 3, 2007, Ottawa, ON: Department of National Defence.

Figure C-1 Pyramid Draw

SINGLE ELIMINATION TOURNAMENT

Recommended Use for a Single Elimination Tournament

The single elimination tournament is best used when there are a large number of entries, a short period of time and a limited number of courts / fields. It is the easiest of all tournaments to run. When participants / teams win, they continue to play. When participants / teams lose, they are eliminated from the tournament.

If there are a large number of participants / teams, multiple single elimination tournaments may be used. Participants / teams may be divided into skill levels (eg, beginner, intermediate and advanced) as three separate tournaments. This is a good format to use at the end of a round robin tournament with more than one pool, to determine an overall winner.

Sample Draws

To ensure fairness is shown to participants / teams, when making the pool, names should be chosen randomly (eg, pull the names out of a hat).

The maximum number of games to be played is equal to the number of entries minus one. If there are 12 players or teams, 11 games will be necessary to determine the winner.

The number of entries in Round 2 and subsequent rounds is always a power of 2 through the use of byes during Round 1.

Seeded Players

This term refers to outstanding players or teams who are placed in the draw in positions where they should, assuming they win all their matches, meet in the quarter or semifinals. The intent is to prevent the top competitors from meeting in the early rounds. There should be no more than 2 seeds to every 16 entries.

When seeded players are present (eg, when using a round robin combined with a single elimination tournament), the seeded players should be placed in the draw in positions where they should not meet before the quarters or semifinals.

Byes

A bye occurs in the single or double elimination competition when the number of entries is not a power of 2 (eg, 2, 4, 8, 16, 32).

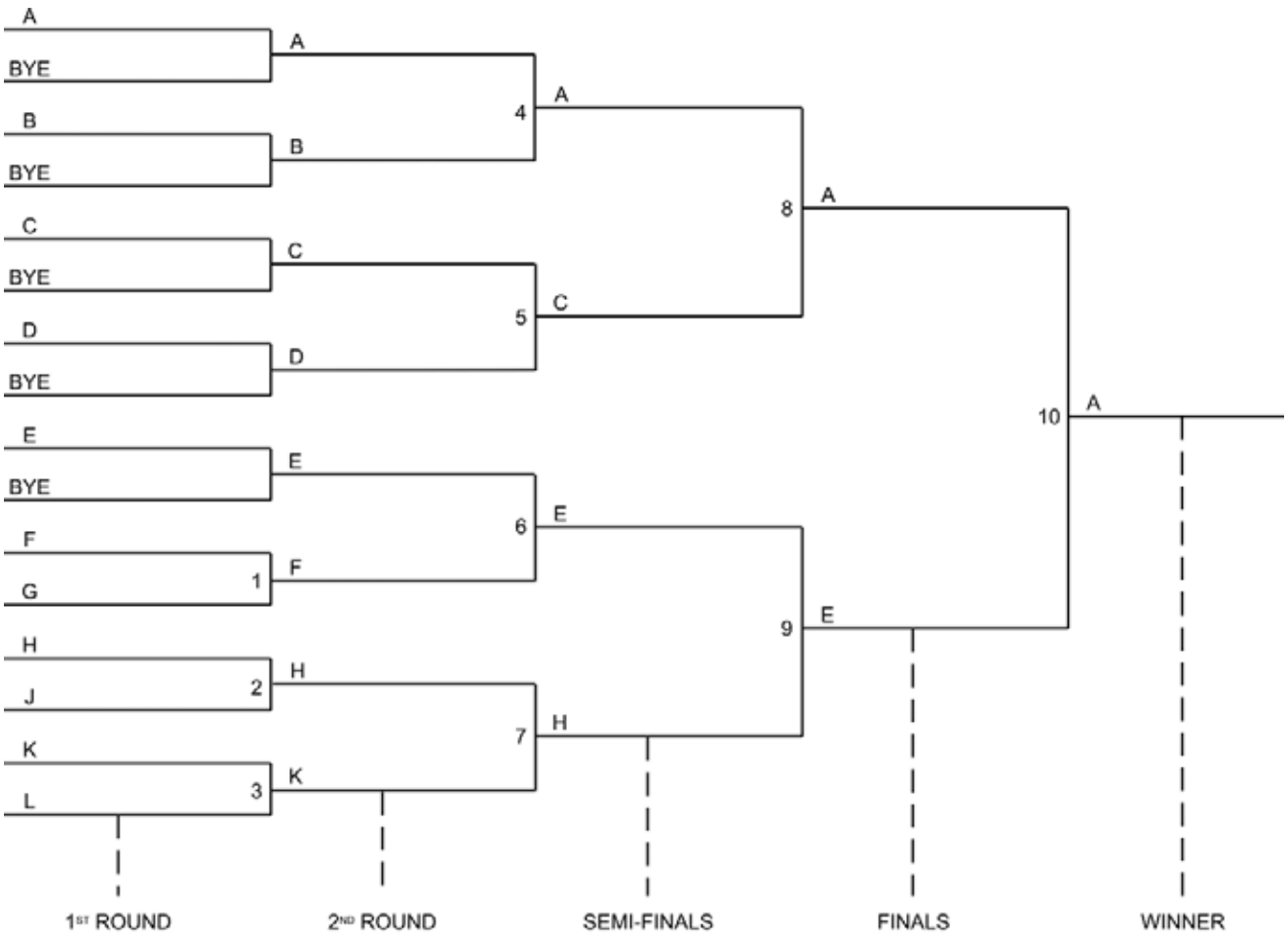
When the number of entry is not a power of two, it is necessary to have a number of byes. All byes must be given in the first series so that the number of entries remaining in the subsequent series is always a power of 2.

When calculating the number of byes, the number of entries is subtracted from the next highest power of 2.

Number of participants / teams	Next highest power of 2	Calculation	Number of byes
2	Power of 2, so there are no byes.		
3	4	4 - 3 = 1	1
4	Power of 2, so there are no byes.		
5	8	8 - 5 = 3	3
6	8	8 - 6 = 2	2
7	8	8 - 7 = 1	1
8	Power of 2, so there are no byes.		
9	16	16 - 9 = 7	7
10	16	16 - 10 =6	6
11	16	16 - 11 = 5	5
12	16	16 - 12 = 4	4
13	16	16- 13 = 3	3
14	16	16 - 14 = 2	2
15	16	16 - 15 = 1	1
16	Power of 2, so there are no byes.		
17	32	32 - 17 = 15	15
18	32	32 - 18 = 14	14
19	32	32 - 19 = 13	13
20	32	32 - 20 = 12	12
21	32	32 - 21 = 11	11
22	32	32 - 22 = 0	10
23	32	32 - 23 = 9	9
24	32	32 - 24 = 8	8
25	32	32 - 25 = 7	7
26	32	32 - 26 = 6	6
27	32	32 - 27 = 5	5
28	32	32 - 28 = 4	4
29	32	32 - 29 = 3	3
30	32	32 - 30 = 2	2
31	32	32 - 31 = 1	1
32	Power of 2, so there are no byes.		

Note. Created by Director Cadets 3, 2008, Ottawa, ON: Department of National Defence.

Figure D-1 Byes Required in a Single or Double Elimination Tournament



NOTES:

1. For eleven entries there are ten games (11-1) and five byes (16-11).
2. Letters denote advancing teams.
3. Numerals denote the order in which the games are played.

Note. From Physical Fitness Training in the Canadian Forces (Vol. 2) (p. 4-40) by Directorate of Physical Education, Recreation and Amenities, 1989, Ottawa, ON: Department of National Defence.

Figure D-2 Single Elimination Draw

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DOUBLE ELIMINATION TOURNAMENT

Recommended Use for a Double Elimination Tournament

This is very similar to the single elimination tournament with the major difference being that each participant / team must lose two games before being eliminated. This means that the tournament takes more time to conduct.

After their first loss, the participant / team is transferred to the left side of the bracket, where they are eliminated after the second defeat. In the finals, the winner of the left side (loser's bracket) meets the winner of the right side (winner's bracket). If the winner of the loser's bracket should defeat the winner of the winner's bracket, an additional game is required. After the completion of the second game, the participant / team that has suffered two defeats is eliminated and the other participant / team is declared the winner.

Sample Draws

The maximum number of games to be played is equal to double the number of entries minus one. If there are 12 teams or participants, 23 games would be the maximum number of games to be played (12 x 2 - 1 = 24 - 1 = 23).

A double elimination tournament is not advisable when more than 10 teams are part of the event. The winner on the loser's side would be involved in too many games before the championship can be decided.

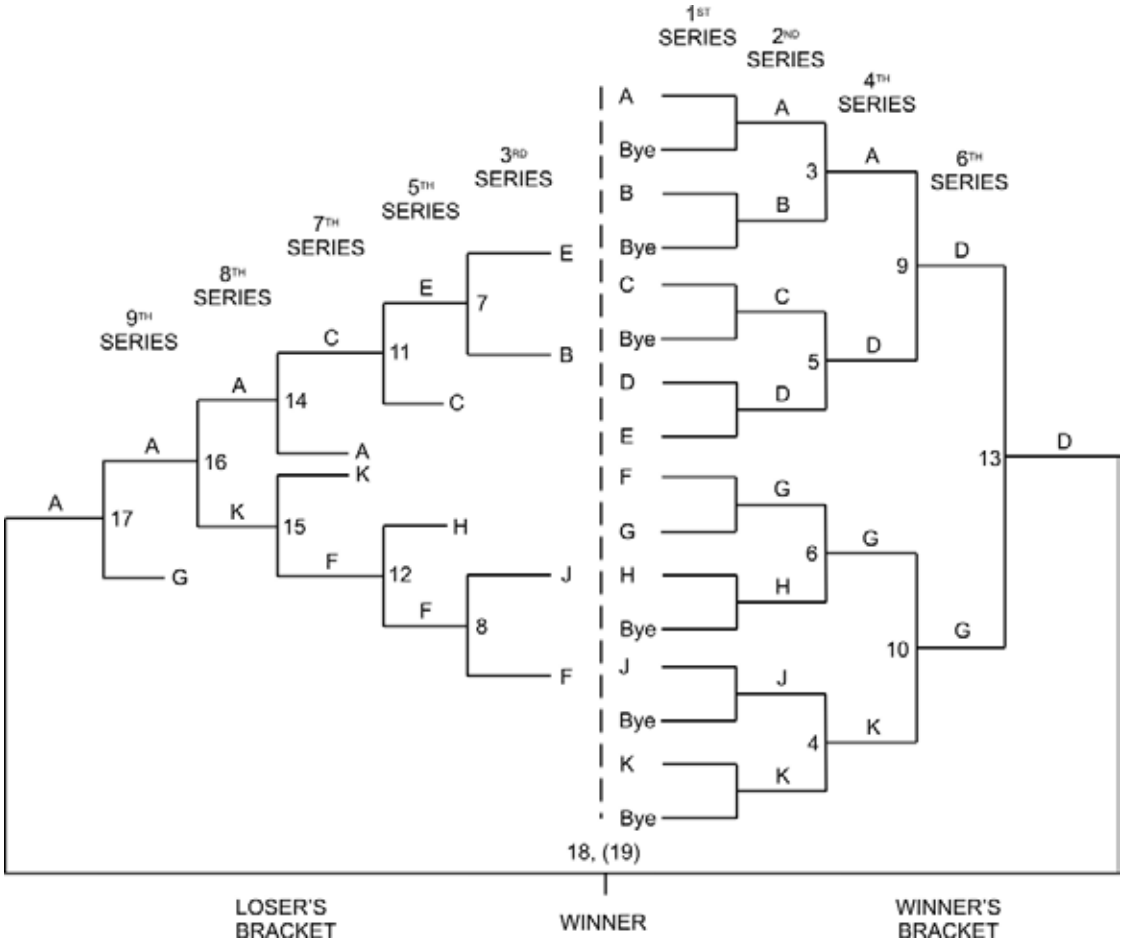
Seeded Players

If seeded players are competing, they should be placed in each section of the draw so that they may be expected to reach quarter or semifinals without meeting a seeded player. The remaining positions can be drawn randomly out of a hat.

Byes

If the number of entries is not a perfect power of 2, byes will be required.

All byes must be given in the first series so that the number of entries remaining in the subsequent series is always a power of 2. The byes should be divided evenly between the top and bottom halves.



Note. From Physical Fitness Training in the Canadian Forces (Vol. 2) (p. 4-40) by Directorate of Physical Education, Recreation and Amenities, 1989, Ottawa, ON: Department of National Defence.

Figure E-1 Double Elimination Draw

CHAPTER 6

PO 106 – FIRE THE CADET AIR RIFLE

COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 1

EO M106.01 – IDENTIFY THE PARTS AND THE CHARACTERISTICS OF THE DAISY 853C AIR RIFLE

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Carry out a safety precaution check on all rifles to be used during this lesson.

State to cadets that the rifles have been inspected and are safe to handle.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for this lesson to orient cadets to the parts and characteristics of the Daisy 853C Air Rifle and to generate interest in the subject.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have identified the parts and characteristics of the Daisy 853C air rifle.

IMPORTANCE

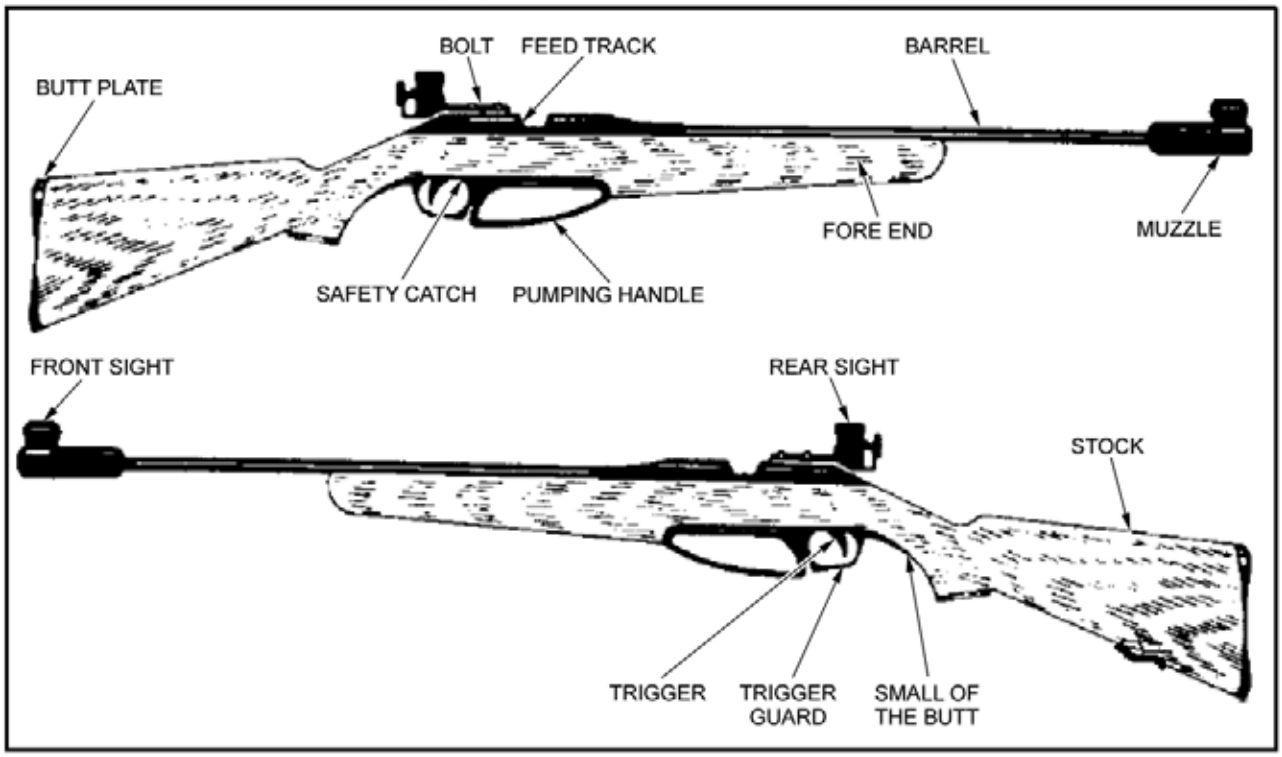
Cadets must have a basic knowledge of the cadet air rifle in order to understand how the rifle works and how to safely follow directions given on the range.

Teaching Point 1 **Identify the parts of the Daisy 853C air rifle.**

Time: 15 min Method: Interactive Lecture

PARTS

- Depending on the number of rifles available, distribute them with an optimum ratio of one rifle for every two cadets.
- When possible, have a second instructor in the room to assist.
- **For safety purposes, maintain strict class control at all times.**



A-CR-CCP-177/PT-001

Figure 1 Parts of the Cadet Air Rifle

Butt plate (end of the butt). It is the part of the rifle directly in contact with the marksman's shoulder. When fitted properly, the butt plate aids in achieving a snug fit, and a consistent placement of the rifle into the shoulder. The addition of butt spacers allows for this adjustment in length.

Spacers. Plastic inserts that can be added or removed from the butt plate to vary its length. To add or take away butt spacers, use a Phillips screwdriver to loosen the butt plate and slide in/out the amount of spacers desired.

Small of the butt (pistol grip). Curved area directly behind the trigger guard where the hand controlling the trigger grips the rifle.

Stock. Complete wooden portion of the rifle (from the butt plate end forward).

Fore end (of the stock). Wooden portion of the stock from the trigger guard forward, in which the barrel and the rifle mechanism are encased.

Sling. It is a web sling made of nylon. Links the rifle to the marksman's arm to support most of the weight of the rifle. One end attaches to the sling bracket and the other to the upper arm.

Sling bracket (hand stop). Adjustable metal clasp attached to the fore stock used to affix the sling to the rifle. It also acts as a hand stop, used to rest the left hand to prevent it from moving.

Trigger. Movable device that releases a spring and releases the rifle mechanism. This rifle has a single stage trigger that cannot be adjusted for weight.

Trigger guard. Metal band that surrounds and protects the trigger.

Safety catch. This is a mechanism that, once engaged, prevents the rifle from firing by locking the trigger in place. It is a cross bolt type device located on the trigger guard. The black side indicates that the rifle is unable to fire; the red side indicates the rifle is ready to fire. It should be ON (no red) at all times, unless firing.

Bolt. Metal lever used for opening or closing the rifle mechanism. It must be in the closed position in order to fire. For maximum safety when the rifle is uncased and not firing, the bolt should be kept open.

Pump handle. Metal lever used to compress the air required to fire the pellet. Whenever the rifle is in a "safe rifle status", the pump lever should be left partially open.

Front sight. Global front sight that uses aperture inserts.

Rear sight. Micrometer sight adjustable for windage and elevation. It is easily attached to a metal rail located above the action. This rail allows for adjustment of the sight forward or backward, in order to maintain proper eye relief. The sight is attached using a small flat-blade screwdriver.

Muzzle. Front end of the barrel equipped with attachable barrel weight.

Barrel with barrel weight. Steel tube through which the pellet travels, extending from the muzzle to the chamber. The barrel weight ensures that the rifle's weight is evenly distributed and that the rifle's balance is maintained.

Bore. Interior of the barrel has spiral grooves cut into it. The lands are the ridges of metal between the grooves. Together, the grooves and lands are called rifling.

Feed track. Delicate area where the pellet is inserted manually onto a single pellet adapter, or with a five-shot clip.

Single shot adapter. Plastic clip that aids in placing a pellet in the chamber.

Five-shot clip. Plastic clip that holds a maximum of five pellets and used to place the pellets in the chamber.

Chamber. Location where the pellet is held before firing.

CONFIRMATION OF TEACHING POINT 1

QUESTION:

The instructor shall ensure that the cadet can identify the parts of the cadet air rifle by physically pointing to the parts, and having the cadets properly name the part.

Teaching Point 2 **Identify the characteristics of the Daisy 853C air rifle.**

Time: 10 min Method: Interactive Lecture

CHARACTERISTICS

Identify the main characteristics of the cadet air rifle. Focus on these points during the confirmation section of this TP.

The characteristics of the Daisy 853C air rifle are:

- **Action.** Single pump pneumatic, straight pull-bolt;
- **Total Length.** 97.8 cm;
- **Total Weight.** 2.5 kg;
- **Calibre.** 0.177 calibre (4.5 mm);
- **Front Sight.** Global type with interchangeable aperture inserts;
- **Rear Sight.** Fully adjustable peep rear sight with micrometer click adjustment;
- **Muzzle Velocity.** 150.8 metres per second;
- **Loading.** Single or auto indexing 5 pellet clip;
- **Stock.** Full-length, sporter-styled hardwood with adjustable length;
- **Safety.** Manual crossbolt trigger block with red indicator;

These characteristics are “Nice to Know” and should be taught only if time permits.

- **Barrel.** Lothar Walther rifled high-grade steel barrel with weight: crowned 12 lands and grooves, right hand twist. Precision bore sized for match pellets. Approximate length 53.1 cm;
- **Maximum Range.** 235.4 metres;
- **Sling.** Adjustable competition web;
- **Trigger Weight.** Minimum 3.5 pounds;
- **Chamber.** Open loading and made of steel; and
- **Pumping Force.** 20 lbf.

With a muzzle velocity of 150.8 metres per second, the cadet air rifle is not a ‘firearm’ under the current federal firearms legislation, but it is treated as one under the definition used by the Military Police.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. The cadet air rifle has what type of action?

Q2. What is the caliber of the cadet air rifle?

Q3. The cadet air rifle uses what type of safety?

ANTICIPATED ANSWERS:

A1. Single pump pneumatic, straight pull-bolt.

A2. 0.177 calibre (4.5 mm).

A3. Manual crossbolt trigger block with red indicator.

END OF LESSON CONFIRMATION

This EO may be confirmed with the handout located at Attachment A. Allow the cadets a few minutes to complete the form and then have cadets switch sheets for correcting.

CONCLUSION

HOMEWORK/READING/PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Knowing the parts and characteristics of the cadet air rifle is important in understanding how the rifle works. This allows the cadet to be able to follow directions given on the range, and properly perform a handling test whenever an air rifle is to be used.

INSTRUCTOR NOTES/REMARKS

Instructors are encouraged to familiarize themselves with the video A-CR-CCP-177/PV-002, *Air Rifle Marksmanship*, and view the section on Description of the Rifle.

REFERENCES

A0-027 A-CR-CCP-177/PT-001 DCdts 3. (2001). *Canadian cadet movement: Cadet marksmanship programme reference manual*. Ottawa, ON: Department of National Defence.

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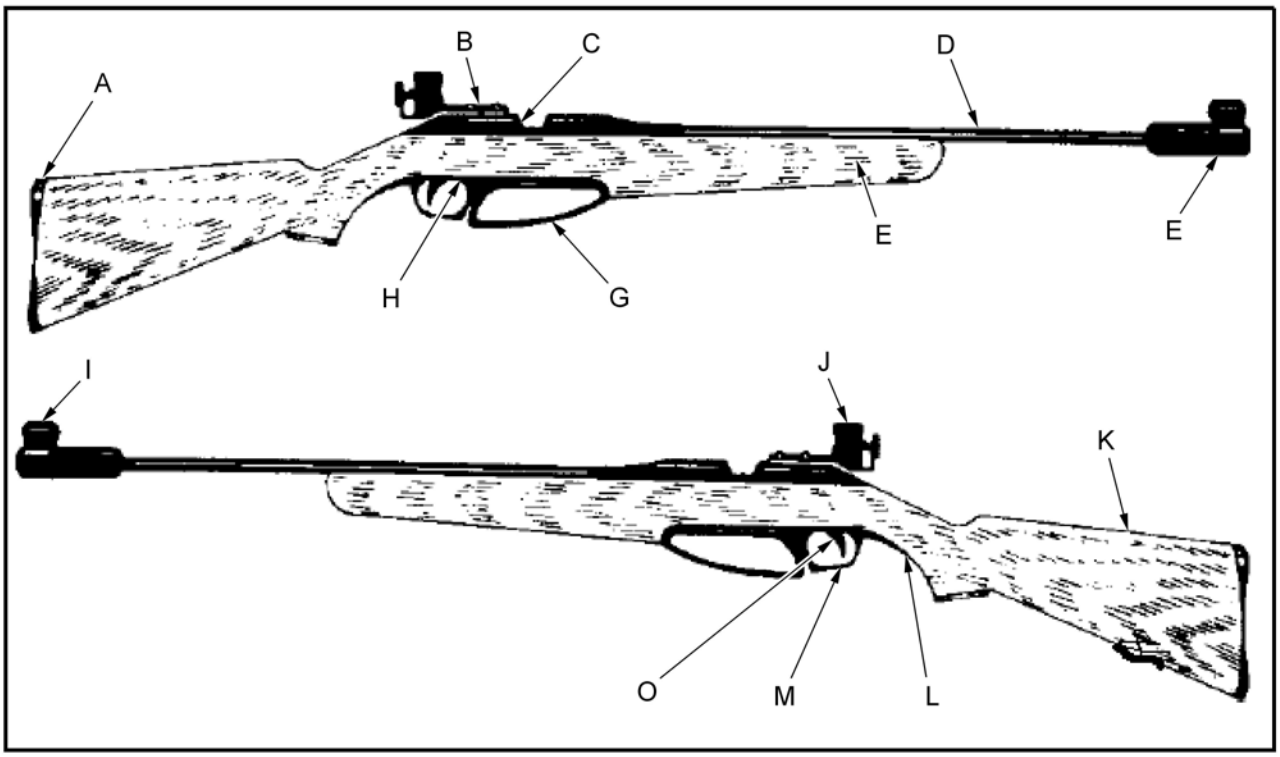
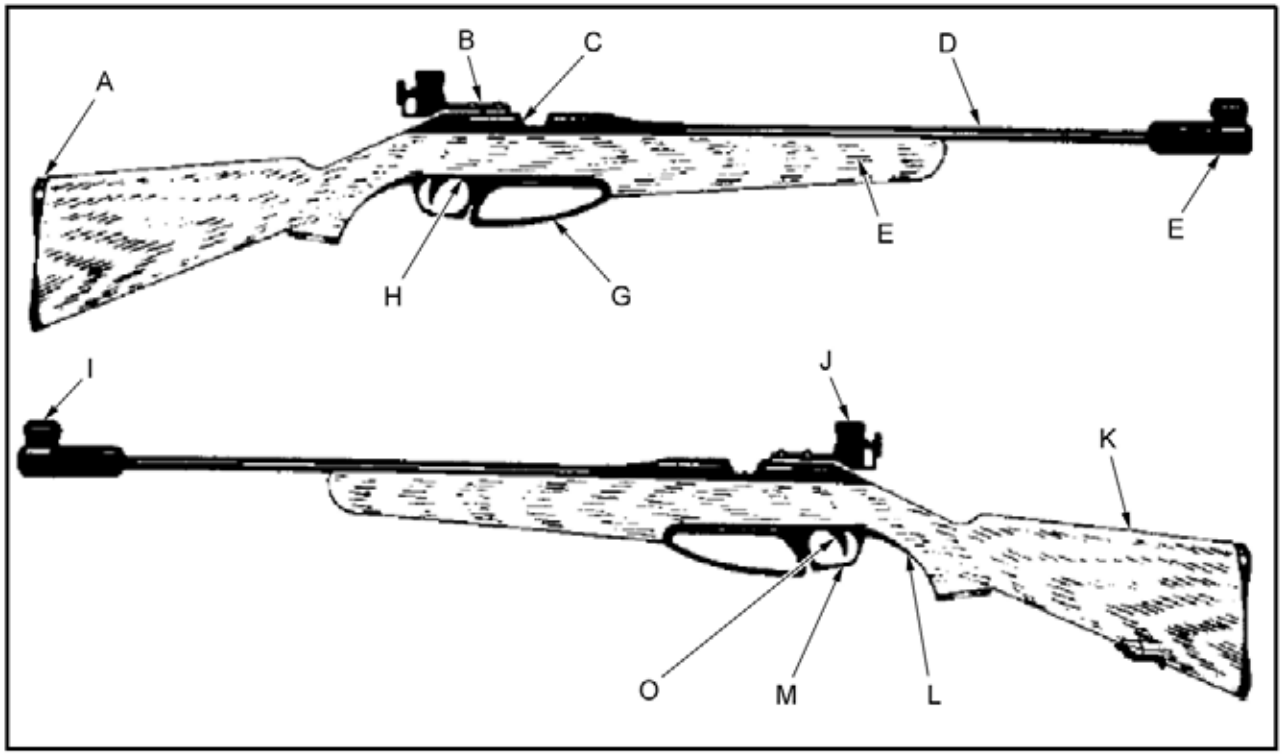
PARTS AND CHARACTERISTICS OF THE CADET AIR RIFLE



Put the letter next to the matching name of the part of the cadet air rifle.

1. Feed Track _____
2. Small of the Butt _____
3. Barrel _____
4. Fore End _____
5. Rear Sight _____
6. Trigger _____
7. Bolt _____
8. Safety Catch _____
9. Muzzle _____
10. Pump Lever _____
11. Front Sight _____
12. Trigger Guard _____
13. Butt Plate _____
14. Stock _____

ANSWER KEY
PARTS AND CHARACTERISTICS OF THE CADET AIR RIFLE



Put the letter next to the matching name of the part of the cadet air rifle.

1.	Feed Track	C
2.	Small of the Butt	L
3.	Barrel	D
4.	Fore End	F
5.	Rear Sight	J
6.	Trigger	O
7.	Bolt	B
8.	Safety Catch	H
9.	Muzzle	E
10.	Pump Lever	G
11.	Front Sight	I
12.	Trigger Guard	M
13.	Butt Plate	A
14.	Stock	K

COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 2

EO M106.02 – CARRY OUT SAFETY PRECAUTIONS ON THE CADET AIR RIFLE

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Carry out a safety precaution check on all rifles to be used during this lesson.

State to cadets that the rifles have been inspected and are safe to handle.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A demonstration and performance was chosen for TPs 1 and 2 as it allows the instructor to explain and demonstrate safety precautions on the cadet air rifle, while providing an opportunity for the cadets to practice under supervision

An interactive lecture was chosen for TP 3 to orient the cadets to the safety regulations of the Daisy 853C Air rifle and generate interest in the subject.

INTRODUCTION

REVIEW

The review for this lesson is from EO M106.01 (Identify the Parts and Characteristics of the Daisy 853C Air Rifle).

Have the cadets identify the characteristics of the Daisy 853C, to include:

- **Action.** Single pump pneumatic, straight pull-bolt.
- **Calibre.** 0.177 calibre (4.5 mm).
- **Safety.** Manual crossbolt trigger block with red indicator.

- **Loading.** Single or auto indexing five-shot clip.
- **Muzzle velocity.** 150.8 metres per second.

Have the cadets identify parts of the Daisy 853C by physically pointing to them and naming them, to include:

- butt plate,
- small of the butt (pistol grip),
- sling bracket (hand stop),
- trigger,
- trigger guard,
- safety catch,
- bolt,
- pump lever,
- muzzle,
- barrel with barrel weight, and
- feed track.

OBJECTIVES

By the end of this lesson the cadet shall have carried out safety precautions on the cadet air rifle.

IMPORTANCE

Safety precautions are essential to ensure everyone’s safety on the range. Every time a cadet picks up a rifle or steps on a range, they must have safety in mind and check to ensure the rifle is safe. An individual safety precaution check when receiving, handing over, or returning to a rifle. Even when a rifle is presumably safe, it is to be checked again.

Teaching Point 1 **Explain and demonstrate safe rifle status for the cadet air rifle.**

Time: 10 min Method: Demonstration and Performance

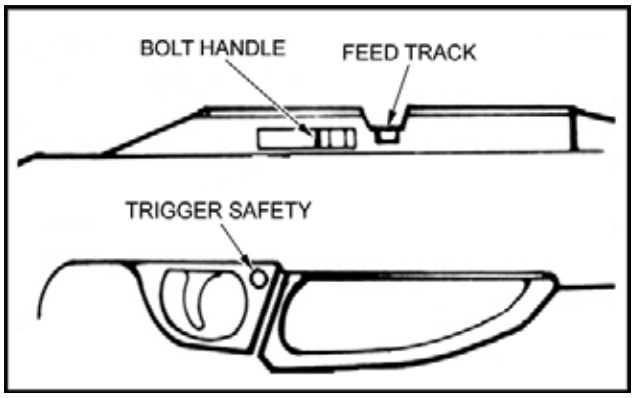
REMOVING A RIFLE FROM THE CASE

The rifle case should be clearly marked on the outside with an arrow, indicating in what direction the rifle inside is pointing. This will ensure that, when the case is opened, the rifle is pointing in a safe direction. The following steps must be followed when removing a rifle from its case:

1. Place the rifle case on a flat surface and ensure the arrow is pointing in a safe direction.
2. Open the case.
3. Cock the action (leave the bolt to the rear).
4. Confirm that the safety catch is ON.
5. Confirm that the pumping lever is partially open.
6. Slide the safety rod in the barrel towards the bolt until it can be seen in the feed track.
7. Remove the rifle from the case.
8. Remove the safety rod when you are on the firing line.

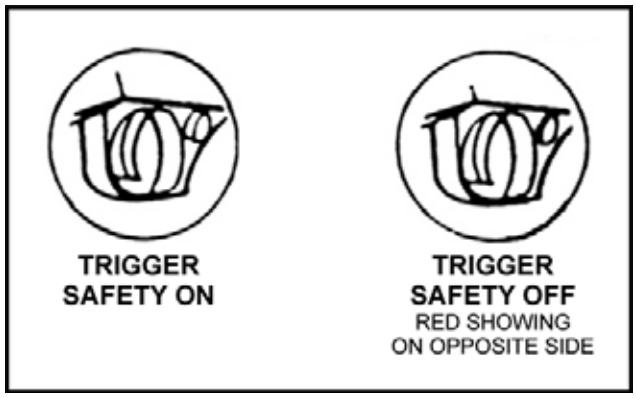
SAFETY CATCH AND SECURITY MEASURES

The safety catch is a mechanism that, once engaged, prevents a rifle from firing by locking its trigger into place. It is located just in front of the trigger, on the trigger guard. To engage the safety catch (ON) it must be pushed towards the right **so no red can be seen**. To fire, the safety catch must be pushed towards the left in the OFF position and a red mark must be seen on it. For maximum security, it is recommended that the safety catch be kept engaged until the rifle is ready for firing.



Daisy 853C Operational Manual

Figure 1 Safety Catch



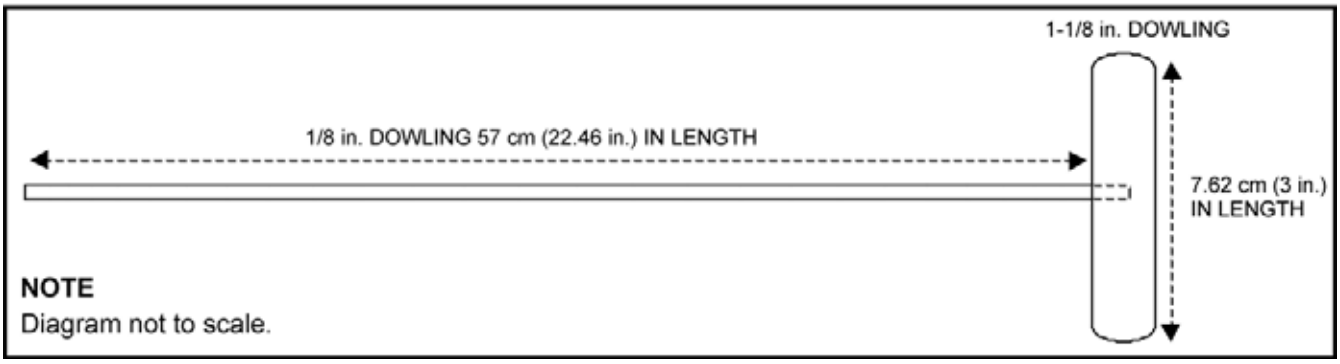
A-CR-CCP-177/PT-001

Figure 2 Safety Catch

SAFETY ROD

To ensure that air rifles are not removed from the firing point or stored with a pellet in the chamber or barrel, a safety rod is to be inserted in the barrel from the muzzle end. It consists of two (2) sections of doweling joined

together in a “T” shape, and may be made of varying materials. Dimensions are detailed in the diagram below. The tip of the safety rod is to be coloured red so that it is visible in the feed track with the bolt fully to the rear.



Cadet Marksmanship Program Reference Manual

Figure 3 Safety Rod

SAFE RIFLE STATUS

The instructor shall demonstrate and explain points 1, 2 and 3 of the safe rifle status checks using full demonstrations and explanations prior to each new skill, followed by a chance for the cadets to imitate the skill under supervision.

When not being handled on the range or in a training environment, the air rifle must be in a safe status. The following options denote various states of “safe rifle status”:

1. In the rifle case:
   - (a) Safety catch is ON.
   - (b) Bolt is forward.
   - (c) Action is not cocked.
   - (d) Safety rod is in the case but not in the barrel.
   - (e) Pump lever is partially open (5-8 cm).
2. On the firing line:
   - (a) Safety catch is ON.
   - (b) The bolt is to the rear.
   - (c) The pump lever is partially open.
3. Off the firing line:
   - (a) The safety catch is on.
   - (b) The bolt is to the rear.
   - (c) The safety rod is in the barrel (visible in the feed track).
   - (d) The pump lever is partially open.

CONFIRMATION OF TEACHING POINT 1

Have the cadets, under supervision, perform the steps for “Safe Rifle Status” for:

- On the firing line; and
- Off the firing line.

Teaching Point 2 **Explain, demonstrate, and have the cadets carry out individual safety precautions for the cadet air rifle.**

Time: 10 min Method: Demonstration and Performance

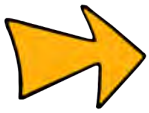
INDIVIDUAL SAFETY PRECAUTIONS

The instructor shall provide an EXPLANATION and DEMONSTRATION of the complete skill.

The instructor shall also provide an EXPLANATION and DEMONSTRATION of each step required to effectively complete the skill.

Upon receiving a rifle, or when the “safe rifle status” is uncertain, individual safety precautions shall be done to confirm that the rifle is safe. An individual must ensure that:

1. The bolt is open fully to the rear.
2. The safety catch is in the ON position.
3. The pump lever is left partially open.
4. A safety rod is placed in the barrel.



Cadets will IMITATE the demonstration provided by the instructor for each step within the skill. The instructor(s) will SUPERVISE the cadets during this imitation.

CONFIRMATION OF TEACHING POINT 2

Have cadets carry out individual safety precautions. Cadets will also be required to perform this skill during their air rifle handling test.

Teaching Point 3 **Explain and demonstrate (where applicable) safety regulations for the cadet air rifle.**

Time: 5 min Method: Interactive Lecture

SAFETY REGULATIONS

Safety regulations are all common sense and are easy to apply when people understand that they are necessary to help prevent accidents with the air rifle. Regulations include:

1. Treating the air rifle as if it is loaded.
2. Never pointing the air rifle at anyone.
3. Holding the rifle vertically when moving to and from the firing point.
4. Leaving fingers off the trigger until ready to fire.
5. Wearing safety glasses/goggles.
6. Employing hygiene on the range by washing hands after every practice.

The Canadian Firearms Centre safety training teaches that the vital four "**ACTS**" of firearm safety. The acronym "**ACTS**" stands for:

- **A**ssume every firearm is loaded.
- **C**ontrol the muzzle direction at all times.
- **T**rigger finger must be kept off the trigger and out of the trigger guard.
- **S**ee that the firearm is unloaded – prove it safe.

CONFIRMATION OF TEACHING POINT 3

QUESTIONS:

Q1. Why do we follow safety regulations?

Q2. What are some common sense safety regulations?

Q3. What does the acronym "**ACTS**" stand for?

ANTICIPATED ANSWERS:

A1. To help prevent accidents with the air rifle.

A2. Any from list taught:

(a) Treating the air rifle as if it is loaded.

(b) Never point the air rifle at anyone.

(c) Holding the rifle vertically when moving to and from the firing point.

(d) Leaving fingers off the trigger until ready to fire.

(e) Wearing safety glasses/goggles.

(f) Employing hygiene on the range by washing hands after every practice.

- **ACTS** stands for; **A**ssume every firearm is loaded, **C**ontrol the muzzle direction at all times, **T**rigger finger must be kept off the trigger and out of the trigger guard, **S**ee that the firearm is unloaded – prove it safe.

END OF LESSON CONFIRMATION

QUESTIONS:

Q1. What does the arrow on the rifle case indicate?

Q2. How do we know if the safety catch is ON?

Q3. What are the vital four “ACTS” of firearm safety?

ANTICIPATED ANSWERS:

A1. The direction of the rifle inside the case.

A2. No red can be seen.

A3. ACTS stands for; **A**ssume every firearm is loaded, **C**ontrol the muzzle direction at all times, **T**rigger finger must be kept off the trigger and out of the trigger guard, **S**ee that the firearm is unloaded – prove it safe.

CONCLUSION

HOMEWORK/READING/PRACTICE

Nil.

METHOD OF EVALUATION

Assessment of this EO will occur during EO M106.05 (Participate in Marksmanship Familiarization Using the Cadet Air Rifle), where cadets are required to successfully complete the Cadet Air Rifle Handling Test prior to firing.

CLOSING STATEMENT

Being able to carry out safety precautions on the cadet air rifle is essential for functioning safely on the range following directions given on the range, and successfully performing a handling test.

INSTRUCTOR NOTES/REMARKS

The instructor must ensure that the sequencing for the demonstration is done correctly since the cadet must mirror their actions.

The optimal ratio of air rifles to cadets is 2:1.

Instructors are encouraged to familiarize themselves with the video A-CR-CCP-177/PV-002, *Air Rifle Marksmanship*.

REFERENCES

A0-027 A-CR-CCP-177/PT-001 DCdts 3. (2001). *Canadian cadet movement: Cadet marksmanship programme reference manual*. Ottawa, ON: Department of National Defence.

COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 3

EO M106.03 – APPLY BASIC MARKSMANSHIP TECHNIQUES

Total Time: 60 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Prepare a mock air rifle range.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A demonstration and performance was chosen for this lesson as it allows the instructor to explain and demonstrate basic marksmanship techniques, while providing an opportunity for the cadets to practice under supervision.

INTRODUCTION

REVIEW

The review for this lesson is EO M106.02 (Carry Out Safety Precautions on the Cadet Air Rifle).

QUESTIONS:

Q1. Why are the individual safety precautions performed?

Q2. What is the purpose of the “safety catch”?

ANTICIPATED ANSWERS:

A1. To confirm a rifle is safe.

A2. It prevents a rifle from firing by locking its trigger into place.

OBJECTIVES

By the end of this lesson the cadet shall have applied basic marksmanship techniques.

IMPORTANCE

These techniques must all be applied in harmony. Improving one while not working on another will not produce the best results in the long run. Perfecting these techniques takes time and concentration. Cadets should remember – PRACTICE MAKES PERFECT!

Teaching Point 1 **Explain, demonstrate, and have the cadets adopt the prone position.**

Time: 5 min Method: Demonstration and Performance

The first principle of marksmanship is to find a comfortable firing position. A comfortable firing position will enable cadets to fire safely and with much better results. The prone position is the most stable firing position to use.

OBJECTIVES OF A GOOD POSITION

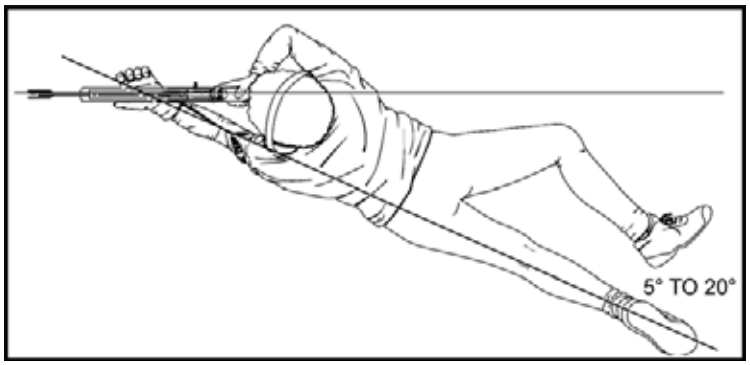
Have cadets down get on the mat and assume the prone position. From here, the instructor is better prepared to observe the cadets imitating the skills being taught.

The instructor shall provide an EXPLANATION and DEMONSTRATION of the complete skill.

The instructor shall also provide an EXPLANATION and DEMONSTRATION of each step required to effectively complete the skill.

Obtaining a good prone position is one of the most, if not the most, important principle of marksmanship. A good prone position helps to maintain comfort and stability during the firing session. The prone position is assumed when the marksman lies flat, directly behind the rifle, with a very slight angle between their body and the rifle, and in line with the target. The position should be:

- natural;
- without strain;
- comfortable; and
- stable, in that the:
    - body should form an angle with the line of sight;
    - spine should remain straight;
    - left leg should be parallel with the spine;
    - right foot should turn out and point to the right;
    - left foot should either be straight or point towards the right; and
    - right knee should form an angle with the left leg.



Cadet Marksmanship Program Reference Manual

Figure 1 Prone Position

Cadets will IMITATE the demonstration provided by the instructor for each step within the skill. The instructor(s) will SUPERVISE the cadets during this imitation.

CONFIRMATION OF TEACHING POINT 1

The instructor will divide the group into two, or, by the number of air rifles available. The instructor shall have one group imitate the actions of the sequence as demonstrated, while the remainder observe. Have them trade places, and repeat.

Teaching Point 2 **Explain, demonstrate, and have the cadets hold the cadet air rifle.**

Time: 5 min Method: Demonstration and Performance

HOLDING THE CADET AIR RIFLE

The instructor shall provide an EXPLANATION and DEMONSTRATION of the complete skill.

The instructor shall also provide an EXPLANATION and DEMONSTRATION of each step required to effectively complete the skill.

The prone position allows holding to be achieved with as little movement and muscular tension as possible, in that the:

- left elbow should be positioned slightly to the left of the rifle;
- left hand must rest firmly against the sling swivel, and the fingers should be relaxed and not grip the fore end;
- right hand should slightly grip the small of the butt with constant pressure;
- right thumb should be placed on the stock directly behind the rear sight or around the small of the butt;
- right elbow should rest naturally where it falls, not too close or too far from the rifle;

- the shoulders should be straight and form right angles with the spine;
- the butt plate is kept firmly in the hollow of the right shoulder. The right elbow will naturally fall in the same spot throughout the relay; and
- the head rests comfortably on the butt and remains straight.

Cadet Marksmanship Program Reference Manual

Figure 2 Prone Position (front)

Cadet Marksmanship Program Reference Manual

Figure 3 Prone Position (side)

Cadets will IMITATE the demonstration provided by the instructor for each step within the skill. The instructor(s) will SUPERVISE the cadets during this imitation.

CONFIRMATION OF TEACHING POINT 2

The Instructor will divide the group into two, or, by the number of air rifles available. The instructor shall have one group imitate the actions of the sequence as demonstrated, while the remainder observe, and then have them trade places, and repeat.

Teaching Point 3 **Explain, demonstrate, and have the cadets aim the cadet air rifle.**

Time: 5 min Method: Demonstration and Performance

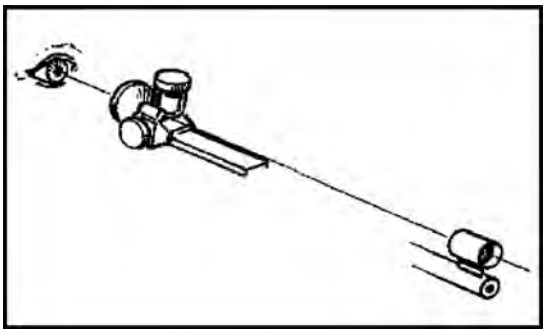
AIMING THE CADET AIR RIFLE

Cadets must constantly strive to maintain proper sight alignment, while obtaining a sight picture. It is the most critical element of the aiming process.

The **aiming process** consists of:

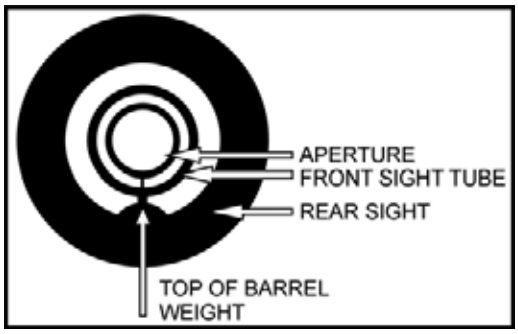
- adopting a comfortable position; and
- ensuring proper body alignment with the target.

Sight alignment - is the alignment of the eye, the rear sight, and the front sight. When cadets bring their eye 5 to 15 cm from the rear sight, they will find that the small hole is large enough to look through and see all of the front sight. Proper sight alignment is a matter of centering the front sight tube in the rear sight. The tube will not quite fill the rear sight and cadets will be able to see light around the outside of the tube; we call this a “line of white”.



Cadet Marksmanship Program Reference Manual

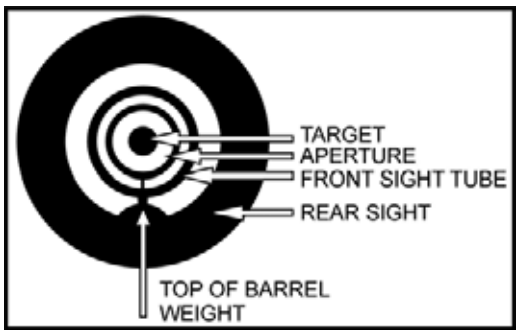
Figure 4 Sight Alignment Diagram



Cadet Marksmanship Program Reference Manual

Figure 5 Line of White

Sight picture - To obtain a proper sight picture, a bull's-eye is simply added to the innermost ring. The goal during the aiming process is to maintain proper sight alignment while keeping the bull centered in the front sight.



Cadet Marksmanship Program Reference Manual

Figure 6 Sight Picture

CONFIRMATION OF TEACHING POINT 3

QUESTIONS:

Q1. What are the two critical elements of the aiming process?

Q2. Sight alignment consists of what three things?

Q3. What is added to the innermost ring to obtain a proper sight picture?

ANTICIPATED ANSWERS:

A1. Adopting a comfortable position, and ensuring proper body alignment with the target.

A2. The eye, the rear sight, and the front sight.

A3. A bull's-eye.

The cadets' aiming abilities will be further assessed during future range practices. The instructor(s) will observe cadets during practices, and assess targets to confirm the skill of aiming.

Teaching Point 4 **Explain, demonstrate, and have the cadets (dry fire) practice the actions required on the command "Relay, load, commence firing" on the cadet air rifle.**

Time: 15 min Method: Demonstration and Performance

LOADING THE AIR RIFLE

The instructor shall provide an explanation and demonstration of the complete skill.

The instructor shall also provide an explanation and demonstration of each step required to effectively complete the skill.

Then, the cadets, under the supervision of the instructor, will have an opportunity to perform each step.

This will be conducted as a DRY FIRE EXERCISE ONLY.

On the command "Relay load" the following sequence must be followed:

Loading procedure:

1. pick up the rifle with the left hand;
2. ensure the safety catch is in the ON position;
3. pump the air rifle, pausing for three seconds with the pump handle fully extended;
4. bring the pump handle back to closed position;
5. simulate loading a pellet, or load an auto indexing five pellet-clip into the feed track; and
6. close the bolt.

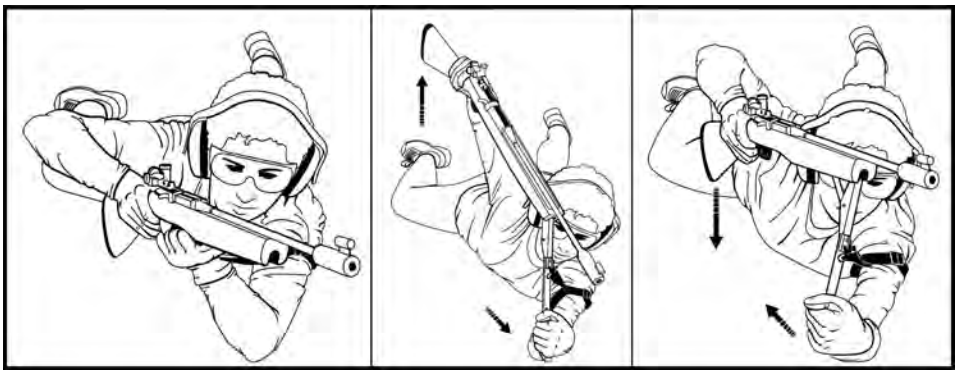
The following methods may be used when pumping the air rifle:

- **Option 1.** Grasp the pistol grip with the right hand. Grasp the pump handle with the left hand. Push downward with the left hand until the pump handle is fully extended. Wait for a few seconds. Using the left hand, bring the pump handle back to the stock of the rifle. The rifle should remain stationary during the pumping process and always point towards the targets.
- **Option 2.** Grasp the pistol grip with the right hand. Grasp the pump handle with the left hand. Place the butt of the rifle under the right arm or shoulder for support. Push downward with the left hand until the pump handle is fully extended. Wait for a few seconds. Using the left hand, bring the pump handle back to the stock of the rifle allowing the underarm and shoulder to help hold the rifle steady when closing the pump handle. Remember that the rifle must always point towards the targets.
- **Option 3. Coach assistance**. Point the rifle in a safe direction and request the assistance from a coach. The coach should move in and pump the rifle using both hands. This should be used as last resorts as any cadet can easily do the above two options.

FIRING THE CADET AIR RIFLE

On the command “Fire”, the following sequence must be followed:

1. when the RSO gives the command, place safety catch in the OFF position;
2. aim the air rifle at the target;
3. squeeze the trigger;
4. open the bolt, pump the rifle, re-load, aim and fire;
5. repeat the last step until firing is complete;
6. upon completion, place the safety catch in the ON position, open the bolt and partially open the pump lever; and
7. lay the air rifle down.



Cadet Marksmanship Program Reference Manual

Figure 7 Pumping the air rifle

The rifle should not be pumped more than once per shot. This air rifle is designed to withstand the pressure based on a single pump stroke.

CONFIRMATION OF TEACHING POINT 4

The instructor will divide the group into two, or into the number of air rifles available. The instructor shall have one group imitate the actions of the sequence as demonstrated, while the remainder observe. Have them trade places, and repeat.

Teaching Point 5 **Explain, demonstrate, and have the cadets practice the actions required on the command "Relay, unload and prepare for inspection" on the cadet air rifle.**

Time: 20 min Method: Demonstration and Performance

The instructor shall provide an explanation and demonstration of the complete skill.

The instructor shall also provide an explanation and demonstration of each step required to effectively complete the skill.

Then, the cadets, under the supervision of the instructor, will have an opportunity to perform each step.

This will be conducted as a DRY FIRE EXERCISE ONLY.

UNLOADING AND PREPARING FOR INSPECTION

Follow the unloading sequence of the cadet air rifle, to include:

1. pick up the air rifle;
2. remove the five pellet clip (if used);
3. pump the air rifle (hold for three seconds and close);
4. move the bolt forward (do not insert a pellet);
5. place the safety catch in the OFF position;
6. aim the rifle at the target;
7. squeeze the trigger;
8. open the bolt;
9. place the safety catch in the ON position;
10. open the pump lever 5-8 cm;
11. place the rifle on the shoulder, muzzle pointed down range;
12. wait to be cleared by the RSO; and
13. lay the rifle down.

CONFIRMATION OF TEACHING POINT 5

The instructor will divide the group into two, or into the number of air rifles available. The instructor shall have one group imitate the actions of the sequence as demonstrated, while the remainder observe. Have them trade places, and repeat.

END OF LESSON CONFIRMATION

The instructor will divide the group into two, or by the number of air rifles available. The instructor shall have one group imitate the actions of the sequence for all TPs as demonstrated, while the remainder observe, and then have them trade places, and repeat.

CONCLUSION

HOMEWORK/READING/PRACTICE

Nil.

METHOD OF EVALUATION

Assessment of this EO will occur during EO M106.05 (Participate in Marksmanship Familiarization Using the Cadet Air Rifle), where cadets are required to successfully complete the Cadet Air Rifle Handling Test prior to firing.

CLOSING STATEMENT

The first principle of Marksmanship is to find a comfortable firing position. A comfortable firing position will enable cadets to fire safely and with much better results. The prone position is the most stable firing position to use.

INSTRUCTOR NOTES/REMARKS

Instructors are encouraged to familiarize themselves with the video A-CR-CCP-177/PV-002, *Air Rifle Marksmanship*

REFERENCES

A0-027 A-CR-CCP-177/PT-001 DCdts 3. (2001). *Canadian cadet movement: Cadet marksmanship programme reference manual*. Ottawa, ON: Department of National Defence.

COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 4

EO M106.04 – FOLLOW RULES AND COMMANDS ON AN AIR RIFLE RANGE

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Prepare a mock air rifle range.

Photocopy one for each cadet Range Commands Cadets Must Follow located at Attachment A.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TP 1 to orient the cadets to the rules to be followed on a range and generate interest in the subject.

A demonstration and performance was chosen for TP 2 as it allows the instructor to explain and demonstrate responding to range commands, while providing an opportunity for the cadets to practice under supervision.

INTRODUCTION

REVIEW

The review for this lesson is EO M106.03 (Apply Basic Marksmanship Techniques).

QUESTIONS:

Q1. What two things do a good prone position help to maintain?

Q2. Sight alignment consists of what three steps?

Q3. What is added to the innermost ring to obtain a proper sight picture?

ANTICIPATED ANSWERS:

A1. Comfort and stability.

A2. The eye, the rear sight, and the front sight.

A3. A bull's-eye.

OBJECTIVES

By the end of this lesson the cadet shall have followed rules and commands on an air rifle range.

IMPORTANCE

Firearms safety is the number one priority on and off the range so everyone must do their part to prevent accidents. In marksmanship, the majority of incidents are caused by ignorance of proper rifle operating procedures or by mishandling.

Teaching Point 1 **Explain rules cadets must follow on the range.**

Time: 10 min Method: Interactive Lecture

RULES CADETS MUST FOLLOW ON THE RANGE

The instructor will read Local Range Standing Orders at the beginning this period.

Range Standing Orders are locally produced for each range. They detail rules to be followed on that range. General rules observed on all ranges include:

1. Rifles will be proved safe when picked up, handed to or received from another person;
2. Rifles are never pointed at any person;
3. Safety rods shall be inserted into the barrels of rifles when not in use on the range;
4. Horseplay is forbidden on the range;
5. Rifles, whether loaded or not, will always be pointed down range;
6. Eating is not permitted on or near the range or around the pellets;
7. All personnel shall read or be briefed on the contents of the Range Standing Orders; and
8. The RSO's directions and orders are to be obeyed at all times.

CONFIRMATION OF TEACHING POINT 1

QUESTION:

Q1. When should a rifle be proved safe?

Q2. When can rifles be pointed at other people?

Q3. When should the directions and orders of the RSO be followed?

ANTICIPATED ANSWERS:

A1. When picked up, handed to or received from another person.

A2. Rifles are never pointed at any person.

A3. The RSO's directions and orders are to be obeyed at all times.

Teaching Point 2 **Explain, demonstrate, and have the cadets practice (dry fire) responding to the following range commands.**

Time: 15 min Method: Demonstration and Performance

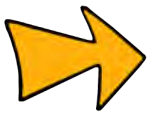
The instructor shall provide an EXPLANATION and DEMONSTRATION of each command and the associated action to be taken.

All loading/firing is to be simulated. No pellets are to be fired.

RANGE COMMANDS CADETS MUST FOLLOW:

COMMAND	ACTION
"Cover off your firing point"	Stand up, move behind the firing point and await further commands.
"Place your equipment down and stand back"	Lay the equipment down on the mat and stand back when finished.
"Adopt the prone position"	Adopt the prone position, pick up the rifle, ready the equipment and put on hearing (if applicable) and eye protection.
Type of firing	This command includes information about the range and type of firing. i.e., Relay #__, ten (10) metres, five (5) rounds, Grouping, On Your Own Time...
"Relay, load, commence firing"	Pick up the rifle with the left hand; Ensure the safety catch is in the ON position; Pump the rifle, pausing for three seconds with the pump handle fully extended; Bring the pump handle back to the closed position; Load the pellet; Close the bolt; Place the safety catch in the OFF position; Aim the rifle at the target. Squeeze the trigger; Open the bolt, pump the rifle, re-load, aim, and fire; Repeat the last step until firing is complete; Upon completion, place the safety catch in the ON position, open the bolt, and partially open the pump lever; and Lay down the rifle.
MAY BE GIVEN	

COMMAND	ACTION
"Relay, cease fire"	Stop firing immediately, put the safety catch in the ON position and lay the rifle down.
"Relay, resume fire"	Put the safety in the OFF position and continue the practice.
"Relay, unload and prepare for inspection"	Pick up the rifle; Remove the five (5) pellet clip if used; Pump the rifle (hold for three seconds and close); Move the bolt forward; Place the safety catch in the OFF position; Aim rifle at target; Pull the trigger; Open the bolt; Place safety catch in the ON position; Open the pump lever 5-8 cm; Place the rifle on the shoulder, muzzle pointed down range; Wait to be cleared by the RSO; Lay the rifle down; and Remove your hearing (if applicable) and eye protection.
"Relay, stand up"	Stand up and leave the equipment on the ground.
"Change targets"	Move forward, walk down the lane to remove old targets and replace them with new ones. Return to the firing point.
"Change relays"	Cadets who have just fired pick up their personal equipment and move off the firing point. The new relay covers off behind the firing point.



Cadets will IMITATE the demonstration provided by the instructor for each step within the process. The instructor(s) will SUPERVISE the cadets during this imitation.

The information in this TP is amplified in Attachment A to this IG, and should be reviewed prior to any cadet participating in a marksmanship practice.

CONFIRMATION OF TEACHING POINT 2

Confirmation of this TP shall be accomplished through observation during the above imitation and supervision phases.

END OF LESSON CONFIRMATION

QUESTIONS:

Q1. When is horseplay allowed on the range?

Q2. The contents of the Range Standing Orders shall be read to whom?

Q3. What direction must rifles be pointed while on the range?

ANTICIPATED ANSWERS:

A1. Never, it is forbidden.

A2. Everyone.

A3. Down range at all times.

CONCLUSION

HOMEWORK/READING/PRACTICE

Review the handout Range Commands Cadets Must Follow prior to all future marksmanship activities.

METHOD OF EVALUATION

Assessment of this EO will occur during EO M106.05 (Participate in Marksmanship Familiarization Using the Cadet Air Rifle), where cadets are required to successfully complete the Cadet Air Rifle Handling Test prior to firing.

CLOSING STATEMENT

Firearms safety is the number one priority on and off the range, so everyone must do their part to prevent accidents. In marksmanship, the majority of incidents are caused by either ignorance of proper rifle operating procedures, or by mishandling.

INSTRUCTOR NOTES/REMARKS

Instructors are encouraged to familiarize themselves with the video A-CR-CCP-177/PV-002, *Air Rifle Marksmanship*.

REFERENCES

A0-027 A-CR-CCP-177/PT-001 DCdts 3. (2001). *Canadian cadet movement: Cadet marksmanship programme reference manual*. Ottawa, ON: Department of National Defence.

RANGE COMMANDS CADETS MUST FOLLOW:

COMMAND	ACTION
"Cover off your firing point"	Stand up, move behind the firing point and await further commands.
"Place your equipment down and stand back"	Lay the equipment down on the mat and stand back when finished.
"Adopt the prone position"	Adopt the prone position, pick up the rifle, ready the equipment and put on hearing (if applicable) and eye protection.
Type of firing	This command includes information about the range and type of firing. i.e., Relay #__, ten (10) metres, five (5) rounds, Grouping, On Your Own Time...
"Relay, load, commence firing"	Pick up the rifle with the left hand; Ensure the safety catch is in the ON position; Pump the rifle, pausing for three seconds with the pump handle fully extended; Bring the pump handle back to the closed position; Load the pellet; Close the bolt; Place the safety catch in the OFF position; Aim the rifle at the target. Squeeze the trigger; Open the bolt, pump the rifle, re-load, aim, and fire; Repeat the last step until firing is complete; Upon completion, place the safety catch in the ON position, open the bolt, and partially open the pump lever; and Lay down the rifle.
MAY BE GIVEN	
"Relay, cease fire"	Stop firing immediately, put the safety catch in the ON position and lay the rifle down.
"Relay, resume fire"	Put the safety in the OFF position and continue the practice.

COMMAND	ACTION
"Relay, unload and prepare for inspection"	Pick up the rifle; Remove the five (5) pellet clip if used; Pump the rifle (hold for three seconds and close); Move the bolt forward; Place the safety catch in the OFF position; Aim rifle at target; Pull the trigger; Open the bolt; Place safety catch in the ON position; Open the pump lever 5-8 cm; Place the rifle on the shoulder, muzzle pointed down range; Wait to be cleared by the RSO; Lay the rifle down; and Remove your hearing (if applicable) and eye protection.
"Relay, stand up"	Stand up and leave the equipment on the ground.
"Change targets"	Move forward, walk down the lane to remove old targets and replace them with new ones. Return to the firing point.
"Change relays"	Cadets who have just fired pick up their personal equipment and move off the firing point. The new relay covers off behind the firing point.

COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 5

EO M106.05 – PARTICIPATE IN MARKSMANSHIP FAMILIARIZATION USING THE CADET AIR RIFLE

Total Time: 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content, range standing orders, and become familiar with the material prior to delivering the lesson.

Construct a range IAW A-CR-CCP-177/PT-001, *Canadian Cadet Movement: Cadet Marksmanship Program Reference Manual*.

Photocopy the Cadet Air Rifle Handling Test for each cadet.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A practical activity was chosen for this lesson as it is an interactive way to allow the cadet to experience marksmanship familiarization in a safe and controlled environment. This activity contributes to the development of marksmanship skills and knowledge in a fun and challenging setting.

INTRODUCTION

REVIEW

The review for this lesson will be from EO M106.02 (Carry Out Safety Precautions on the Cadet Air Rifle).

QUESTIONS:

Q1. Why do we follow safety regulations?

Q2. How would you verify the safety catch is ON?

Q3. What are the four “ACTS” of firearm safety?

ANTICIPATED ANSWERS:

A1. We follow safety regulations to prevent accidents with the cadet air rifle.

A2. When the safety is ON, no red can be seen.

A3. The mnemonic “ACTS” stands for:

- Assume every firearm is loaded.
- Control the muzzle direction at all times.
- Trigger finger must be kept off the trigger and out of the trigger guard.
- See that the firearm is unloaded (prove it safe).

OBJECTIVES

By the end of this lesson the cadet shall have participated in marksmanship familiarization using the cadet air rifle.

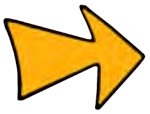
IMPORTANCE

It is important for cadets to participate in a marksmanship familiarization activity because it allows them to experience marksmanship in a fun, dynamic and safe setting.

Teaching Point 1 **Supervise the cadets' participation in marksmanship familiarization.**

Time: 10 min Method: Practical Activity

A range briefing is conducted to pass on vital information and answer any questions the cadets may have prior to participating in a marksmanship activity. The range briefing is required to ensure the safe execution of a marksmanship activity.



The range safety briefing is normally conducted by a Range Safety Officer (RSO), as the safety of the range is their responsibility.

CONDUCT A RANGE BRIEFING

The following elements may be included in a range briefing. They would be adjusted based on the requirements of the activity.

1. Welcome and staff introduction.
2. An overview of the range layout. Description of the out of bounds / danger areas, location of range facilities, location of concurrent activities, as well as routes of access.
3. The general safety rules.
4. An explanation of the activity and course of fire: Type of activity /Training conducted, the distance, the targets being used, the indication (number of rounds and how they will be fired), and the scoring.
5. The equipment being used, eg rifles, ammunition, safety equipment.
6. The safety precautions: individual safety precautions, rifle safety principles, and safe rifle status.
7. The range commands that will be heard during the activity.
8. The cease fire command: When to use it, who can call it, and action upon hearing a cease fire.
9. Immediate actions (IAs) and stoppages: The types of stoppages that may occur and the immediate actions that must be taken.
10. Personal hygiene, eg washing hands after handling ammunition or rifles.
11. First aid and emergencies: Location of first aid point, identification of first aider, action in the event of an emergency, emergency routes of access, emergency response plan.
12. Assignment of relays: Number of relays, assignment of relay, and timing of relay.
13. Concurrent activities: Type, timing, supervisory staff / OPI.
14. Additional items, eg ensuring handling tests have been completed, timing for the activity (when the activity will begin), declaration requirements, breaks, messing / meals / snacks, set up and dismantling of the range.
15. Opportunity for cadets to ask questions.

CONDUCT THE AIR RIFLE HANDLING TEST

As per instructions in the Qualification Standard Plan, Chapter 3, Annex C, conduct the Air Rifle Handling Test.

Each cadet must complete the Air Rifle Handling Test prior to firing pellets or felt cleaning pellets on a range.

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets participate in marksmanship familiarization.

RESOURCES

- Cadet air rifle (one per firing lane),
- Air rifle pellets (as per activity chosen),
- Target frames (one per firing lane),
- Targets (as per activity chosen),
- Marksmanship mats (one per firing lane),
- Scoring template,
- .177- / .22-scoring magnifier (scoring magnifier),
- Scoring plug,
- Safety glasses / goggles (one per firing lane and for range staff), and
- Pen / pencil.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

Once the range briefing has been conducted, and cadets have successfully completed the cadet air rifle handling test, supervise the cadets' participation in a marksmanship familiarization activity.

SAFETY

Range activities will be conducted IAW A-CR-CCP-177/PT-001, *Canadian Cadet Movement: Cadet Marksmanship Program Reference Manual*.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in the activity will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the marksmanship activity will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Marksmanship is a fun and exciting activity that requires personal discipline and teamwork skills. This activity has also developed into highly competitive levels at the provincial, regional, and national levels.

INSTRUCTOR NOTES / REMARKS

Hand-washing stations must be available for cleanup after the activity is completed.

REFERENCES

A0-027 A-CR-CCP-177/PT-001 Director Cadets 3. (2005). *Canadian cadet movement: Cadet marksmanship program reference manual*. Ottawa, ON: Department of National Defence.

A0-041 CATO 14-41 Director Cadets 4. (2007). *Marksmanship, rifles and ammunition*. Ottawa ON: Department of National Defence.

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COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 6

EO C106.01 – PARTICIPATE IN A RECREATIONAL MARKSMANSHIP ACTIVITY

Total Time: 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content, range standing orders, and become familiar with the material prior to delivering the lesson.

Photocopy the targets located at Attachments B–R as required.

Construct a range IAW A-CR-CCP-177/PT-001, *Canadian Cadet Movement: Cadet Marksmanship Program Reference Manual*.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A practical activity was chosen for this lesson as it is an interactive way to allow the cadet to experience recreational marksmanship in a safe and controlled environment. This activity contributes to the development of marksmanship skills and knowledge in a fun and challenging setting.

INTRODUCTION

REVIEW

The review for this lesson consists in the procedures evaluated as part of the Air Rifle Handling Test.

OBJECTIVES

By the end of this lesson the cadet shall have participated in a recreational marksmanship activity.

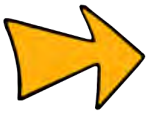
IMPORTANCE

It is important for cadets to participate in a recreational marksmanship activity because it allows them to experience marksmanship in a fun, dynamic and safe setting.

Teaching Point 1 **Supervise the cadet's participation in a recreational marksmanship activity.**

Time: 80 min Method: Practical Activity

A range briefing is conducted to pass on vital information and answer any questions the cadets may have prior to participating in a marksmanship activity. The range briefing is required to ensure the safe execution of a marksmanship activity.



The range safety briefing is normally conducted by a Range Safety Officer (RSO), as the safety of the range is their responsibility.

CONDUCT A RANGE BRIEFING

The following elements may be included in a range briefing. They would be adjusted based on the requirements of the activity.

1. Welcome and staff introduction.
2. An overview of the range layout. Description of the out of bounds / danger areas, location of range facilities, location of concurrent activities, as well as routes of access.
3. The general safety rules.
4. An explanation of the activity and course of fire: Type of activity /Training conducted, the distance, the targets being used, the indication (number of rounds and how they will be fired), and the scoring.
5. The equipment being used, eg rifles, ammunition, safety equipment.
6. The safety precautions: individual safety precautions, rifle safety principles, and safe rifle status.
7. The range commands that will be heard during the activity.
8. The cease fire command: When to use it, who can call it, and action upon hearing a cease fire.
9. Immediate actions (IAs) and stoppages: The types of stoppages that may occur and the immediate actions that must be taken.
10. Personal hygiene, eg washing hands after handling ammunition or rifles.
11. First aid and emergencies: Location of first aid point, identification of first aider, action in the event of an emergency, emergency routes of access, emergency response plan.
12. Assignment of relays: Number of relays, assignment of relay, and timing of relay.
13. Concurrent activities: Type, timing, supervisory staff / OPI.
14. Additional items, eg ensuring handling tests have been completed, timing for the activity (when the activity will begin), declaration requirements, breaks, messing / meals / snacks, set up and dismantling of the range.
15. Opportunity for cadets to ask questions.

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets participate in a recreational marksmanship activity.

RESOURCES

- Cadet air rifle (one per firing lane),
- Cadet air rifle sling (one per firing lane),
- Air rifle pellets (as per activity chosen),
- Target frames (one per firing lane),
- Targets (as per activity chosen),
- Marksmanship mats (one per firing lane),
- Safety glasses / goggles (one per person in the room),
- .177- / .22-scoring magnifier (scoring magnifier),
- Scoring plug,
- Scoring template,
- Stopwatch, and
- Pen / pencil.

Additional resources required for specific marksmanship activities may be found in the Attachments.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

Ensure all cadets have completed the Air Rifle Handling Test prior to the conduct of this activity. Cadets who have not completed the Air Rifle Handling Test must do so prior to firing on the range.

1. Brief cadets on the safety rules or any other guidelines pertaining to the activity.
2. Divide the cadets into relays according to the number of firing lanes.
3. Conduct a recreational marksmanship activity, choosing from the following categories:
   (a) classification,
   (b) fun activities,

(c) timed activities, or

(d) competitive team / individual activities.

SAFETY

Range activities will be conducted IAW A-CR-CCP-177/PT-001, *Canadian Cadet Movement: Cadet Marksmanship Program Reference Manual*.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in the activity will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the recreational marksmanship activity will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Marksmanship is a fun and exciting activity that requires personal discipline and teamwork skills. This activity has also developed into highly competitive levels at the zone, regional, and national levels.

INSTRUCTOR NOTES / REMARKS

Hand-washing stations must be available for cleanup after the activity is completed.

REFERENCES

A0-027 A-CR-CCP-177/PT-001 Director Cadets 3. (2005). *Canadian cadet movement: Cadet marksmanship program reference manual*. Ottawa, ON: Department of National Defence.

A0-041 CATO 14-41 Director Cadets 4. (2007). *Marksmanship, rifles and ammunition*. Ottawa ON: Department of National Defence.

RECREATIONAL MARKSMANSHIP ACTIVITIES

CLASSIFICATION

- Classification (Attachment B)

FUN ACTIVITIES

- Pyramid (Attachment C)
- Beach Ball (Attachment D)
- Balloons (Attachment E)
- Rack'em Up (Attachment F)
- Lights Out (Attachment G)
- Save the Day (Attachment H)
- Flower Pot (Attachment I)

TIMED ACTIVITIES

- Chase the Dots (Attachment J)
- Speed Grid (Attachment K)
- Beat the Clock (Attachment L)
- Dartboard (Attachment M)
- Cut the Fuses (Attachment N)
- Shoo-Fly (Attachment O)
- Good Break (Attachment P)

COMPETITIVE TEAM / INDIVIDUAL ACTIVITIES

- Simulated Stage 1 Championship (Attachment Q)
- Simulated Stage 2 Championship (Attachment R)

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CLASSIFICATION

CLASSIFICATION ACTIVITY

Objective: To provide cadets the opportunity to obtain marksmanship classifications.

Scoring: The standard for the classification levels are:

1. Marksman: Two five-round groupings within a circle of 3 cm in diameter.
2. First Class Marksman: Two five-round groupings within a circle of 2.5 cm in diameter.
3. Expert Marksman: Two five-round groupings within a circle of 2 cm in diameter.
4. Distinguished Marksman: Two five-round groupings within a circle of 1.5 cm in diameter.

Equipment Required:

- Air rifle marksmanship equipment,
- Cadet air rifle,
- Air rifle pellets (10 per participant),
- CCT2000GRTD Canadian Cadet Movement Air Rifle Grouping Target (two per cadet),
- Air Rifle Grouping Template from A-CR-CCP-177/PT-001 (p. B1-1),
- Target frame, and
- Stopwatch.

Optional aids to firing are limited to the following:

- Cadet air rifle sling,
- Marksmanship jacket,
- Marksmanship glove, and
- Hat.

Activity Instructions:

1. Brief the cadets on the activity being conducted including any safety rules or other guidelines pertaining to the activity.
2. Distribute two targets to each cadet.
3. Have the cadets write their name and date on the targets and attach them to the target frame.
4. Give each cadet in the relay 10 pellets to fire 5 into the centre of each target.
5. Have the cadets fire, in relays, following the commands given by the RSO.
6. Give the cadets 15 minutes to complete firing.
7. Have the cadets retrieve their targets.
8. Score the targets using the Air Rifle Grouping Template.
9. Record the scores and allow the cadets to keep their targets.

The following are prohibited:

- Cross firing,
- Alterations, other than those permitted in A-CR-CCP-177/PT-001 Part 4, Section 4, Para 5.3,
- A pellet-loading clip,
- Supports used as a rest for the rifle or the forearm,
- A spotting scope,
- Use of sights not provided with the cadet air rifle, and
- Coaching.

PYRAMID

Objective: To fire pellets into each point on the pyramid.

Scoring: Score the targets awarding:

a. three points for each corner hit on the pyramid,
b. two points for each hit within one block of a corner,
c. one point for each hit within two blocks of a corner.

Equipment Required:

- Air rifle marksmanship equipment,
- Cadet air rifle,
- Air rifle pellets (6 per participant),
- Pyramid Target (one per participant),
- Target frame, and
- Stopwatch.

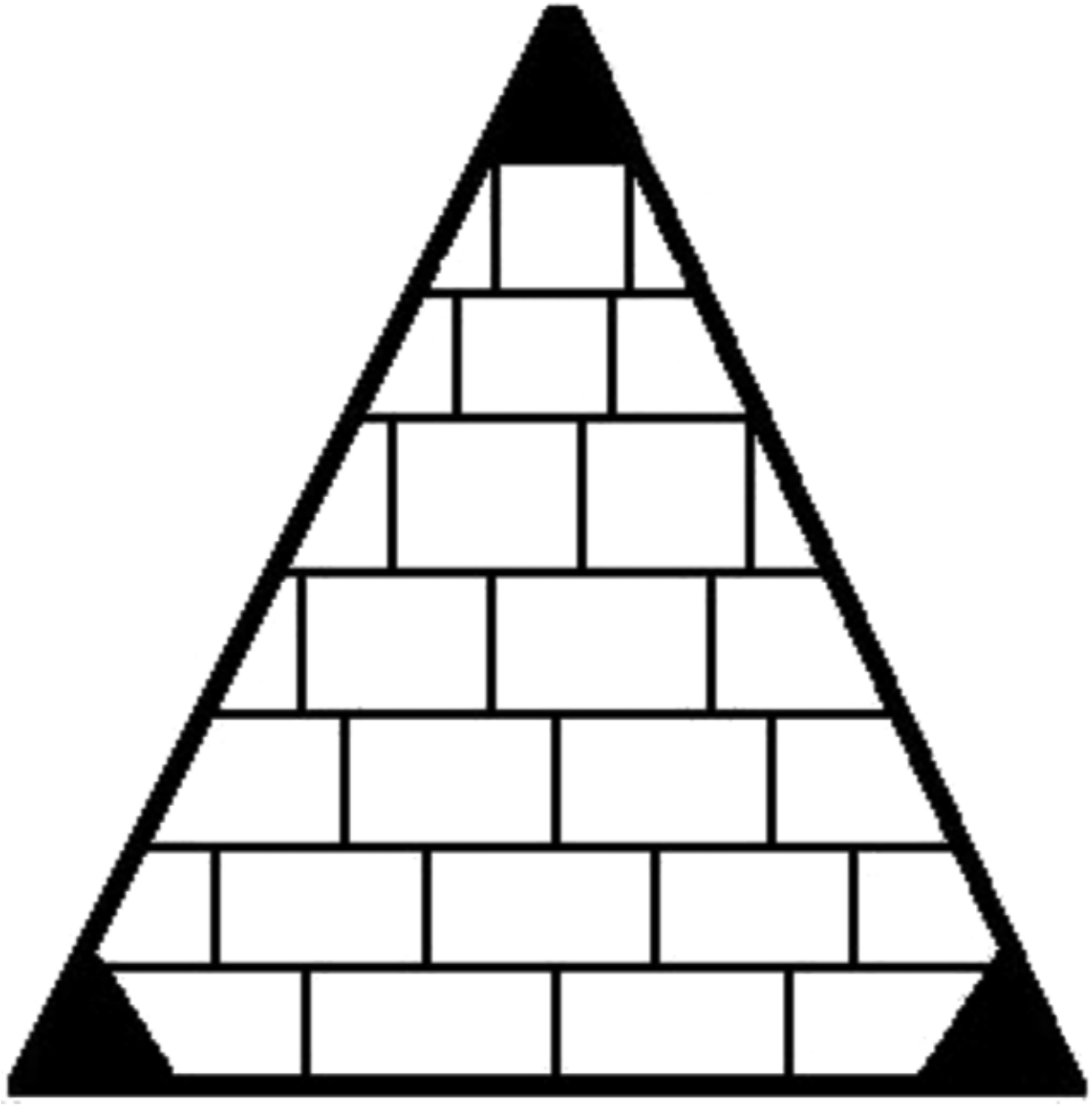
Activity Instructions:

1. Brief the cadets on the activity being conducted including any safety rules or other guidelines pertaining to the activity.
2. Distribute a target to each cadet.
3. Have the cadets write their name and date on the target and attach it to the target frame.
4. Give each cadet in the relay six pellets to fire, two pellets into each corner of the pyramid.
5. Have the cadets fire, in relays, following the commands given by the RSO.
6. Give the cadets three minutes to complete firing.
7. Have the cadets retrieve their targets.
8. Score the targets awarding:
   (a) three points for each corner hit on the pyramid,
   (b) two points for each hit within one block of a corner,
   (c) one point for each hit within two blocks of a corner.
9. Allow the cadets to review and keep their targets.

The following are prohibited:

- Alterations, other than those permitted in A-CR-CCP-177/PT-001 Part 4, Section 4, Para 5.3,
- A pellet-loading clip,
- Supports used as a rest for the rifle or the forearm,
- A spotting scope, and
- Use of sights not provided with the cadet air rifle.

PYRAMID TARGET



Name: _____ Date: _____

Witness: _____ Score: _____

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BEACH BALL

Objective: To fire 10 pellets into the black circle on the beach ball.

Scoring: One point is awarded for each successful hit in the black circle.

Equipment Required:

- Air rifle marksmanship equipment,
- Cadet air rifle,
- Air rifle pellets (10 per participant),
- Beach Ball Target (one per participant),
- Target frame, and
- Stopwatch.

Activity Instructions

1. Brief the cadets on the activity being conducted including any safety rules or other guidelines pertaining to the activity.
2. Distribute a target to each cadet.
3. Have the cadets write their name and date on the target and attach it to the target frame.
4. Give the cadets 10 pellets to fire into the black circle of the beach ball.
5. Have the cadets fire, in relays, following the commands given by the RSO.
6. Give the cadets 10 minutes to complete firing.
7. Have the cadets retrieve their targets.
8. Score the targets awarding one point for each pellet hit within the black circle.
9. Allow the cadets to review and keep their targets.

The following are prohibited:

- Cross firing,
- Alterations, other than those permitted in A-CR-CCP-177/PT-001 Part 4, Section 4, Para 5.3,
- A pellet-loading clip,
- Supports used as a rest for the rifle or the forearm,
- A spotting scope, and
- Use of sights not provided with the cadet air rifle.

BEACH BALL TARGET

Name: _____ Date: _____

Witness: _____ Score: _____

BALLOONS

Objective: To fire pellets into balloons on the target.

Scoring: One point is awarded for each balloon hit by a pellet.

Equipment Required:

- Air rifle marksmanship equipment,
- Cadet air rifle,
- Air rifle pellets (20 per participant),
- Balloon Target (one per participant),
- Target frame, and
- Stopwatch.

Activity Instructions:

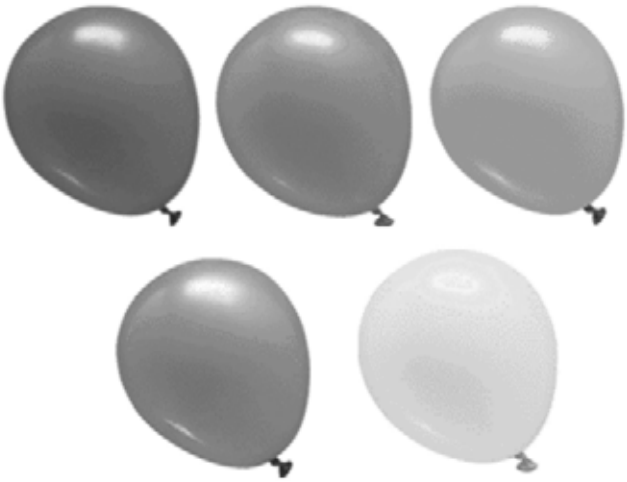
1. Brief the cadets on the activity being conducted including any safety rules or other guidelines pertaining to the activity.
2. Distribute a target to each cadet.
3. Have the cadets write their name and date on the target and attach it to the target frame.
4. Give each cadet in the relay 20 pellets to fire, one pellet into each balloon.
5. Have the cadets fire, in relays, following the commands given by the RSO.
6. Give the cadets 15 minutes to complete firing.
7. Have the cadets retrieve their targets.
8. Score the targets awarding one point for each balloon hit.
9. Allow the cadets to review and keep their targets.

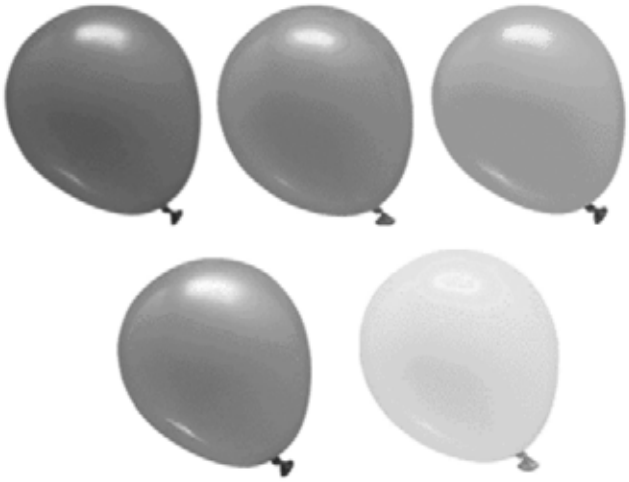
The following are prohibited:

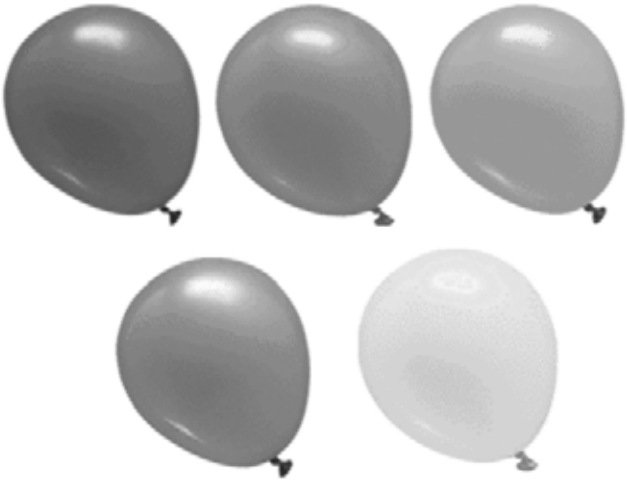
- Cross firing,
- Alterations, other than those permitted in A-CR-CCP-177/PT-001 Part 4, Section 4, Para 5.3,
- A pellet-loading clip,
- Supports used as a rest for the rifle or the forearm,
- A spotting scope, and
- Use of sights not provided with the cadet air rifle.

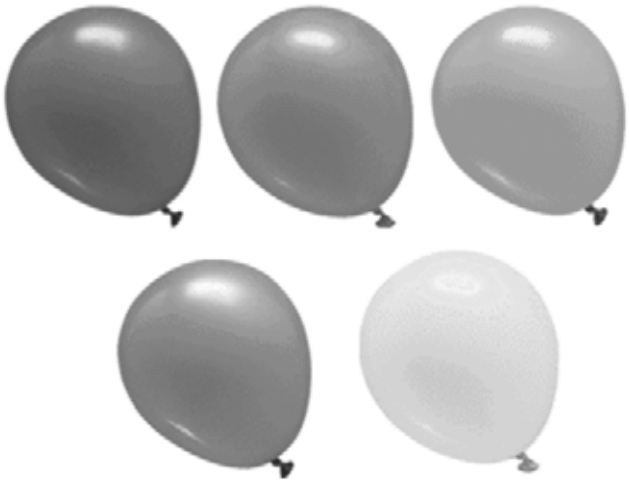
Note: Actual balloons may be used in place of the paper targets.

BALLOON TARGET









Name: _____ Date: _____

Witness: _____ Score: _____

RACK'EM UP

Objective: The cadets will be given 15 pellets and 15 minutes to fire a 1 pellet at the centre of each billiard ball.

Scoring: Targets will be scored by totalling the value for each billiard ball where the centre circle has a pellet hole located in it. Value for each ball is found on the billiard ball score sheet.

Equipment Required:

- Air rifle marksmanship equipment,
- Cadet air rifle,
- Air rifle pellets (15 per participant),
- Rack'em up Target (one per participant),
- Rack'em up scoresheet,
- Target frame, and
- Stopwatch.

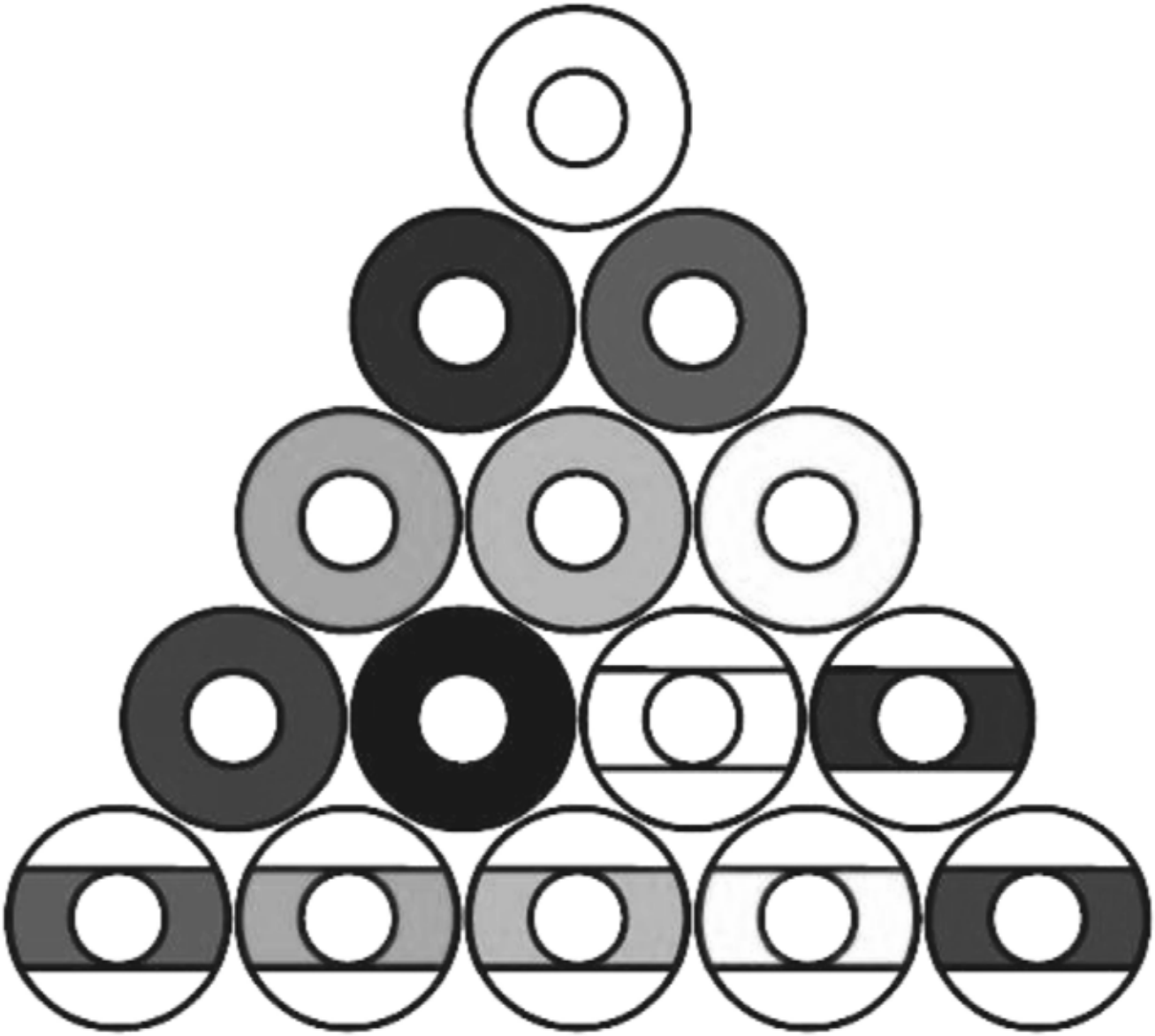
Activity Instructions:

1. Brief the cadets on the activity being conducted including any safety rules or other guidelines pertaining to the activity.
2. Distribute a target to each cadet.
3. Have the cadets write their name and date on the target and attach it to the target frame.
4. Give each cadet in the relay 15 pellets to fire, one pellet into each billiard ball.
5. Have the cadets fire, in relays, following the commands given by the RSO.
6. Give the cadets 15 minutes to complete firing.
7. Have the cadets retrieve their targets.
8. Score the targets awarding one point for each balloon hit.
9. Allow the cadets to review and keep their targets.

The following are prohibited:

- Cross firing,
- Alterations, other than those permitted in A-CR-CCP-177/PT-001 Part 4, Section 4, Para 5.3,
- A pellet-loading clip,
- Supports used as a rest for the rifle or the forearm,
- A spotting scope, and
- Use of sights not provided with the cadet air rifle.

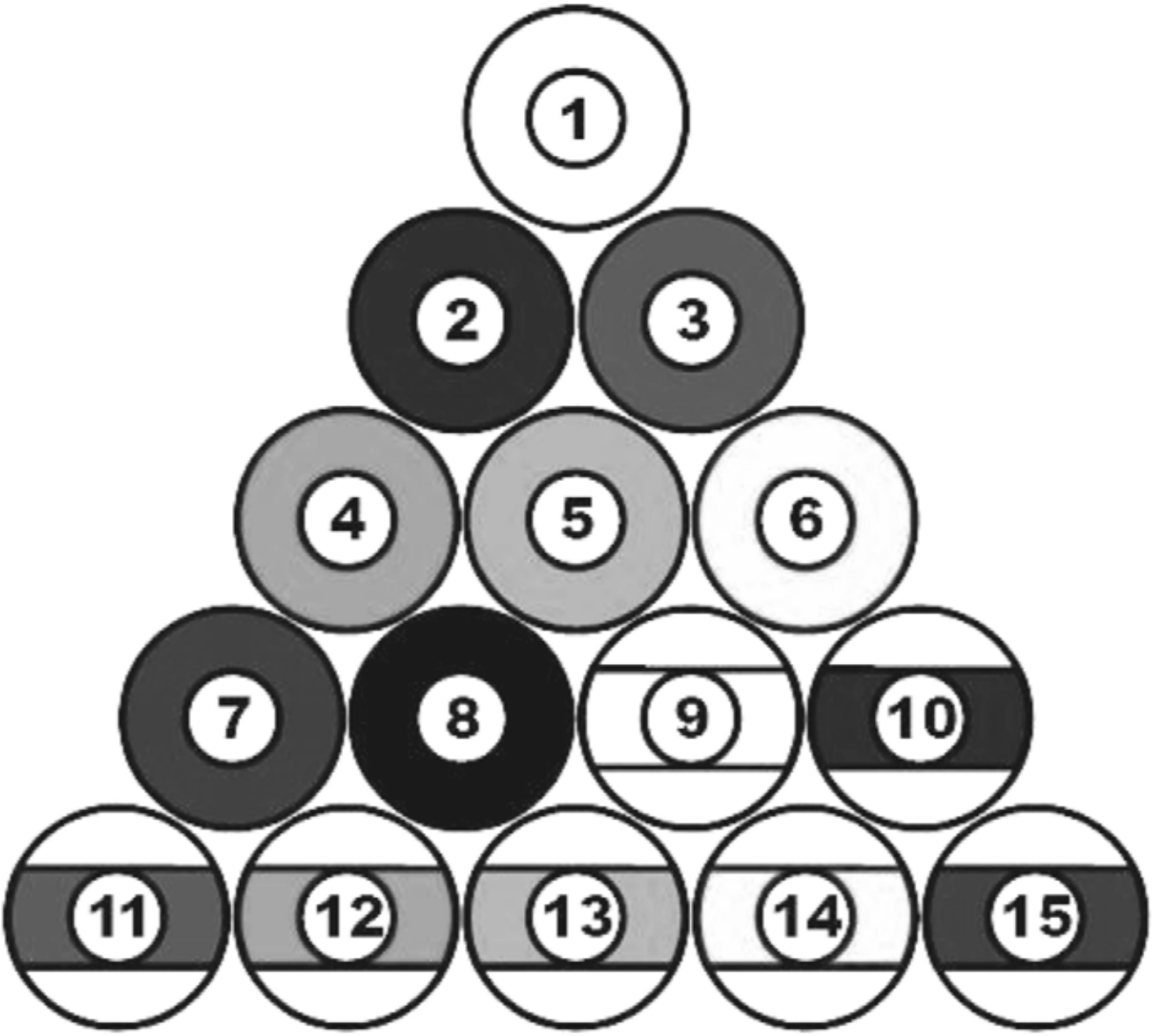
RACK'EM UP TARGET



Name: Date:

Witness: Score:

RACK'EM UP SCORESHEET



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LIGHTS OUT

Objective: The cadets will be given 10 pellets and 15 minutes to break all 6 light bulbs.

Scoring: One point is awarded for each broken bulb and two points for each broken filament. No points will be awarded for the screw base.

Equipment Required:

- Air rifle marksmanship equipment,
- Cadet air rifle,
- Air rifle pellets (10 per participant),
- Lights Out Target (one per participant),
- Target frame, and
- Stopwatch.

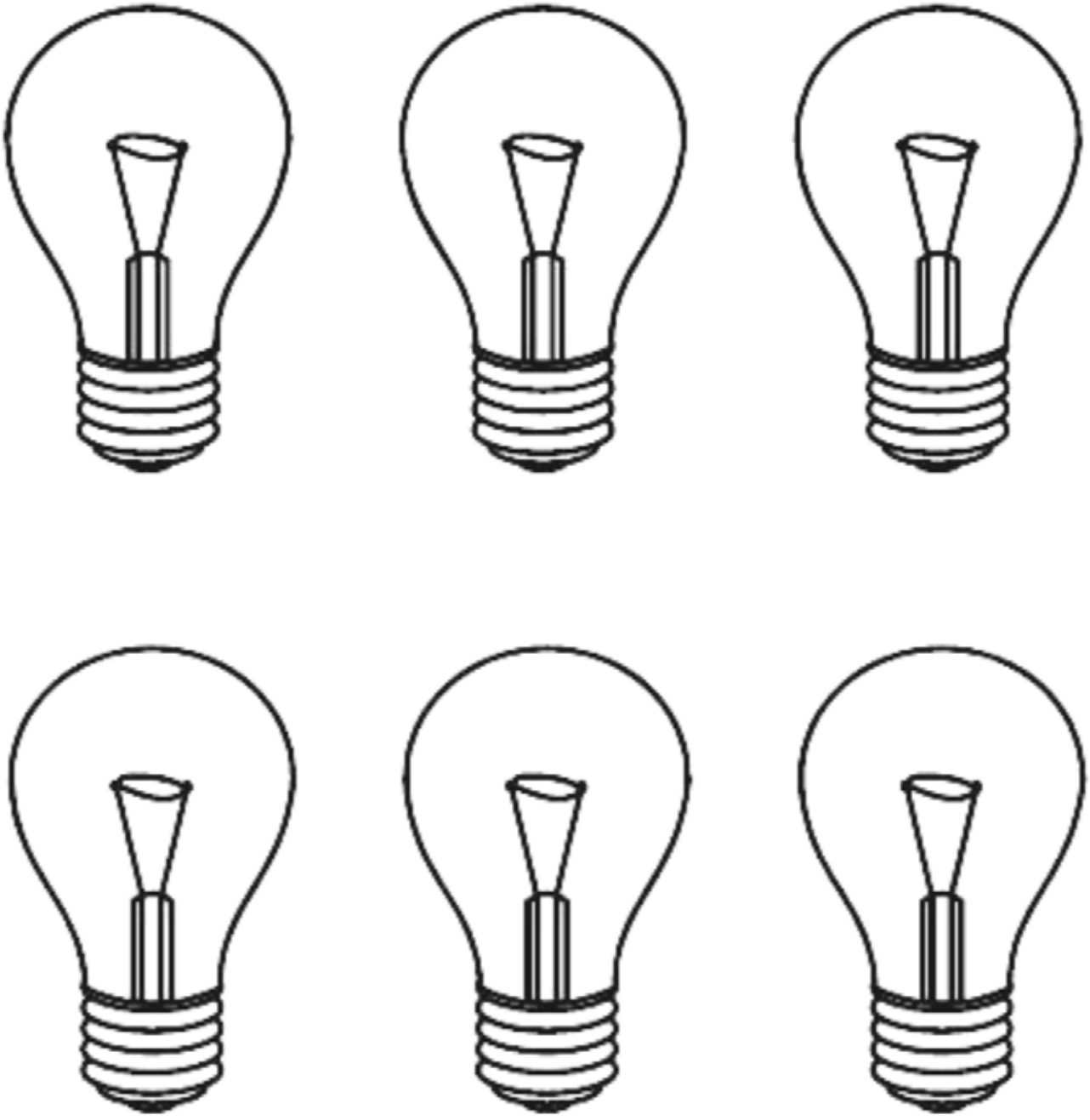
Activity Instructions:

1. Brief the cadets on the activity being conducted including any safety rules or other guidelines pertaining to the activity.
2. Distribute a target to each cadet.
3. Have the cadets write their name and date on the target and attach it to the target frame.
4. Give each cadet in the relay 10 pellets to fire.
5. Have the cadets fire, in relays, following the commands given by the RSO.
6. Give the cadets 15 minutes to complete firing.
7. Have the cadets retrieve their targets.
8. Score the targets (see above).
9. Allow the cadets to review and keep their targets.

The following are prohibited:

- Cross firing,
- Alterations, other than those permitted in A-CR-CCP-177/PT-001 Part 4, Section 4, Para 5.3,
- A pellet-loading clip,
- Supports used as a rest for the rifle or the forearm,
- A spotting scope, and
- Use of sights not provided with the cadet air rifle.

LIGHTS OUT TARGET



Name: Date:

Witness: Score:

SAVE THE DAY

Objective: The cadets will be given 5 pellets and 10 minutes to fire at (cut) the fuse of the dynamite.

Scoring: To defuse the dynamite, the cadet must hit the fuse above the split without hitting the dynamite. If the fuse is hit below the split, all three pieces must be hit to defuse the dynamite. A hit on the dynamite will cause it to explode.

Equipment Required:

- Air rifle marksmanship equipment,
- Cadet air rifle,
- Air rifle pellets (five per participant),
- Save the Day Targets (one per participant),
- Target frame, and
- Stopwatch.

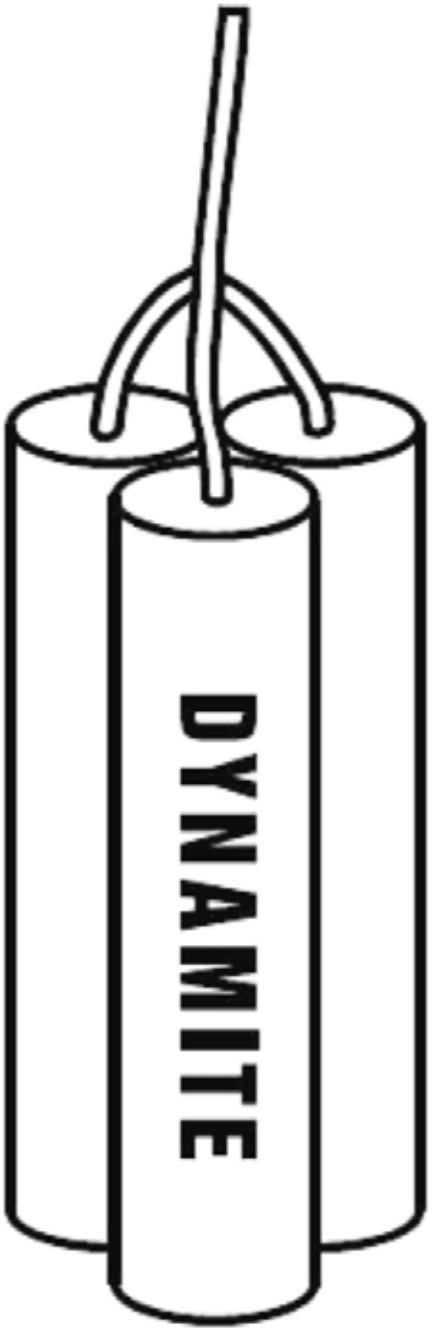
Activity Instructions:

1. Brief the cadets on the activity being conducted including any safety rules or other guidelines pertaining to the activity.
2. Distribute a target to each cadet.
3. Have the cadets write their name and date on the target and attach it to the target frame.
4. Give each cadet in the relay five pellets to fire at the fuse.
5. Have the cadets fire, in relays, following the commands given by the RSO.
6. Give the cadets 10 minutes to complete firing.
7. Have the cadets retrieve their targets.
8. Score the targets (see above).
9. Allow the cadets to review and keep their targets.

The following are prohibited:

- Cross firing,
- Alterations, other than those permitted in A-CR-CCP-177/PT-001 Part 4, Section 4, Para 5.3,
- A pellet-loading clip,
- Supports used as a rest for the rifle or the forearm,
- A spotting scope, and
- Use of sights not provided with the cadet air rifle.

SAVE THE DAY TARGET



Name: Date:

Witness: Score:

FLOWER POT

Objective: The cadets will be given 10 pellets and 15 minutes to hit any part of the flower.

Scoring: One point is awarded for each petal, leaf or stem, and two points for each hit in the centre. One point will be deducted for each hit on the flower pot.

Equipment Required:

- Air rifle marksmanship equipment,
- Cadet air rifle,
- Air rifle pellets (10 pellets per participant),
- Flower Pot Target (one per participant),
- Target frame, and
- Stopwatch.

Activity Instructions:

1. Brief the cadets on the activity being conducted including any safety rules or other guidelines pertaining to the activity.
2. Distribute a target to each cadet.
3. Have the cadets write their name and date on the target and attach it to the target frame.
4. Give each cadet in the relay 10 pellets to fire.
5. Have the cadets fire, in relays, following the commands given by the RSO.
6. Give the cadets 15 minutes to complete firing.
7. Have the cadets retrieve their targets.
8. Score the targets (see above).
9. Allow the cadets to review and keep their targets.

The following are prohibited:

- Cross firing,
- Alterations, other than those permitted in A-CR-CCP-177/PT-001 Part 4, Section 4, Para 5.3,
- A pellet-loading clip,
- Supports used as a rest for the rifle or the forearm,
- A spotting scope, and
- Use of sights not provided with the cadet air rifle.

FLOWER POT TARGET

Name: _____ Date: _____

Witness: _____ Score: _____

CHASE THE DOTS

Objective: To fire pellets into the dots on the target, within a time limit.

Scoring: One point is awarded for each black dot that is hit by a pellet within the time allotted.

Equipment Required:

- Air rifle marksmanship equipment,
- Cadet air rifle,
- Air rifle pellets (10 pellets per participant),
- Chase the Dots Target (one per participant),
- Target frame, and
- Stopwatch.

Activity Instructions:

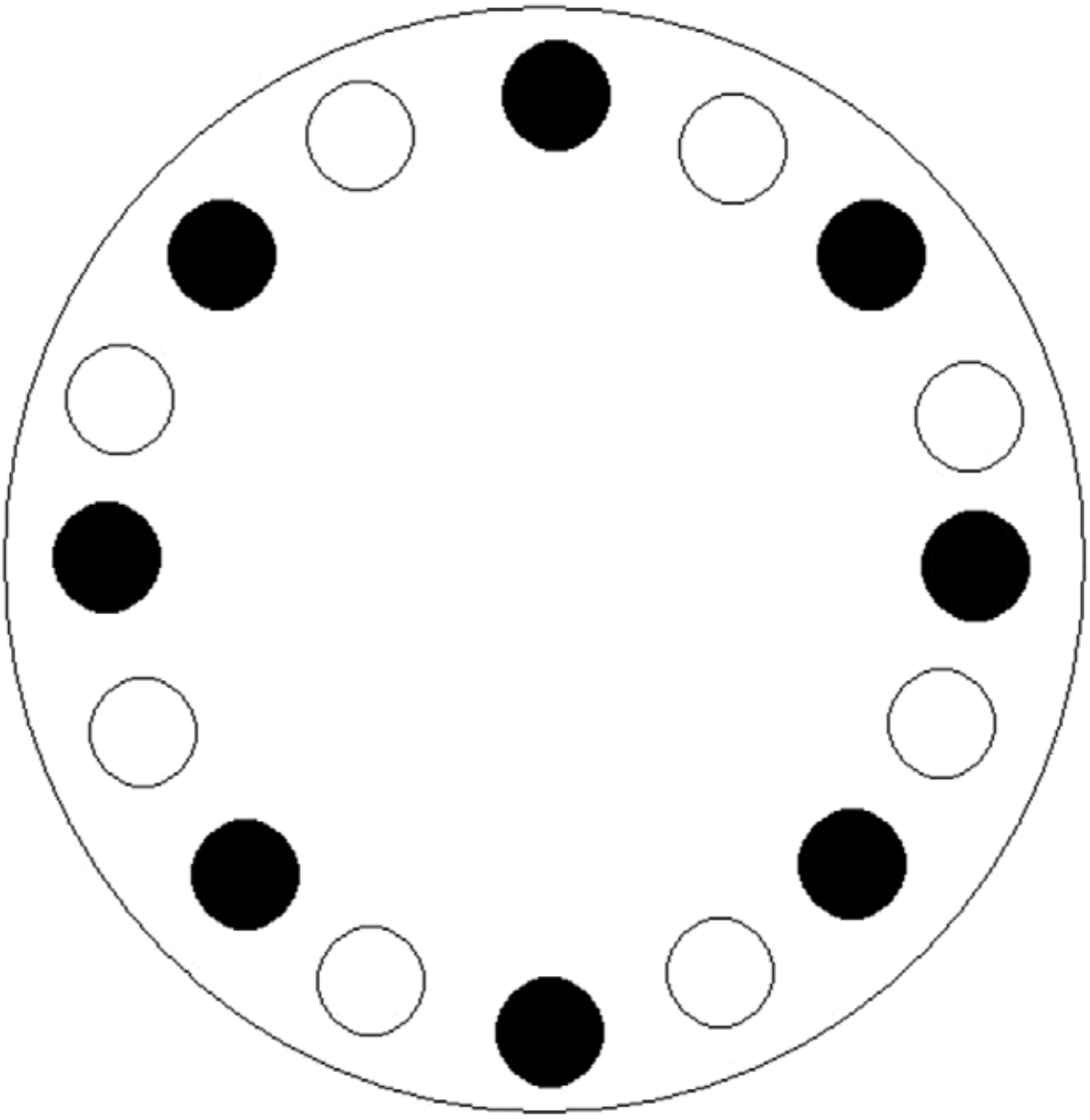
1. Brief the cadets on the activity being conducted including any safety rules or other guidelines pertaining to the activity.
2. Distribute a target to each cadet.
3. Have the cadets write their name and date on the target and attach it to the target frame.
4. Give the cadets in the relay eight pellets to fire, one pellet into each black dot, in a clockwise direction.
5. Have the cadets fire, in relays, following the commands given by the RSO.
6. Give the cadets four minutes to complete firing.
7. Return any unused pellets to the pellet controller.
8. Have the cadets retrieve their targets.
9. Score the targets awarding one point for each black dot hit.
10. Allow the cadets to review and keep their targets.

The following are prohibited:

- Alterations, other than those permitted in A-CR-CCP-177/PT-001 Part 4, Section 4, Para 5.3,
- A pellet-loading clip,
- Supports used as a rest for the rifle or the forearm,
- A spotting scope,
- Use of sights not provided with the cadet air rifle, and
- Coaching.

Note: To make this activity more difficult, shorten the time allowance.

CHASE THE DOTS TARGET



Name: _____ Date: _____

Witness: _____ Score: _____

SPEED GRID

Objective: To fire pellets into the circles on the target, within a time limit.

Scoring: One point is awarded for each circle that is hit by a pellet within the time allotted.

Equipment Required:

- Air rifle marksmanship equipment,
- Cadet air rifle,
- Cadet air rifle five-pellet clip (three per firing lane),
- Air rifle pellets (10 pellets per participant),
- Speed Grid Target (one per participant),
- Target frame, and
- Stopwatch.

Activity Instructions:

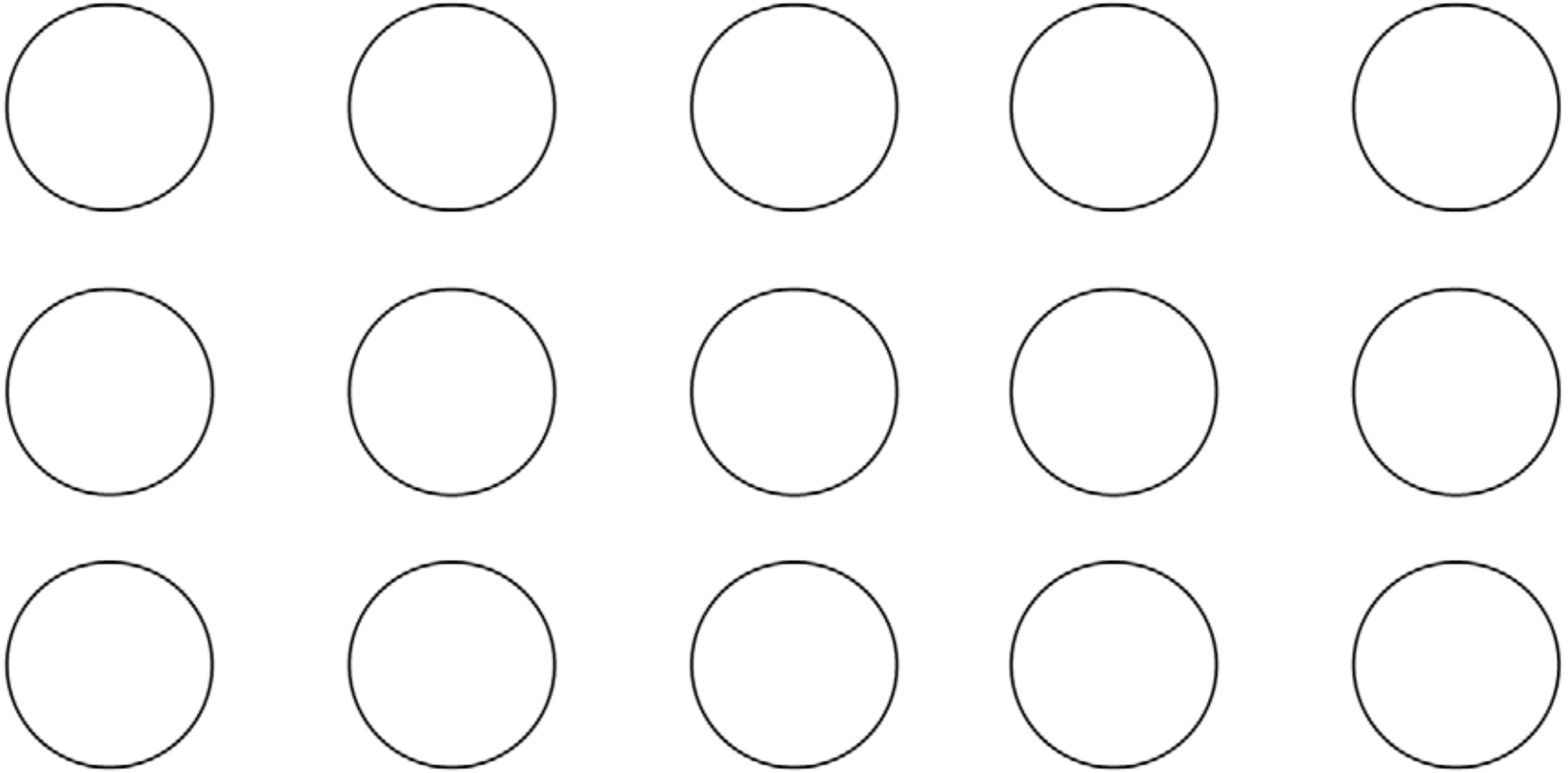
1. Brief the cadets on the activity being conducted including any safety rules or other guidelines pertaining to the activity.
2. Distribute a target to each cadet.
3. Have the cadets write their name and date on the target and attach it to the target frame.
4. Give the cadets 15 pellets, pre-loaded into three five-pellet clips.
5. Have the cadets fire one pellet into each circle on the target.
6. Have the cadets fire, in relays, following the commands given by the RSO.
7. Give the cadets eight minutes to complete firing.
8. Return any unused pellets to the pellet controller.
9. Have the cadets retrieve their targets.
10. Score the targets awarding one point for each circle hit.
11. Allow the cadets to review and keep their targets.

The following are prohibited:

- Alterations, other than those permitted in A-CR-CCP-177/PT-001 Part 4, Section 4, Para 5.3,
- Supports used as a rest for the rifle or the forearm,
- A spotting scope,
- Use of sights not provided with the cadet air rifle, and
- Coaching.

Note: To make this activity more difficult, shorten the time allowance.

SPEED GRID TARGET



Name: _____ Date: _____

Witness: _____ Score: _____

BEAT THE CLOCK

Objective: To fire pellets into the designated hours (numbers) within a time limit.

Scoring: One point is awarded for each correct hour (number) hit by a pellet within the time allotted.

Equipment Required:

- Air rifle marksmanship equipment,
- Cadet air rifle,
- Cadet air rifle five-pellet clip (three per firing lane),
- Air rifle pellets (6 pellets per participant),
- Beat the Clock Target (one per participant),
- Target frame, and
- Stopwatch.

Activity Instructions:

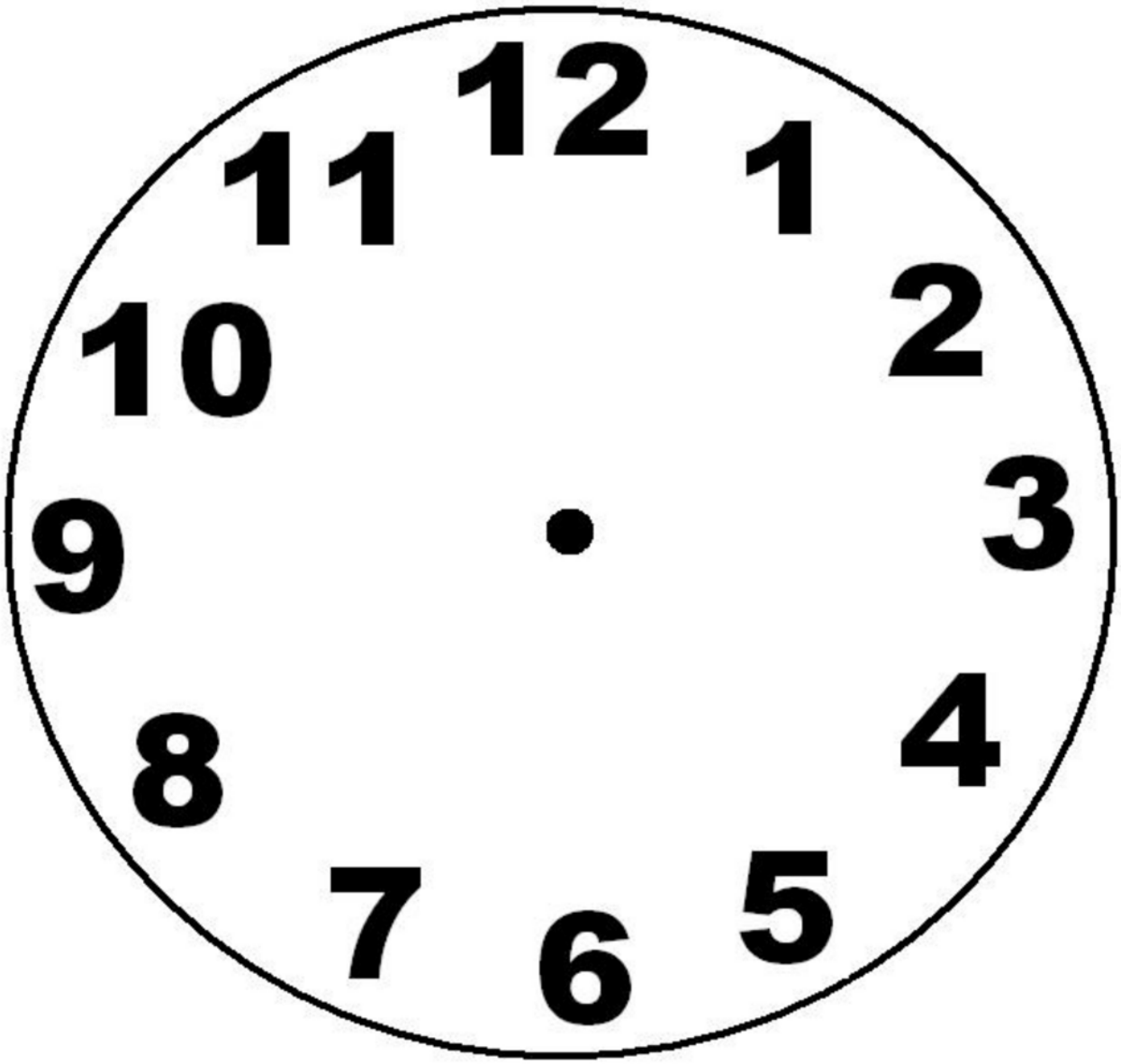
1. Brief the cadets on the activity being conducted including any safety rules or other guidelines pertaining to the activity.
2. Distribute a target to each cadet.
3. Have the cadets write their name and date on the target and attach it to the target frame.
4. Give the cadets six pellets to fire, one pellet at each hour (number) as it is called.
5. Have the cadets fire, in relays, following the commands given by the RSO.
6. Have the RSO, using the clock, call out one number every 10 second for a total of six numbers.
7. Return any unused pellets to the pellet controller.
8. Have the cadets retrieve their targets.
9. Score the targets awarding one point for each correct number hit on the target.
10. Allow the cadets to review and keep their targets.

The following are prohibited:

- Alterations, other than those permitted in A-CR-CCP-177/PT-001 Part 4, Section 4, Para 5.3,
- Supports used as a rest for the rifle or the forearm,
- A spotting scope,
- Use of sights not provided with the cadet air rifle, and
- Coaching.

Note: To make this activity more difficult, shorten the time allowance.

BEAT THE CLOCK TARGET



Name: Date:

Witness: Score:

DARTBOARD

Objective: The cadets will be given 10 pellets and 30 seconds to fire at the highest scores on the dartboard.

Scoring: Targets will be scored by totalling the value for each pellet located in each slice of the board. The bull's-eye has a value of 25 and the area around the outside with the numbers has no point value.

Equipment Required:

- Air rifle marksmanship equipment,
- Cadet air rifle,
- Air rifle pellets (10 per participant),
- Dartboard Target (one per participant),
- Target frame, and
- Stopwatch.

Activity Instructions:

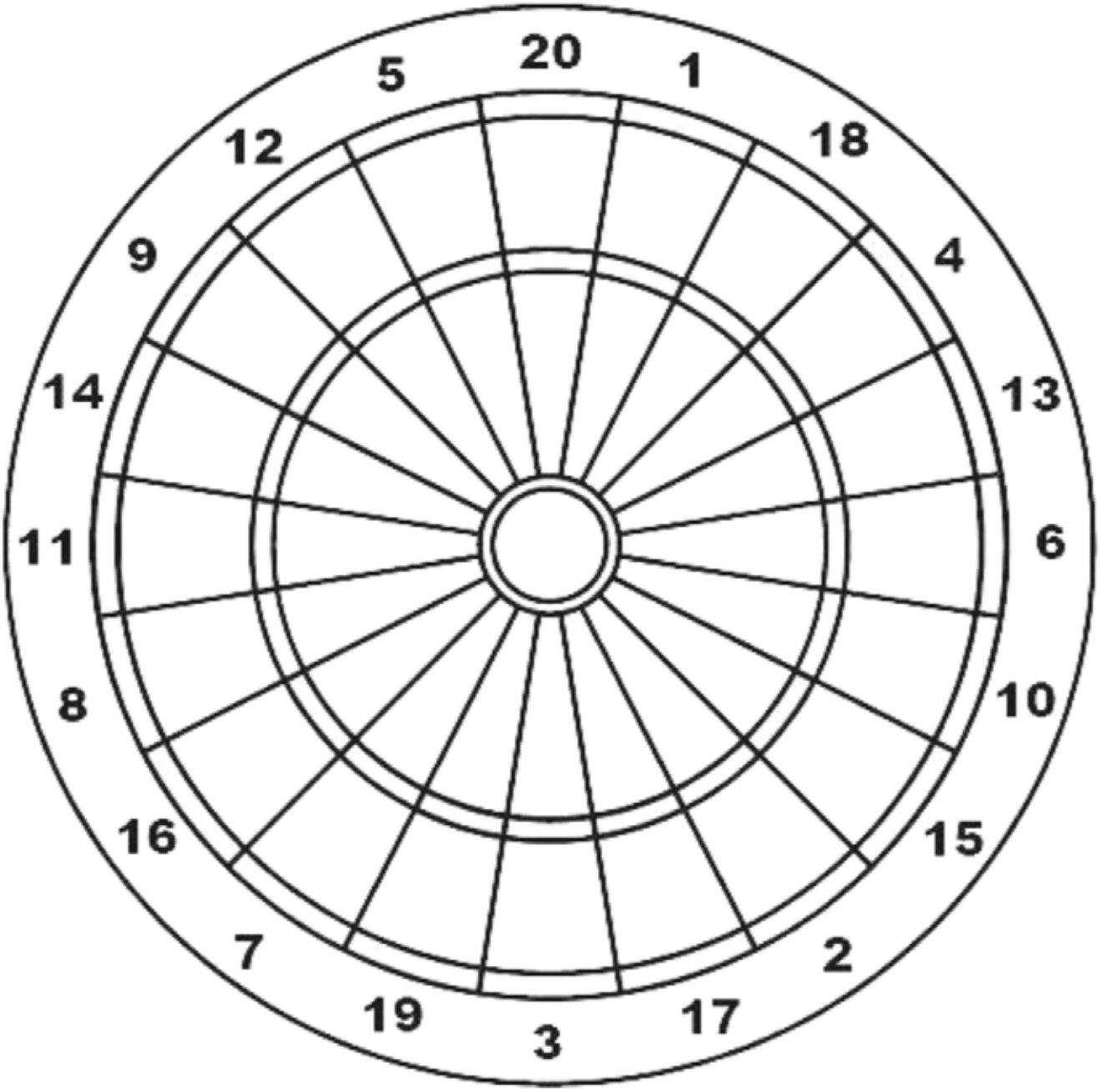
1. Brief the cadets on the activity being conducted including any safety rules or other guidelines pertaining to the activity.
2. Distribute a target to each cadet.
3. Have the cadets write their name and date on the target and attach it to the target frame.
4. Give the cadets 10 pellets to fire.
5. Have the cadets fire a 30 second timed relay, in relays, following the commands given by the RSO.
6. Return unused pellets to the pellet controller.
7. Have the cadets retrieve their targets.
8. Score the targets (see above).
9. Allow the cadets to review and keep their targets.

The following are prohibited:

- Alterations, other than those permitted in A-CR-CCP-177/PT-001 Part 4, Section 4, Para 5.3,
- Supports used as a rest for the rifle or the forearm,
- A spotting scope,
- Use of sights not provided with the cadet air rifle, and
- Coaching.

Note: To make this activity more difficult, shorten the time allowance.

DARTBOARD TARGET



Name: Date:

Witness: Score:

CUT THE FUSES

Objective: The cadets will be given 10 pellets and 30 seconds to fire at the fuses of all 4 pieces of dynamite.

Scoring: The cadets must hit any portion of the fuse without hitting the dynamite; all four pieces must be hit to defuse the dynamite.

Equipment Required:

- Air rifle marksmanship equipment,
- Cadet air rifle,
- Air rifle pellets (10 per participant),
- Cut the Fuses Target (one per participant),
- Target frame, and
- Stopwatch.

Activity Instructions:

1. Brief the cadets on the activity being conducted including any safety rules or other guidelines pertaining to the activity.
2. Distribute a target to each cadet.
3. Have the cadets write their name and date on the target and attach it to the target frame.
4. Give the cadets 10 pellets to fire.
5. Have the cadets fire a 30 second timed relay, in relays, following the commands given by the RSO.
6. Return unused pellets to the pellet controller.
7. Have the cadets retrieve their targets.
8. Score the targets (see above).
9. Allow the cadets to review and keep their targets.

The following are prohibited:

- Alterations, other than those permitted in A-CR-CCP-177/PT-001 Part 4, Section 4, Para 5.3,
- Supports used as a rest for the rifle or the forearm,
- A spotting scope,
- Use of sights not provided with the cadet air rifle, and
- Coaching.

Note: To make this activity more difficult, shorten the time allowance.

CUT THE FUSES TARGET

Name: _____ Date: _____

Witness: _____ Score: _____

SHOO-FLY

Objective: To provide cadets the opportunity to lead a timed air rifle marksmanship activity.

Scoring: Targets will be scored by totalling the number of flies hit. Each fly can only be hit once.

Equipment Required:

- Air rifle marksmanship equipment,
- Cadet air rifle,
- Air rifle pellets (20 per participant),
- Shoo-fly Target (one per participant),
- Target frame, and
- Stopwatch.

Activity Instructions:

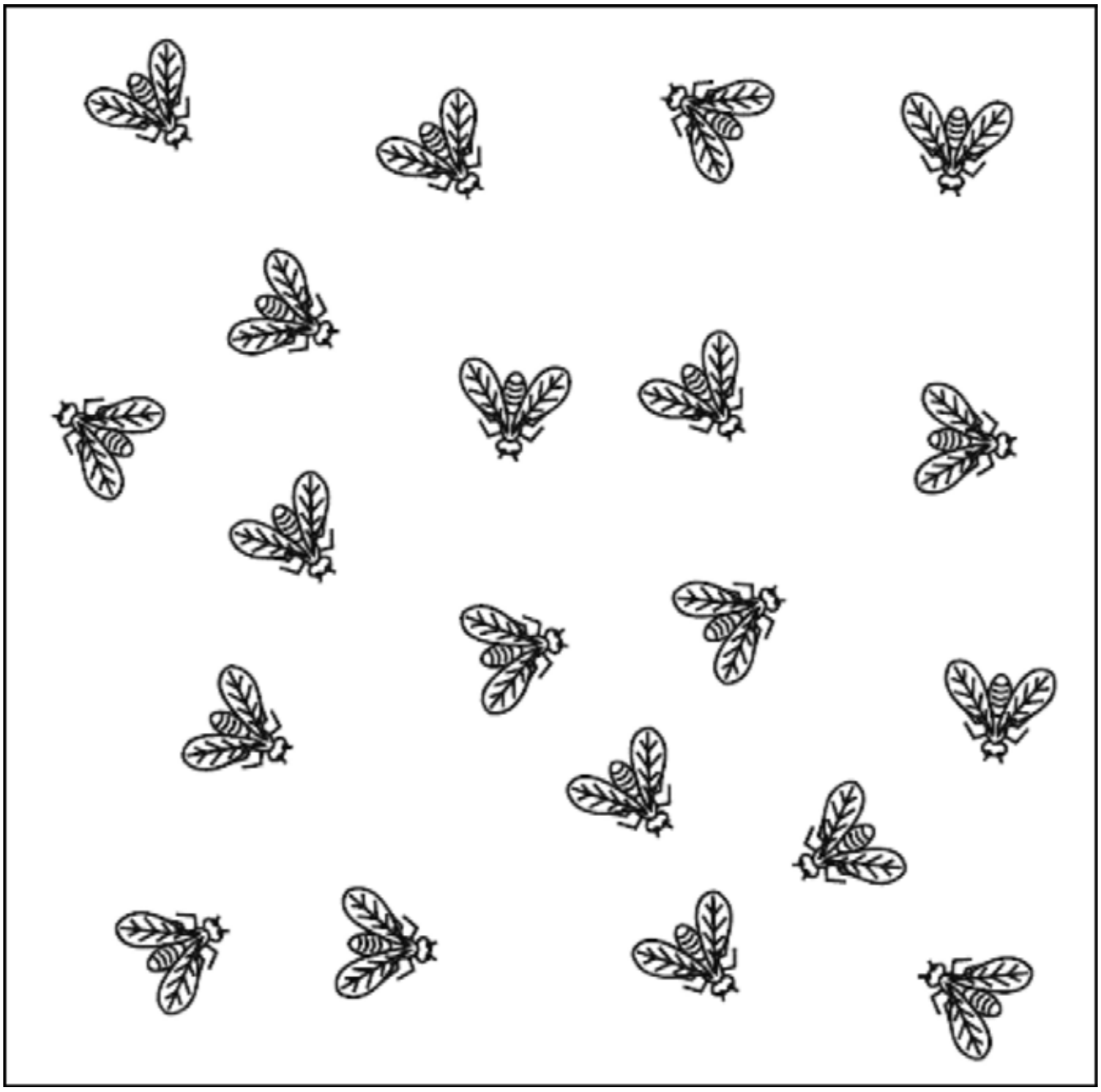
1. Brief the cadets on the activity being conducted including any safety rules or other guidelines pertaining to the activity.
2. Distribute a target to each cadet.
3. Have the cadets write their name and date on the target and attach it to the target frame.
4. Give the cadets 20 pellets to fire.
5. Have the cadets fire a five minute timed relay, in relays, following the commands given by the RSO.
6. Return unused pellets to the pellet controller.
7. Have the cadets retrieve their targets.
8. Score the targets (see above).
9. Allow the cadets to review and keep their targets.

The following are prohibited:

- Alterations, other than those permitted in A-CR-CCP-177/PT-001 Part 4, Section 4, Para 5.3,
- Supports used as a rest for the rifle or the forearm,
- A spotting scope,
- Use of sights not provided with the cadet air rifle, and
- Coaching.

Note: To make this activity more difficult, shorten the time allowance.

SHOO-FLY TARGET



Name: Date:

Witness: Score:

GOOD BREAK

Objective: To provide cadets the opportunity to lead a timed air rifle marksmanship activity.

Scoring: Targets will be scored by totalling the value for each billiard ball where the centre circle has a pellet hole located in it; additional pellets will be scored as zero.

Equipment Required:

- Air rifle marksmanship equipment,
- Cadet air rifle,
- Air rifle pellets (10 per participant),
- Good Break Target (one per participant),
- Good Break scoresheet,
- Target frame, and
- Stopwatch.

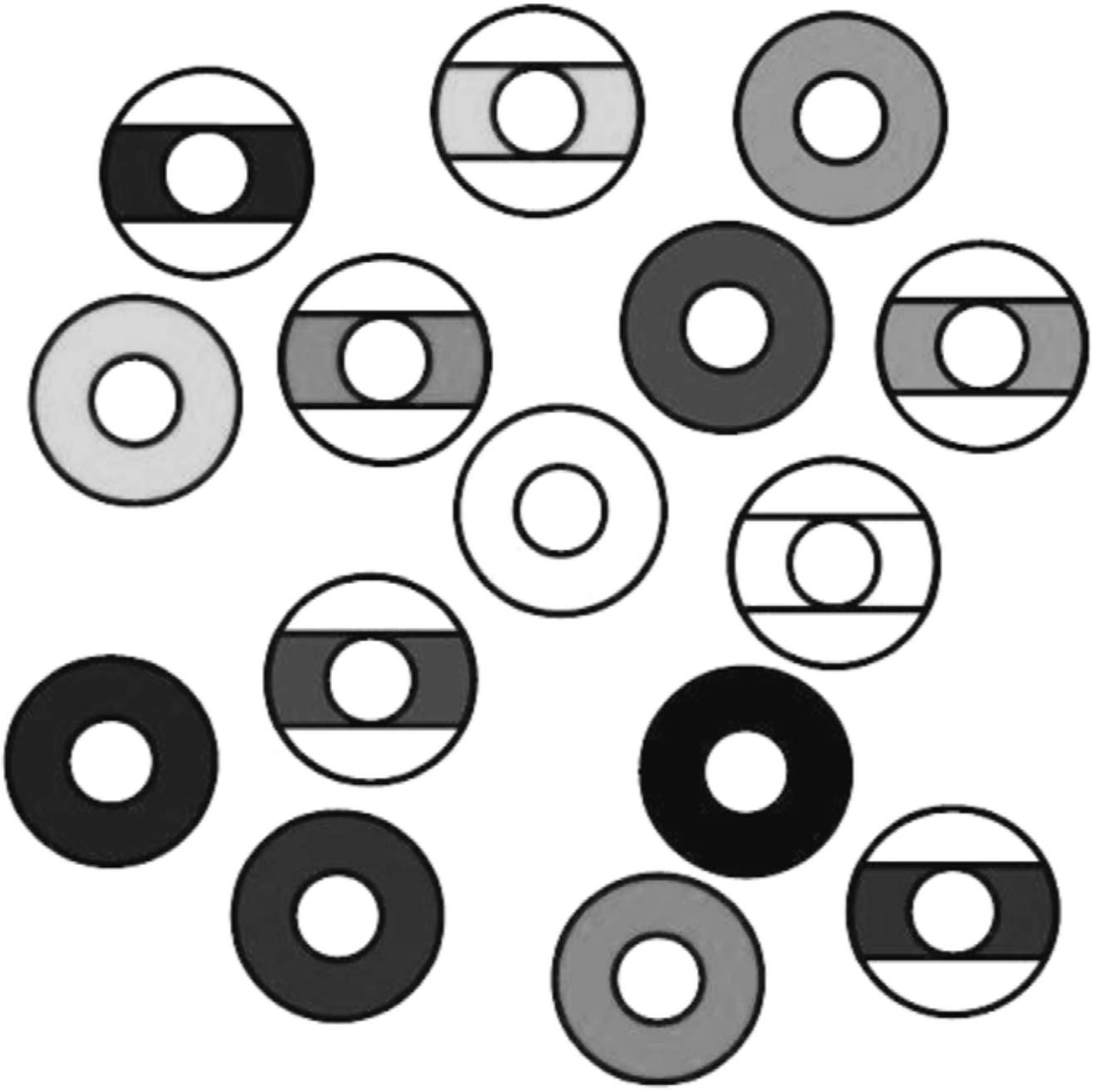
Activity Instructions:

1. Brief the cadets on the activity being conducted including any safety rules or other guidelines pertaining to the activity.
2. Distribute a target to each cadet.
3. Have the cadets write their name and date on the target and attach it to the target frame.
4. Give the cadets 10 pellets to fire.
5. Have the cadets fire a five minute timed relay, in relays, following the commands given by the RSO.
6. Return unused pellets to the pellet controller.
7. Have the cadets retrieve their targets.
8. Score the targets (see above).
9. Allow the cadets to review and keep their targets.

The following are prohibited:

- Alterations, other than those permitted in A-CR-CCP-177/PT-001 Part 4, Section 4, Para 5.3,
- Supports used as a rest for the rifle or the forearm,
- A spotting scope,
- Use of sights not provided with the cadet air rifle, and
- Coaching.

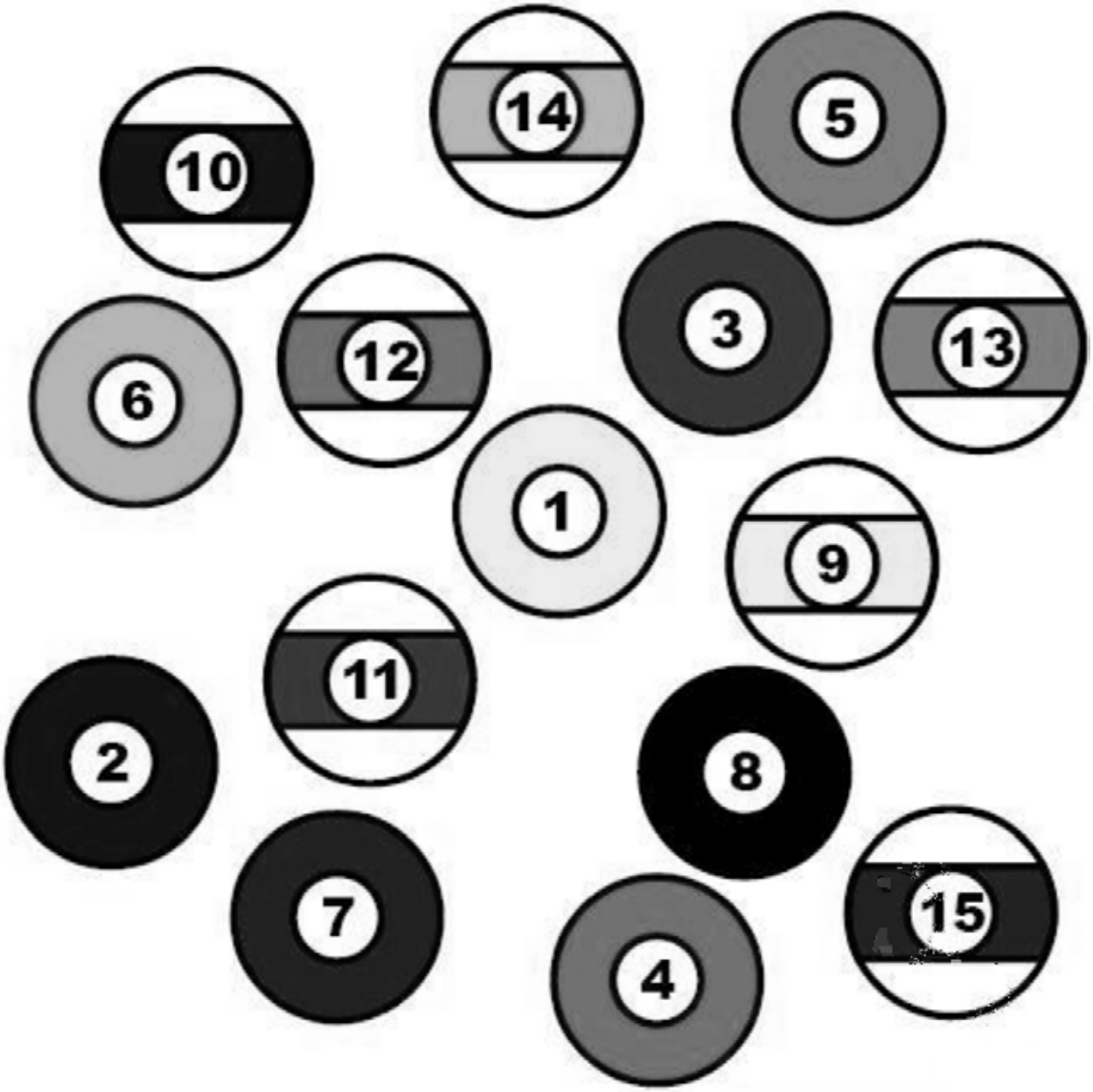
GOOD BREAK TARGET



Name: Date:

Witness: Score:

GOOD BREAK SCORESHEET



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SIMULATED STAGE 1 CHAMPIONSHIP

Objective: To provide cadets the opportunity to compete in a simulated CCMMCS Stage 1 Championship (Match 1.1), intended for team selection by:

- competing as an individual against each other;
- firing at a distance of 10 m;
- firing in the prone unsupported position;
- firing one target per relay;
- loading single pellets only; and
- coaching on the firing line as permitted.

Note: This activity shall be conducted IAW Part 4, Section 3 of A-CR-CCP-177/PT-001, *Canadian Cadet Movement: Cadet Marksmanship Program Reference Manual*.

Scoring: Targets will be scored IAW A-CR-CCP-177/PT-001 *Canadian Cadet Movement: Cadet Marksmanship Program Reference Manual*, to include:

- Each CCM Competition Target has a highest possible score of 100 points (10 diagrams worth 10 points each).
- All pellet holes are scored using the highest value of the scoring ring that it is broken.
- Pellet holes outside the scoring rings are given a value of zero.
- If more than one pellet is fired on a diagram, the pellet hole with the highest value will be discarded until one pellet hole remains on the diagram. A two-point penalty will be applied for each excess pellet hole.
- Only the prescribed number of pellet holes may be fired at each diagram (eg, if two shots were fired at the first diagram, one diagram on the target would remain blank [free of pellet holes]).

Equipment Required:

- Air rifle marksmanship equipment,
- Cadet air rifle,
- Air rifle pellets (10 pellets),
- CCT2001AR853 (CCM Competition Target),
- .177- / .22-scoring magnifier (scoring magnifier),
- Scoring plug,
- Scoring template,
- Target frame,
- Stopwatch.

Optional aids to firing are limited to the following:

- Cadet air rifle sling,
- Marksmanship jacket,
- Marksmanship glove, and
- Hat.

Activity Instructions:

1. Brief the cadets on the activity being conducted including any safety rules or other guidelines pertaining to the activity.
2. Distribute the CCM Competition Target to each cadet.
3. Have the cadets write their name and date on the target and attach it to the target frame.
4. Give the cadets 10 pellets to fire.
5. Have the cadets fire, in relays, following the commands given by the RSO.
6. Give the cadets 15 minutes to complete firing.
7. Have the cadets retrieve their targets.
8. Score the targets using a scoring magnifier and / or scoring template.
9. Allow the cadets to review and keep their targets.

The following are prohibited:

- Alterations, other than those permitted in A-CR-CCP-177/PT-001 Part 4, Section 4, Para 5.3,
- Supports used as a rest for the rifle or the forearm,
- A spotting scope,
- Use of sights not provided with the cadet air rifle, and
- Coaching.

SIMULATED STAGE 2 CHAMPIONSHIP

Objective: To provide cadets the opportunity to compete in a simulated CCMMCS Stage 2 Championship (Match 1.2 A), intended for team competition by:

- competing as a team of five competitors;
- firing at a distance of 10 m;
- firing in the prone unsupported position;
- firing two targets per relay;
- firing two relays;
- loading single pellets only; and
- coaching on the firing line as permitted.

Note: This activity shall be conducted IAW Part 4, Section 3 of A-CR-CCP-177/PT-001, *Canadian Cadet Movement: Cadet Marksmanship Program Reference Manual*.

Scoring: Targets will be scored IAW A-CR-CCP-177/PT-001, *Canadian Cadet Movement: Cadet Marksmanship Program Reference Manual*, to include:

- Each member has a highest possible score of 400 points (40 diagrams worth 10 points each).
- The top four competitors will be counted towards the team's highest possible score of 1600 points.
- All shot holes are scored using the highest value of the scoring ring that it is broken.
- Shots outside the scoring rings are given a value of zero.
- If more than the one pellet is fired on a diagram, the shots with the highest value will be discarded until one shot remains on the diagram. A two-point penalty will be applied for each excess shot.
- Only the prescribed number of shots may be fired at each diagram (eg, if two shots were fired at the first diagram, one diagram on the target would remain blank [free of shots]).

Equipment Required:

- Air rifle marksmanship equipment,
- Cadet air rifle,
- Air rifle pellets (40 pellets),
- CCT2001AR853 (air rifle competition target),
- .177- / .22-scoring magnifier (scoring magnifier),
- Scoring plug,
- Scoring template,
- Target frame, and
- Stopwatch.

Activity Instructions:

1. Brief the cadets on the activity being conducted including any safety rules or other guidelines pertaining to the activity.
2. Distribute two CCM Competition Targets to each cadet.
3. Have the cadets write their name and date on the targets and attach them to the target frame.
4. Give the cadets 20 pellets to fire.
5. Have the cadets fire, in relays, following the commands given by the RSO.
6. Give the cadets 30 minutes to complete firing.
7. Have the cadets retrieve their targets.
8. Score the targets using a scoring magnifier and / or scoring template.
9. Allow the cadets to review and keep their targets.
10. Repeat steps 2 to 9.

The following are prohibited:

- Alterations, other than those permitted in A-CR-CCP-177/PT-001 Part 4, Section 4, Para 5.3,
- Supports used as a rest for the rifle or the forearm,
- A spotting scope,
- Use of sights not provided with the cadet air rifle, and
- Coaching.

COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 7

EO C106.02 – CLEAN AND STORE THE CADET AIR RIFLE

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A demonstration was chosen for TP1 as it allows the instructor to demonstrate the procedures for cleaning the cadet air rifle.

A demonstration and performance was chosen for TP2 as it allows the instructor to explain and demonstrate cleaning and storing the rifle while providing an opportunity for the cadets to practice under supervision.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have cleaned and stored the cadet air rifle.

IMPORTANCE

Many inaccuracy complaints can be traced back to a dirty bore. Therefore, air rifles must be cleaned and maintained on a regular basis in order to ensure proper operation and sustained accuracy.

Teaching Point 1 **Explain and demonstrate the procedure for cleaning the cadet air rifle.**

Time: 15 min Method: Demonstration

THE IMPORTANCE OF CLEANING THE AIR RIFLE

No one should attempt to clean a rifle until individual safety precautions have been performed on the rifle, and it is certain that the barrel is clear of any obstructions.

It is important to keep the air rifle clean because a dirty bore will eventually cause accuracy problems. Although air rifles do not suffer from powder deposits as do smallbore and largebore rifles, they do experience a build-up of residue in the barrel.

WHEN TO CLEAN THE AIR RIFLE

There are four main times to clean the cadet air rifle:

1. Before firing,
2. After firing,
3. Periodically, and
4. Before storage.

Cadets will not actually be cleaning the air rifle during this period of instruction. This may be done after participating in a range practice.

CLEANING PROCEDURE FOR THE AIR RIFLE

WHEN	ACTION
Before firing	Fire two to three felt cleaning pellets.
After firing	Fire two to three felt cleaning pellets.
Periodically	1. Fire a felt cleaning pellet soaked in SAE 30 motor oil; 2. Wait five minutes; and 3. Fire three felt cleaning pellets.
Before storage of 3 (three) months or more.	1. Fire two to three felt cleaning pellets; 2. Fire one felt cleaning pellet soaked in SAE 30 motor oil; and 3. Fire three felt cleaning pellets when taking rifle out of storage.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. What must be done before attempting to clean an air rifle?

Q2. When are the four times an air rifle must be cleaned?

Q3. How many felt cleaning pellets are fired before participating in a range practice?

ANTICIPATED ANSWERS:

A1. Individual safety precautions.

A2. Before firing, after firing, periodically, and before storage for three months or more.

A3. Two to three cleaning pellets will be fired before participating in a range practice.

Teaching Point 2 **Explain and demonstrate the sequence for storing the air rifle.**

Time: 10 min Method: Demonstration and Performance

STORING THE AIR RIFLE IN THE CASE

The sequence for storing the cadet air rifle is the reverse order of the procedure for removing the air rifle from the case:

1. Ensure the open case is pointed in a safe direction.
2. Close the action (bolt forward and closed).
3. Slide safety rod out of the barrel.
4. Place the rifle in the case in the direction of the arrow on the case.
5. Confirm pumping lever is partially open.
6. Confirm the safety catch is ON.
7. Close the case.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. What position is the bolt in for storage?

Q2. What direction is the rifle placed in the case?

Q3. What position is the safety catch placed in for storage?

ANTICIPATED ANSWERS:

A1. Forward and closed.

A2. In the direction of the arrow on the case.

A3. ON, with no red showing.

END OF LESSON CONFIRMATION

QUESTIONS:

Q1. What must be done before anyone should attempt to clean an air rifle?

Q2. What types of problems can be caused by a dirty bore?

Q3. Before storage cleaning is done when a rifle will be stored for how long?

ANTICIPATED ANSWERS:

A1. They perform individual safety precautions.

A2. It is important to keep the air rifle clean because a dirty bore will eventually cause accuracy problems.

A3. Three months or more.

CONCLUSION

HOMEWORK/READING/PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

A dirty air rifle and bore will cause accuracy and operation problems. Therefore, air rifles must be cleaned and maintained on a regular basis in order to ensure proper operation and sustained accuracy.

INSTRUCTOR NOTES/REMARKS

Nil.

REFERENCES

A0-027 A-CR-CCP-177/PT-001 DCdts 3. (2001). *Canadian cadet movement: Cadet marksmanship programme reference manual*. Ottawa, ON: Department of National Defence.

CHAPTER 7

PO 107 – SERVE IN AN AIR CADET SQUADRON

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 1

EO M107.01 – DISCUSS YEAR ONE TRAINING

Total Time:	30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for this lesson to orient the cadets to year one training and optional training opportunities at the squadron.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have identified year one training.

IMPORTANCE

Having an overview of the training opportunities available in level one prepares new cadets for the training year. They will be able to see how training fits together and identify areas of interest.

Teaching Point 1 **Explain proficiency level one subject areas and performance objectives.**

Time: 15 min Method: Interactive Lecture

PERFORMANCE OBJECTIVES

The cadet training program is comprised of subject areas which are delivered as performance objectives (POs). There POs in proficiency level one are:

Level 1 PO and Subject Area	Description
100 – Positive Social Relations for Youth	Prepares cadets to interact comfortably within the cadet community, interact positively with others, exercise sound judgement, accept personal responsibility for actions and choices, deal with interpersonal conflict, and see assistance from available resources when needed.
101 – Citizenship	Helps cadets be good citizens by encouraging them to perform simple, individual acts in everyday life that will better the lives of others in the community.
102 – Community Service	Encourage cadets to become more active in their communities through participation in a community service activity.
103 – Leadership	Discuss characteristics of followers, set personal goals and participate in team building activities.
104 – Personal Fitness and Healthy Living	Identify activities that will help achieve a healthy lifestyle and develop a personal activity plan.
105 – Physical Activities	Participate in various physical activities.
106 – Air Rifle Marksmanship	Learn the safe handling procedures and techniques in the firing of the cadet air rifle.
107 – General Cadet Knowledge	Discuss training opportunities, identify and address squadron members, wear the cadet uniform.
108 – Drill and Ceremonial	Perform basic movements at the halt and on the march to participate in squadron parades.
120 – CF Familiarization	Participate in Canadian Forces familiarization activities and identifying the mission and objectives of the CF and the role of the air force in the CF.
121 – Canadian Aviation, Aerospace, Aerodrome Operations and Aircraft Manufacturing and Maintenance Community Familiarization	Participate in Canadian Aviation, Aerospace and Aerodrome Operations and Aircraft Manufacturing and Maintenance Community familiarization activities.
129 – Radio Communication	Communicate using the phonetic alphabet and numbers.

Level 1 PO and Subject Area	Description
130 - Aviation	Identify aircraft as military, civilian and cadet, describe the main components of an airplane and becoming familiar with aviation history.
140 - Aerospace	Become familiar with important events in space history and build a model rocket.
160 – Aerodrome Operations	Construct a model aerodrome to become familiar with major aerodrome components and features of a runway.
170 – Aircraft Manufacturing and Maintenance	Discuss aspects of aircraft manufacturing and maintenance and tour a local aviation maintenance facility.
190 – Aircrew Survival	Participate in an overnight aircrew survival exercise.

CONFIRMATION OF TEACHING POINT 1

QUESTION:

Q1. Name one of the subjects taught in Year One (go around the class until all POs have been listed).

ANTICIPATED ANSWER:

A1. Positive Social Relations for Youth.
Citizenship.
Community service.
Leadership.
Personal fitness and healthy living.
Physical Activity.
Air rifle marksmanship.
General cadet knowledge.
Drill and ceremonial.
CF Familiarization.
Canadian aviation, aerospace, aerodrome operations and aircraft manufacturing and maintenance community familiarization.
Radio Communication.
Aviation.
Aerospace.
Aircraft manufacturing and maintenance.
Aerodrome Operations.
Aircrew Survival.

Teaching Point 2 **Discuss squadron optional training.**

Time: 10 min Method: Interactive Lecture

SQUADRON OPTIONAL TRAINING

In addition to the mandatory training, the squadron may also offer extracurricular activities, called optional training. This may include, but is not limited to:

- bands,
- drill teams,
- sports teams,
- interest clubs,
- ground school,
- biathlon,
- marksmanship,
- trips and tours, and
- special events.

Days of training, timings, level of participation and any other important details should be included.

Discuss only optional activities provided by the squadron. Cadets or staff members involved with those specific activities can be invited to give short presentations.

CONFIRMATION OF TEACHING POINT 2

QUESTION:

Q1. Which optional activities are you most interested in?

ANTICIPATED ANSWER:

A1. Will vary by cadet.

END OF LESSON CONFIRMATION

QUESTIONS:

Q1. Name five of the subjects taught in Year One.

Q2. Name one optional activity offered by the squadron (go around the class until the main activities are covered).

ANTICIPATED ANSWERS:

A1. Positive Social Relations for Youth.
Citizenship.

Community service.
Leadership.
Personal fitness and healthy living.
Physical Activity.
Air rifle marksmanship.
General cadet knowledge.
Drill and ceremonial.
CF Familiarization.
Canadian aviation, aerospace, aerodrome operations and aircraft manufacturing and maintenance community familiarization.
Radio Communication.
Aviation.
Aerospace.
Aircraft manufacturing and maintenance.
Aerodrome Operations.
Aircrew Survival.

A2. Will vary by squadron.

CONCLUSION

HOMEWORK / READING / PRACTICE

The squadron training calendar will have information on optional activities.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

There is a wide variety of training available in level one. Cadets should look for opportunities to become involved in activities that interest them. The more activities cadets get involved in at the unit, the more they will enjoy and benefit from the program.

INSTRUCTOR NOTES / REMARKS

Much of the material in this lesson will be specific to each squadron. The squadron training plan must be reviewed in order to accurately represent the mandatory, complementary and support days.

REFERENCES

A3-029 CATO 51-01 Director Cadets 3. (2006). *Air cadet program outline*. Ottawa, ON: Department of National Defence.

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 2

EO M107.02 – IDENTIFY AIR CADET AND RCAF OFFICER RANKS

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Have one air cadet rank slip-on for each cadet.

Have one RCAF officer rank slip-on for each cadet.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TPs 1 and 3 as it allows the instructor to present the information.

An in-class activity was chosen for TPs 2 and 4 as it is a fun and interesting way to measure the cadets' comprehension of the material.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have identified air cadet and RCAF officer ranks.

IMPORTANCE

It is important that the cadets be able to identify the ranks of both cadets and officers in order to pay proper marks of respect. It is a matter of courtesy to address people by their correct rank.

Teaching Point 1 **Identify air cadet ranks.**

Time: 5 min Method: Interactive Lecture

CADET RANKS

Every cadet in the squadron has a rank. Ranks are an indication of the experience and responsibility of each cadet.

AIR CADET (AC)

Cadets will start at the rank of air cadet upon enrolment.

There is no badge for the rank of Air Cadet.

LEADING AIR CADET (LAC)

Cadets may be recommended for promotion to the rank of Leading Air Cadet upon completion of five months of training.

The Leading Air Cadet badge is a propeller. When worn on the jacket it is worn on the upper sleeves, centred midway between the shoulder seam and the point of the elbow.

adapted from Rank Badges, retrieved 30 Mar 2006 from http://www.cadets.ca/aircad/resources-ressources/symbols/air_pages_all/air_rank.html

Figure 1 Leading Air Cadet Rank Badge

CORPORAL (CPL)

Cadets may be recommended for promotion to the rank of Corporal after successfully completing Proficiency Level One.

The Corporal rank badge has two chevrons. When worn on the jacket it is worn on the upper sleeves, centred midway between the shoulder seam and the point of the elbow.

adapted from Rank Badges, retrieved 30 Mar 2006 from http://www.cadets.ca/aircad/resources-ressources/symbols/air_pages_all/air_rank.html

Figure 2 Corporal Rank Badge

FLIGHT CORPORAL (FCPL)

Cadets may be recommended for promotion to the rank of Flight Corporal after completing six months of service at the rank of Corporal and successfully completing Proficiency Level Two.

The Flight Corporal badge has two chevrons and a crown. When worn on the jacket, it is worn on the upper sleeves, centred midway between the shoulder seam and the point of the elbow.

Cadets Canada. (2005). CATO 55-04: Royal Canadian Air Cadet Dress Instructions. In Cadet Administrative and Training Orders Vol. 5). Ottawa. ON

Figure 3 Flight Corporal Rank Badge

SERGEANT (SGT)

Cadets may be recommended for promotion to the rank of Sergeant after completing six months of service at the rank of Flight Corporal and successfully completing Proficiency Level Three.

The Sergeant rank badge has three chevrons. When worn on the jacket it is worn on the upper sleeves, centred midway between the shoulder seam and the point of the elbow.

adapted from Rank Badges, retrieved 30 Mar 2006 from http://www.cadets.ca/aircad/resources-ressources/symbols/air_pages_all/air_rank.html

Figure 4 Sergeant Rank Badge

FLIGHT SERGEANT (FSGT)

Cadets may be recommended for promotion to the rank of Flight Sergeant after completing six months of service at the rank of Sergeant and successfully completing Proficiency Level Four.

The Flight Sergeant rank badge has three chevrons and a crown. When worn on the jacket it is worn on the upper sleeves, centred midway between the shoulder seam and the point of the elbow.

adapted from Rank Badges, retrieved 30 Mar 2006 from http://www.cadets.ca/aircad/resources-ressources/symbols/air_pages_all/air_rank.html

Figure 5 Flight Sergeant Rank Badge

WARRANT OFFICER SECOND CLASS (WOII)

Cadets may be recommended for promotion to the rank of Warrant Officer Second Class after completing six months of service at the substantive rank of Flight Sergeant and being identified as a successful candidate through the merit review board process.

The Warrant Officer Second Class badge is a crown encircled by a wreath. When worn on the jacket it is worn on the lower sleeves, centred midway between the bottom of the cuff and the point of the elbow.

adapted from Rank Badges, retrieved 30 Mar 2006 from http://www.cadets.ca/aircad/resources-ressources/symbols/air_pages_all/air_rank.html

Figure 6 Warrant Officer Second Class Rank Badge

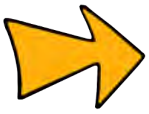
WARRANT OFFICER FIRST CLASS (WOI)

Warrant Officer First Class is the highest rank a cadet may achieve. Cadets may be recommended for promotion to the rank of Warrant Officer First Class after completing six months of service at the substantive rank of Warrant Officer Second Class and being identified as a successful candidate through the merit review board process.

The Warrant Officer First Class badge is the Canadian Coat of Arms. When worn on the jacket it is worn on the lower sleeves, centred midway between the bottom of the cuff and the point of the elbow.

adapted from Rank Badges, retrieved 30 Mar 2006 from http://www.cadets.ca/aircad/resources-ressources/symbols/air_pages_all/air_rank.html

Figure 7 Warrant Officer First Class Rank Badge



Ranks are also worn as slip-ons on the all-season jacket and the short sleeve shirt. Slip-ons are worn on both shoulders.

Bringing the badges and/or slip-ons into the classroom to hand around for the cadets to look at would add an element of realism to the class.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. What is the highest rank a cadet may achieve?

Q2. Which rank has three chevrons?

Q3. To what rank is a cadet promoted to upon completion of five months of training?

ANTICIPATED ANSWERS:

A1. Warrant Officer First Class.

A2. Sergeant.

A3. Leading Air Cadet.

Teaching Point 2 **Conduct an air cadet ranks activity.**

Time: 5 min Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of this activity is for cadets to become familiar with air cadet ranks.

RESOURCES

- One air cadet rank slip-on per cadet. There can be more than one cadet with the same rank).
- Tape.

ACTIVITY INSTRUCTIONS

1. Tape one rank to the back of each cadet (the cadet does not get to see the rank that is on their back).
2. Have the cadets walk around and ask other cadets yes or no questions to determine what rank they are wearing. For example, “Do I have two chevrons?” The cadet has to determine from the answers to their questions what rank they are.
3. The cadets can only ask one question to each of the other cadets. They cannot ask the same cadet more than one question to determine what rank they are. This will ensure the cadets are interacting fully with the other members of the class.
4. Once cadets have determined what rank they think they are, have them form a group with any other cadets who are the same rank, if there are any.
5. After 10 minutes, have the cadets split into their rank groups. They will then present what rank they think they are based on the information they received. For example, if a group has determined they have only two chevrons on their back, they would present themselves as the corporal group / individual.

SAFETY

Nil.

INSTRUCTOR GUIDELINES

Nil.

Teaching Point 3 **Identify RCAF officer ranks.**

Time: 10 min Method: Interactive Lecture

The instructor should make the cadets aware that they will not usually encounter senior or general officers at the squadron. However, some larger squadrons may have a major as the commanding officer. More emphasis should be placed on the subordinate and junior officers during the lesson.

SUBORDINATE OFFICER – OFFICER CADET

The officer cadet rank is identified by one thin gold braid.

www.forces.gc.ca/site/Community/insignia/aira_e.asp

Figure 8 Officer Cadet Rank

JUNIOR OFFICERS

Once an officer is promoted to the rank second lieutenant they become a commissioned member of the Canadian Forces. Receiving a commission means that a person has been recognized by the monarchy (Queen or King) to serve as an officer.

SECOND LIEUTENANT (2LT)

The rank of Second Lieutenant is identified by one thick gold braid.

www.forces.gc.ca/site/Community/insignia/aira_e.asp

Figure 9 Second Lieutenant Rank

LIEUTENANT (LT)

The rank of Lieutenant is identified by one thick gold braid, with one thin gold braid on top of it.

www.forces.gc.ca/site/Community/insignia/aira_e.asp

Figure 10 Lieutenant Rank

CAPTAIN (CAPT)

The rank of Captain is identified by two thick gold braids.

www.forces.gc.ca/site/Community/insignia/aira_e.asp

Figure 11 Captain Rank

SENIOR OFFICERS

MAJOR (MAJ)

The rank of Major is identified by two thick gold braids with one thin gold braid in between.

www.forces.gc.ca/site/Community/insignia/aira_e.asp

Figure 12 Major Rank

LIEUTENANT COLONEL (LCOL)

The rank of Lieutenant Colonel is identified by three thick gold braids.

www.forces.gc.ca/site/Community/insignia/aira_e.asp

Figure 13 Lieutenant Colonel Rank

COLONEL (COL)

The rank of Colonel is identified by four thick gold braids.

www.forces.gc.ca/site/Community/insignia/aira_e.asp

Figure 14 Colonel Rank

GENERAL OFFICERS

General officers are unique in that there are two manners to distinguish their ranks. All four of these ranks will wear one extra thick braid on the sleeve of their dress uniform. To distinguish between the four general ranks, there are differences in their epaulettes. All of the epaulettes will have a crown over a crossed sabre and baton, with the distinguishing feature being the number of maple leafs under the swords.

BRIGADIER GENERAL (BGEN)

The rank of Brigadier General is identified by one maple leaf under the swords.

www.forces.gc.ca/site/Community/insignia/aira_e.asp

Figure 15 Brigadier General Rank

MAJOR GENERAL (MGEN)

The rank of Major General is identified by two maple leafs under the swords.

www.forces.gc.ca/site/Community/insignia/aira_e.asp

Figure 16 Major General Rank

LIEUTENANT GENERAL (LGEN)

The rank of Lieutenant General is identified by three maple leafs in a triangular pattern under the swords.

www.forces.gc.ca/site/Community/insignia/aira_e.asp

Figure 17 Lieutenant General Rank

GENERAL (GEN)

The rank of General is identified by four maple leafs in a diamond pattern under the swords.

www.forces.gc.ca/site/Community/insignia/aira_e.asp

Figure 18 General Rank

CONFIRMATION OF TEACHING POINT 3

QUESTIONS:

Q1. What is the lowest rank that an air officer may hold?

Q2. Which rank has two thick gold braids?

Q3. How many braids does a Lieutenant wear?

ANTICIPATED ANSWERS:

A1. Officer Cadet.

A2. Captain.

A3. One narrow and one wide braid.

Teaching Point 4 **Conduct an RCAF officer ranks activity.**

Time: 5 min Method: In-Class Activity

ACTIVITY – RANK TRADE

OBJECTIVE

The objective of this activity is for cadets to become familiar with the air officer ranks.

RESOURCES

One RCAF officer slip-on per cadet.

ACTIVITY INSTRUCTIONS

1. Distribute one slip-on to each cadet.
2. Have the cadets introduce their rank to another cadet. When both cadets have introduced their ranks, they will trade slip-ons. Repeat so that each cadet has traded with three different cadets.
3. Have the cadets form groups based on the ranks they are holding.
4. Direct the groups to form a line of ranks in ascending order.

SAFETY

Nil.

INSTRUCTOR GUIDELINES

Nil.

END OF LESSON CONFIRMATION

The cadets' participation in the activities will serve as confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Every member of the squadron has a rank. It is important to be able to recognize cadets and officers by their rank in order to demonstrate the proper respect. Practicing rank recognition and knowing the officers at the squadron is vital for cadets to be able to serve as a member of the squadron. Rank recognition is the first step in knowing and following the chain-of-command.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A0-149 CATO 13-02 Director Cadets 4. (2009). *Cadet rank promotions*. Ottawa, ON: Department of National Defence.

A3-005 QR&O 3.01 Departments of National Defence. (2006). *QR&O 3.01: Ranks and designation of rank*. In Queen's Regulations and Orders for the Canadian Forces (Vol. 1, Ch 3). Ottawa, ON.

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 3

EO M107.03 – OBSERVE RULES AND PROCEDURES FOR THE PAYING OF COMPLIMENTS

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for this lesson to orient them to the various procedures for addressing NCOs, subordinate officers and commissioned officers and for paying compliments.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have observed rules and procedures for paying compliments.

IMPORTANCE

It is important that the cadets be able to address cadet NCO, subordinate officers, commissioned officers and pay compliments. They will have many opportunities to practice these skills during their time as a cadet.

Teaching Point 1 **Explain the procedures for addressing cadet NCOs and subordinate officers.**

Time: 10 min Method: Interactive Lecture

ADDRESSING CADET NCOS AND SUBORDINATE OFFICERS

It is important to pay the correct compliments to the appropriate individuals.

When addressing a cadet NCO or a subordinate officer, the cadet will stand at the position of attention. As cadet NCOs and subordinate officers do not hold a commission from the Queen, they are not saluted. Throughout the conversation, the cadet shall address the NCO or subordinate officer by their rank and surname and remain at the position of attention. When the cadet has completed addressing the NCO or officer, they should dismiss themselves appropriately by turning to the right.

The instructor should demonstrate this process prior to the activity.

ACTIVITY

OBJECTIVE

The objective of the activity is to allow the cadets to practice the procedures for addressing cadet NCOs and subordinate officers.

RESOURCES

Nil.

ACTIVITY INSTRUCTIONS

1. Divide the cadets into pairs. Assign one as the cadet NCO or subordinate officer.
2. Have the other cadet approach and address the cadet NCO / subordinate officer.
3. Have the cadet NCO /subordinate officer dismiss the cadet.
4. Have the cadets change roles.

SAFETY

Nil.

INSTRUCTOR GUIDELINES

Nil.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. Do cadet NCOs and subordinate officers hold a commission from the Queen?

Q2. If they do not hold a commission, are they saluted?

Q3. Name an action the cadet should take while addressing a cadet NCO/subordinate officer.

ANTICIPATED ANSWERS:

A1. No, they do not hold a commission.

A2. No, they are not saluted.

A3. Standing at the position of attention, addressing by rank and surname, and dismissing appropriately.

Teaching Point 2 **Explain the procedures for addressing a commissioned officer.**

Time: 5 min Method: Interactive Lecture

ADDRESSING COMMISSIONED OFFICERS

When addressing commissioned officers, the same procedures are followed as when addressing NCOs and subordinate officers except a salute shall be given.

The cadet shall stand at the position of attention after approaching the commissioned officer. The cadet will then give the appropriate salute as outlined in A-DH-201-000/PT-000, *Canadian Forces Manual of Drill and Ceremonial*. Throughout the conversation the cadet shall address the commissioned officer by their rank and surname and always remain at the position of attention unless otherwise directed by the commissioned officer. When the cadet has completed addressing the officer, they should again salute and dismiss themselves appropriately.

The instructor should demonstrate this process prior to the activity.

ACTIVITY

OBJECTIVE

The objective of the activity is to allow the cadets to practice the procedures for addressing commissioned officers.

RESOURCES

Nil.

ACTIVITY INSTRUCTIONS

1. Divide the cadets into pairs. Assign one as the commissioned officer.
2. Have the other cadet approach, salute and address the commissioned officer.

3. Have the commissioned officer dismiss the cadet.
4. Have the cadets change roles

SAFETY

Nil.

INSTRUCTOR GUIDELINES

Nil.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. Are you required to salute commissioned officers? Why?

Q2. When should the commissioned officer be saluted?

ANTICIPATED ANSWERS:

A1. Yes. They hold a commission from the Queen (King).

A2. After the officer has been approached and prior to dismissal.

Teaching Point 3 **Explain the regulations for paying compliments inside a building.**

Time: 5 min Method: Interactive Lecture

PAYING COMPLIMENTS INSIDE A BUILDING

Salutes are not given inside buildings except when on parade, during ceremonial occasions, or when entering and leaving offices. However, cadets shall turn their head and offer a polite greeting when meeting an officer in a common area. It is not customary to wear headdress inside a building.

ENTERING AN OFFICE

When entering an office the cadet shall:

- stand at the position of attention in the doorway;
- salute if wearing headdress and the office occupant holds a commission; and
- politely ask permission to enter the office.

LEAVING AN OFFICE

When leaving an office the cadet shall:

- stand at the position of attention in the doorway;
- salute if wearing headdress and the office occupant holds a commission; and
- depart.

The instructor should demonstrate this process prior to the activity.

RCAC Level one handbook, Cadets Canada, 1993

Figure 1 Entering and Leaving an Office

ACTIVITY

OBJECTIVE

The objective of this activity is to allow the cadets to practice the procedures for entering and leaving offices.

RESOURCES

Nil.

ACTIVITY INSTRUCTIONS

1. Divide the cadets into pairs. Assign one of them as the cadet to enter / leave an office while the other is “in” the office.
2. Have the cadet practice entering / leaving the office.
3. Have the cadets change roles.

SAFETY

Nil.

INSTRUCTOR GUIDELINES

Nil.

CONFIRMATION OF TEACHING POINT 3

QUESTION:

Q1. Name two times or places where compliments are paid inside a building.

ANTICIPATED ANSWER:

A1. Parade Square, ceremonial occasions, entering and leaving offices.

Teaching Point 4 **Explain other occasions to pay compliments.**

Time: 5 min Method: Interactive Lecture

OTHER OCCASIONS TO PAY COMPLIMENTS

It is appropriate for cadets to salute on different occasions.

- When the Canadian or another foreign national anthem is played.
- When recognizing a commissioned officer who is not in uniform.
- When the National Flag of Canada is being lowered or raised.
- When boarding or disembarking any of Her Majesty's Canadian ships or those of a foreign service, cadets shall pay compliments to the quarterdeck.

CONFIRMATION OF TEACHING POINT 4

QUESTIONS:

Q1. Does one salute when recognizing a commissioned officer out of uniform?

Q2. Does one pay compliments if the Star Spangled Banner is played?

ANTICIPATED ANSWERS:

A1. Yes, compliments shall be paid.

A2. Yes, compliments are paid for all national anthems.

END OF LESSON CONFIRMATION

The cadets' participation in the activities will serve as confirmation for this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

There will be many opportunities to address cadet NCOs, subordinate and commissioned officers and pay compliments inside a building. These acts may feel awkward initially and are part of a disciplined military culture. With practice, they will become natural. These acts of comportment are key ways to demonstrate respect for senior cadets and superiors.

INSTRUCTOR NOTES/REMARKS

Nil.

REFERENCES

A0-002 A-PD-201-000/PT-000 National Defence. (2001). *The Canadian Forces Manual of Drill and Ceremonial*. Ottawa, ON: National Defence.

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 4

EO M107.04 – STATE THE AIM AND MOTTO OF THE AIR CADET PROGRAM

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for this lesson to orient the cadets to the aim and motto of the Air Cadet Program.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have stated the aim and motto of the Air Cadet program.

IMPORTANCE

Knowing the aims and motto of the air cadet program are fundamental for any cadet. This information will give cadets a better understanding of how the cadet program can help them develop as a cadet and an individual.

Teaching Point 1 **State the mission of the cadet program.**

Time: 5 min Method: Interactive Lecture

MISSION

The mission of the cadet program is to contribute to the development and preparation of youth for the transition to adulthood, enabling them to meet the challenges of modern society, through a dynamic, community-based program.

CONFIRMATION OF TEACHING POINT 1

QUESTION:

Q1. What is the mission of the cadet program?

Q2. What does the mission mean to you?

ANTICIPATED ANSWER:

A1. The mission of the cadet program is to contribute to the development and preparation of youth for the transition to adulthood, enabling them to meet the challenges of modern society, through a dynamic, community-based program.

A2. Answers will vary.

Teaching Point 2 **State the vision of the cadet program.**

Time: 5 min Method: Interactive Lecture

VISION

The vision of the cadet program is a relevant, credible and proactive youth development organization, offering the program of choice for Canada's youth, preparing them to become the leaders of tomorrow through a set of fun, challenging, well organized and safe activities.

CONFIRMATION OF TEACHING POINT 2

QUESTION:

Q1. What is the vision of the cadet program?

Q2. What does the vision mean to you?

ANTICIPATED ANSWER:

A1. The vision of the cadet program is a relevant, credible and proactive youth development organization, offering the program of choice for Canada's youth, preparing them to become the leaders of tomorrow through a set of fun, challenging, well organized and safe activities.

A2. Answers will vary.

Teaching Point 3 **Describe the aim of the cadet program.**

Time: 10 min Method: Interactive Lecture

DEVELOP IN YOUTH THE ATTRIBUTES OF GOOD CITIZENSHIP AND LEADERSHIP

The cadet program aims to assist in the development of cadets as good citizens and leaders.

Through citizenship and community services activities, the cadet develops an appreciation for community membership and involvement within cadet, local, regional, provincial, national, and global communities. Cadets' active involvement will have a positive impact on local communities, which will contribute to community strength and vibrancy.

Through leadership activities, cadets develop interpersonal skills and assume responsibility as effective team members, leaders and dynamic coaches. They will develop the ability to conduct themselves in an ethical and socially responsible way.

PROMOTE PHYSICAL FITNESS

The cadet program aims to promote physical well-being. Cadets develop an understanding of the benefits of fitness and a healthy lifestyle. This understanding, combined with on-going participation in fitness activities, aids in the development of positive attitudes and behaviours that build resiliency within cadets and enable them to meet challenges.

STIMULATE THE INTEREST OF YOUTH IN THE SEA, LAND AND AIR ACTIVITIES OF THE CANADIAN FORCES (CF)

The cadet program aims to expose youth to the sea, land and air activities of the CF. Cadets develop elemental skills through introduction and interaction with their respective CF communities. The cadet program educates and promotes liaison with civilian maritime, adventure and aviation communities. These combined experiences and interactions are essential to the unique identity of the sea, army and air cadet organizations. Also, they distinguish the cadet program as a whole from other youth development programs.

CONFIRMATION OF TEACHING POINT 3

QUESTIONS:

Q1. What is the aim of the cadet program?

Q2. How does the cadet program help in developing good citizens and leaders?

Q3. How does the cadet program promote physical fitness?

Q4. How does the cadet program stimulate an interest in the sea, land and air activities of the Canadian Forces?

ANTICIPATED ANSWERS:

A1. Develop in youth the attributes of good citizenship and leadership, promote physical fitness and stimulate the interest of youth in the sea, land and air activities of the CF.

A2. Through citizenship and community services activities, the cadet develops an appreciation for community membership and involvement within cadet, local, regional, provincial, national, and global communities. Cadets' active involvement will have a positive impact on local communities, which will contribute to community strength and vibrancy.

Through leadership activities, cadets develop interpersonal skills and assume responsibility as effective team members, leaders and dynamic coaches. They will develop the ability to conduct themselves in an ethical and socially responsible way.

A3. The cadet program aims to promote physical well-being. Cadets develop an understanding of the benefits of fitness and a healthy lifestyle. This understanding, combined with on-going participation in fitness activities, aids in the development of positive attitudes and behaviours that build resiliency within cadets and enable them to meet challenges.

A4. The cadet program aims to expose youth to the sea, land and air activities of the CF. Cadets develop elemental skills through introduction and interaction with their respective CF communities. The cadet program educates and promotes liaison with civilian maritime, adventure and aviation communities. These combined experiences and interactions are essential to the unique identity of the sea, army and air cadet organizations. Also, they distinguish the cadet program as a whole from other youth development programs.

Teaching Point 4 **State the motto of the air cadet program.**

Time: 5 min Method: Interactive Lecture

MOTTO

The motto of the air cadet program is: To Learn - To Serve - To Advance.

- To Learn - the cadets learn new things throughout the program from qualified people, from various fields of expertise.
- To Serve – the cadet learns how to serve in the community and within their local squadron.
- To Advance - the cadet is able to advance through the program by gaining knowledge and then passing their knowledge and experience on to other cadets.

CONFIRMATION OF TEACHING POINT 4

QUESTIONS:

Q1. What is the motto of the air cadet program?

Q2. What does ‘To Learn’ mean?

Q3. What does ‘To Serve’ mean?

Q4. What does ‘To Advance’ mean?

ANTICIPATED ANSWERS:

A1. To Learn – To Serve – To Advance.

A2. The cadet learns new things throughout the program from qualified people, from various fields of expertise.

A3. The cadet learns how to serve in the community and within their local squadron.

A4. The cadet is able to advance through the program by gaining knowledge and then passing their knowledge and experience on to other cadets.

Other answers to questions 2 to 4 may arise. Each aspect of the motto can mean something different for each cadet.

END OF LESSON CONFIRMATION

The cadets' responses to questioning after each teaching point will serve as confirmation for this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

The aims and motto of the air cadet program provide the cadet with a greater understanding of what it means to be an air cadet, and will foster a sense of pride in belonging to the air cadet program.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A0-010 CATO 11-03 Director Cadets 3. (2006). *Cadet program mandate*. Ottawa, ON: Department of National Defence.

C2-040 The Air Cadet League of Canada. (2006). *Policy 3.1: aim of the Canadian cadet organizations*. Retrieved 25 May, 2006, from http://www.aircadetleague.ca/templates/pdf/refmanual/english/pol_3_1.pdf

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 5

EO M107.05 – WEAR THE AIR CADET UNIFORM

Total Time: 60 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for this lesson as it allows the instructor to present the material to the cadets.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have worn the air cadet uniform.

IMPORTANCE

The cadet uniform is highly recognizable and the standard of personal dress, appearance and grooming shall be such as to reflect credit on the individual and the Canadian Cadet Organization (CCO).

Teaching Point 1 **Explain the correct manner in which to wear headdress.**

Time: 5 min Method: Interactive Lecture

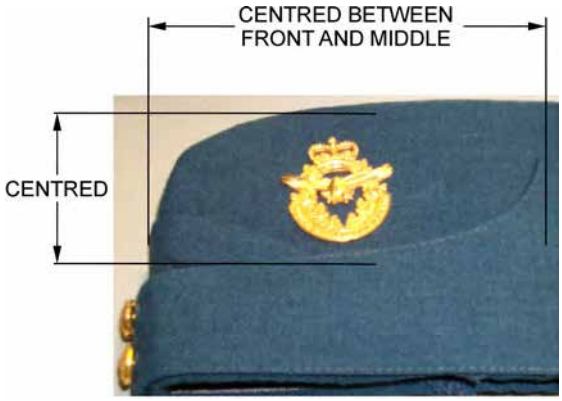
As each piece of uniform is being presented, the instructor should explain and show the proper wear and care (where applicable) of the piece using a senior cadet as a demonstrator.

WEDGE

The wedge shall be worn on the right side of the head with the lower point of the front crease in the centre of the forehead and with the front edge of the cap 2.5 cm above the right eyebrow. Two air force buttons must be attached in pre-cut holes at the front.

WEDGE INSIGNIA

The wedge insignia is to be worn on the left side of the wedge with the centre of the badge positioned mid-way between the front and mid-point of the wedge.



Royal Canadian Air Cadet Dress Instructions

Figure 1 Placement of Wedge Insignia

WIDE BRIMMED TAN SUMMER HAT

The wide brimmed tan summer hat may be worn during summer activities for which the wedge is unsuitable.

TOQUE

The toque may be worn outside when weather conditions dictate.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. On what side of the wedge is the insignia worn?

Q2. Where are the two air force buttons placed on the wedge?

Q3. When and where can the toque be worn?

ANTICIPATED ANSWERS:

A1. Left side.

A2. In pre-cut holes on the front of the wedge.

A3. Outside when weather conditions dictate.

Teaching Point 2 **Explain the correct manner to wear and care for clothing articles on the upper body.**

Time: 10 min Method: Interactive Lecture

As each piece of uniform is being presented, the instructor should explain and show the proper wear and care (where applicable) of the piece using a senior cadet as a demonstrator.

SHORT SLEEVE SHIRT

The short sleeve shirt may be worn with or without the tie. It can also be worn with or without the jacket. It shall be kept clean and pressed. The only crease is to be down the centre of each sleeve starting at the centre of each epaulette. The shirt shall be tucked into the pants and the top button shall remain open when not wearing the tie.

NECKTIE

The necktie shall be knotted neatly using a Windsor or four in hand knot and shall be kept tight. Plain gold colour tie clips or pins may be used. When the jacket is removed the tie shall not be tucked into the shirt except for safety reasons.

WINDSOR KNOT

Royal Canadian Air Cadet Dress Instructions

Figure 2 Method for Tying a Windsor Knot

FOUR-IN-HAND KNOT

Royal Canadian Air Cadet Dress Instructions

Figure 3 Method for Tying a Four in Hand Knot

The instructor can briefly show the class the two methods for tying the tie. This information is also found in the handbook for reference purposes when the cadets are practicing on their own time.

DARK BLUE COTTON T-SHIRT

The dark blue cotton t-shirt may be worn with the appropriate orders of dress. It shall be wrinkle free at all times.

TURTLENECK SWEATER

The turtleneck sweater may be worn with or without the jacket but the jacket must be worn when proceeding to and from the squadron's location. Sleeves shall not be rolled or taken up.

JACKET AND JACKET BELT

The cadet jacket with cloth belt shall be worn fully buttoned with the exception of the top button. Jackets may be removed in buildings and offices when authorized. The jacket shall be kept clean and pressed. The sleeves of the jacket shall be roll pressed with no creases. The jacket belt shall be worn so as the excess of the belt, once attached, is on the left side of the buckle. The buckle shall be adjusted so that the excess of the belt on the left side is not more than 8 cm.

ALL-SEASON JACKET

The all-season jacket may be worn year round when weather conditions dictate. The liner and the exterior jacket may be worn separately or as a set. Rank slip-ons shall be worn on both.

RANK SLIP-ONS

Rank slip-ons shall be worn on both shoulders with the short-sleeve shirt, the all-season jacket, with the CF flying suit at the flying site for authorized cadets and with CF combat clothing during squadron survival exercises when authorized by the squadron CO.

GREY SPORTS T-SHIRT

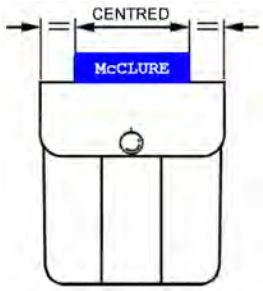
The grey sports t-shirt shall be worn as directed by the squadron or CSTC CO.

BLACK GLOVES AND MITTS

Plain black civilian pattern gloves and mitts may be worn with the overcoat, parka, or all-season jacket when weather conditions dictate.

NAMETAG

The nametag shall be made of blue and white laminated plastic plate 6.3 cm in length and 1.2 cm in height. It shall be inscribed with white lettering 0.6 cm high and shall indicate only the surname of the cadet. The nametag is worn over the right breast pocket and should be detachable.



Royal Canadian Air Cadet Dress Instructions

Figure 4 Right Breast Pocket with Nametag

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. What are the two methods for tying the tie?

Q2. Where are the creases in the short sleeve shirt placed?

Q3. How are the sleeves of the jacket pressed?

ANTICIPATED ANSWERS:

A1. Windsor and four in hand knots.

A2. The only crease to be in the shirt is to be down the centre of each sleeve starting at the centre of each epaulette.

A3. The sleeves of the jacket shall be roll pressed with no creases.

Teaching Point 3 **Explain the correct manner to wear and care for the trousers and shorts.**

Time: 5 min Method: Interactive Lecture

As each piece of uniform is being presented, the instructor should explain and show the proper wear and care (where applicable) of the piece using a senior cadet as a demonstrator.

TROUSERS

The trousers shall be stream pressed without starch so as to have creases down the centre of each leg in the front and the back. Creases shall extend from the top of the leg to the bottom and shall not be sewn or glued.

BLACK BELT

The black belt shall be worn with the trousers such that the buckle is centred and the ends are “brass on brass”. Brass on brass is when the end of the belt meets the brass buckle, and when the belt is done up, there is no black showing between the two pieces of brass. The belt may need to be adjusted in order for this to occur.

GREY SPORTS SHORTS

The grey sports shorts shall be worn as directed by the squadron or CSTC CO.

CONFIRMATION OF TEACHING POINT 3

QUESTIONS:

Q1. Where are the creases in the trousers placed?

Q2. How is the buckle on the belt worn?

ANTICIPATED ANSWERS:

A1. The trousers are pressed to have creases down the centre of each leg in the front and the back. Creases shall extend from the top of the leg to the bottom.

A2. Centred with the ends brass on brass.

Teaching Point 4 **Explain the correct manner to wear and care for footwear.**

Time: 10 min Method: Interactive Lecture

As each piece of uniform is being presented, the instructor should explain and show the proper wear and care (where applicable) of the piece using a senior cadet as a demonstrator.

BOOTS

Black ankle boots are to be laced horizontally from side to side.

Royal Canadian Air Cadet Dress Instructions

Figure 5 Method of Lacing Boots

When the boots are tied, the ends of the laces are to be tucked inside the boot. Boots shall not be modified with any type of metal cleats, hobnails or other metal attachments to the heel or sole. No varnish other than shoe polish will be used to shine the boots.

CARE OF THE BOOTS

The black ankle boots should be cleaned and polished on a regular basis. General guidelines for polishing the boots include:

1. The welts of the boot are to be cleaned with an old toothbrush and black boot polish.
2. Use a polish cloth wrapped around the index finger.
3. Apply a moderate amount of polish to the cloth.
4. Apply the polish in a circular motion to the area being polished.
5. Start with large circles to cover the area with polish.
6. Use smaller circles as the polish gets worked into the boot.
7. Continue to work in a circular motion until circles formed by the polish are no longer visible.
8. The whole boot is to be polished, not just the toe.

RUNNING SHOES

Running shoes shall be worn as directed by the squadron or CSTC CO.

GREY WOOL SOCKS

Grey wool socks shall be worn with boots and running shoes. If a cadet suffers from a recognized allergy to wool the cadet may wear grey or black cotton or nylon socks.

CONFIRMATION OF TEACHING POINT 4

QUESTIONS:

Q1. When should grey wool socks be worn?

Q2. How should the black ankle boots be laced?

ANTICIPATED ANSWERS:

A1. Grey socks shall be worn at all times with boots and issued running shoes unless the cadet suffers from a recognized allergy to wool.

A2. The black ankle boots should be laced horizontally from sided to side.

Teaching Point 5 **Explain the placement of level one air cadet badges.**

Time: 10 min Method: Interactive Lecture

SQUADRON SHOULDER BADGES

Squadron shoulder badges are to be worn on both sleeves of the jacket only. The top of the badge is to be 2 cm below the upper shoulder seam.

Royal Canadian Air Cadet Dress Instructions

Figure 6 Squadron Shoulder Flash

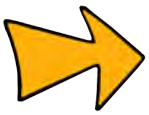
RANK BADGES

The LAC rank badges are to be worn centered on both sleeves of the jacket, mid-way between the elbow and the upper shoulder seam.

Royal Canadian Air Cadet Dress Instructions

Figure 7 LAC Rank Badge

When cadets have been promoted to the rank of Corporal, they may need assistance / guidance in sewing their rank badges onto their uniform. Their Level Officer / Flight Commander can assist.



All badges are to be sewn onto the jacket neatly and with thread that blends in with the colour of the badge and the uniform.

CONFIRMATION OF TEACHING POINT 5

QUESTIONS:

Q1. What uniform part are the squadron shoulder flashes worn on?

Q2. How far down the sleeve is the squadron shoulder flash worn?

Q3. Where are the LAC badges worn on the uniform?

ANTICIPATED ANSWERS:

A1. Only on the jacket.

A2. 2 cm.

A3. LAC rank badges are to be worn centered on both sleeves, mid-way between the elbow and the upper shoulder seam.

Teaching Point 6 **Explain personal appearance while in uniform.**

Time: 10 min Method: Interactive Lecture

GENERAL APPEARANCE

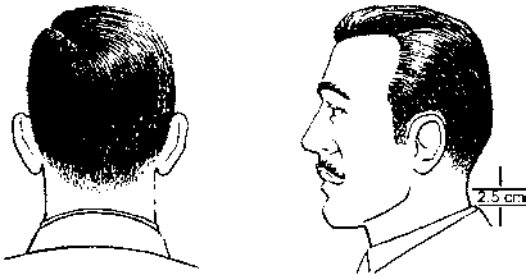
Cadets in uniform shall be well groomed with footwear cleaned and shone. Uniforms shall be clean and properly pressed at all times. In particular, buttons, fasteners and zippers shall be kept closed. Pockets shall not bulge. Items such as glasses, sun-glasses, glasses cases, pens, pencils, key-rings or paper shall not visibly extend or protrude from pockets or be suspended from waist belts or pockets. Headsets from a radio receiver, tape / CD player or other personal entertainment device shall not be worn.

HAIRSTYLES

Hair shall be neatly groomed and conservatively styled. The length, bulk and style of hair shall not preclude the proper wear of the wedge. Style and colour shall not be bizarre, exaggerated or of unusual appearance. Unusual colours such as green, bright red, orange, purple, etc. are not permitted.

MALE HAIRSTYLES

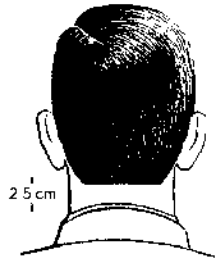
Male cadets' hair shall be taper trimmed at the back, sides, and above the ears to blend with the hairstyle. It shall be no more than 15 cm in length. When the hair is groomed and wedge is removed, no hair shall touch the ears or fall below the top of the eyebrows.



TAPER TRIMMED
HAIRCUT CONVENTIONAL

Royal Canadian Air Cadet Dress Instructions

Figure 8 Taper Trimmed Haircut – Conventional



TAPER TRIM HAIRCUT
STRAIGHT BACK APPEARANCE

Royal Canadian Air Cadet Dress Instructions

Figure 9 Taper Trimmed Haircut – Straight Back Appearance

SIDEBURNS

Sideburns shall not extend below a line horizontally bisecting the ear. They shall be squared off horizontally at the bottom edge and taper trimmed to conform to the overall hairstyle.

MOUSTACHES

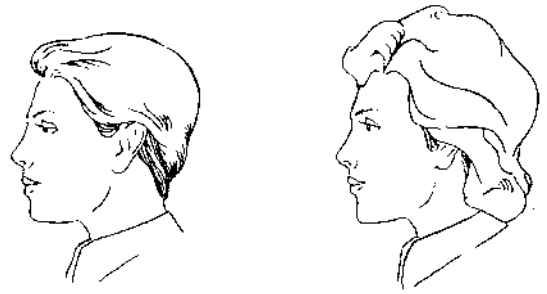
When moustaches are worn, the unshaven portion of the face shall not extend outwards beyond the corners of the mouth. Moustaches shall be kept neatly trimmed, not be greater than 2 cm (3/4 in.) in bulk, not extend below the corners of the mouth, and not protrude beyond the width of the mouth.

Canadian Forces Dress Instructions

Figure 10 Moustache

FEMALE HAIRSTYLES

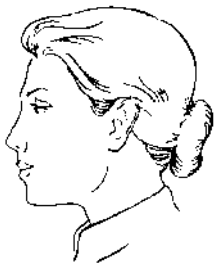
Female cadets' hair shall not extend below the lower edge of the shirt collar.



Royal Canadian Air Cadet Dress Instructions

Figure 11 Female Short Hairstyles

Hair may be worn in a bun at the back of the head.



Royal Canadian Air Cadet Dress Instructions

Figure 12 Hair Styled in Bun

Braids shall be styled conservatively and tied tightly. They shall be secured at the end by a knot or a small unadorned fastener. A single braid shall be worn in the centre of the back. Double braids shall be worn behind the shoulders. When gathered behind the head and braided hair shall be a maximum length that does not extend below the top of the armpit.

Royal Canadian Air Cadet Dress Instructions

Figure 13 Single Braid

Royal Canadian Air Cadet Dress Instructions

Figure 14 Double Braids

MAKE-UP

Female cadets are authorized to wear a minimal amount of make-up. When wearing the uniform, make-up shall be applied conservatively. This precludes the use of false eyelashes, heavy eyeliner, brightly coloured eye shadow or lipstick, coloured nail polish, and excessive facial make-up.

JEWELLERY

The only jewellery that may be worn in uniform shall be a wristwatch, a medical alert bracelet and a maximum of two rings, which are not of a costume jewellery nature.

Female cadets in uniform may wear a single pair of plain gold stud, silver stud or white pearl earrings in pierced ears. The single stud earring (worn in the centre of each earlobe) shall be spherical in shape and not exceed 0.6 cm in diameter. Male cadets are not authorized to wear an earring or earrings.

Royal Canadian Air Cadet Dress Instructions

Figure 15 Stud Earring Centred in Earlobe

TATTOOS AND PIERCINGS

Cadets shall not acquire visible tattoos that could be deemed to be offensive or otherwise reflect discredit on the Canadian Cadet Movement. Cadets in uniform shall not wear visible body piercing adornments (tongue included). Covering the unauthorized piercing with an adhesive bandage is not acceptable.

ACCESSORIES

Civilian pattern backpacks shall be of conservative appearance. They may either be carried in the left hand or worn suspended from both shoulders and square on the back.

Female cadets are permitted to carry a purse. The purse is to be held in the left hand or suspended over the left forearm. When the purse is carried as a shoulder bag, the strap shall be suspended from the left shoulder with the top of the purse not higher than waist level. It shall not be carried as a handbag.

EYEGLASSES / SUNGLASSES

Eyeglasses and sunglasses shall be conservative in design and colour. Sunglasses with photo chromic or mirrored lenses are not authorized for wear. Cadets, who normally wear eyeglasses, may wear either conventionally framed prescription sunglasses or conservatively styled clip-on sunglasses when conditions and circumstances dictate. Other cadets may wear conservatively styled sunglasses, which do not detract from the overall appearance of the uniform when conditions and circumstances dictate. Sunglasses shall not be worn on parade unless authorized by the CSTC or Squadron CO in special circumstances.

CARRYING OF ARTICLES

If any article is being carried, such as a briefcase, it is to be carried in the left hand. If an article is being carried while marching, the left arm is not swung.

CIVILIAN CLOTHING

Other than those specific items listed in the CATO, civilian clothing shall not be worn with the cadet uniform unless authorized by the CSTC or squadron CO in special circumstances. This includes, but is not limited to, civilian jackets and hats.

GENERAL DEPORTMENT

Chewing gum, slouching, sauntering, placing hands in pockets, smoking, eating on the street, walking hand in hand and similar deportment that detracts from a proud and orderly appearance in the eyes of the public is unacceptable for cadets. Physical displays of affection between uniformed cadets shall be avoided.

CONFIRMATION OF TEACHING POINT 6

QUESTIONS:

Q1. In what hand should articles be held?

Q2. What is the policy on tattoos and piercings?

Q3. What deportment is unacceptable for cadets?

Q4. What jewellery is authorized for wear while in uniform?

ANTICIPATED ANSWERS:

A1. Left hand.

A2. Cadets shall not acquire visible tattoos that could be deemed to be offensive or otherwise reflect discredit on the Canadian Cadet Movement. Cadets in uniform shall not wear visible body piercing adornments (tongue included). Covering the unauthorized piercing with an adhesive bandage is not acceptable.

A3. Chewing gum, slouching, sauntering, placing hands in pockets, smoking, eating on the street, walking hand in hand and similar deportment which detracts from a proud and orderly appearance in the eyes of the public is unacceptable for cadets.

A4. The only jewellery that may be worn in uniform shall be a wristwatch, a medical alert bracelet and a maximum of two rings, which are not of a costume jewellery nature. Female cadets in uniform may wear a single pair of plain gold, silver stud or white pearl earrings in pierced ears.

END OF LESSON CONFIRMATION

The cadets' responses to instructor questioning throughout the lesson will serve as confirmation of the lesson.

CONCLUSION

HOMEWORK/READING/PRACTICE

Nil.

METHOD OF EVALUATION

There is no formal assessment of this EO. Cadets will be expected to properly wear the air cadet uniform on an ongoing basis in accordance with the Royal Canadian Air Cadet Dress Instructions. Cadets will be expected to maintain an acceptable standard of personal dress and deportment.

CLOSING STATEMENT

The air cadet uniform should be worn properly at all times. The cadet uniform is highly recognizable and the standard of personal dress, appearance, and grooming shall be such as to reflect credit on the individual and on the CCO. The intent is to ensure a high standard of grooming consistent with that expected of cadets.

INSTRUCTOR NOTES/REMARKS

Emphasis must be placed on the cadets' requirement to properly care for and maintain their uniforms at all times. Cadets should learn from the beginning how to properly maintain their uniforms and wear them properly.

This lesson should be delivered at the beginning of the training year before the cadets are expected to wear their uniforms.

REFERENCES

A3-006 Cadets Canada. (2005). CATO 55-04: *Royal Canadian Air Cadet Dress Instructions*. In Cadet Administrative and Training Orders (Vol. 5). Ottawa, ON.

A0-001 A-AD-265-000/AG-001 DHH 3-2. (2001). *Canadian Forces Dress Instructions*. Ottawa, ON.

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 6

EO M107.06 – DISCUSS SUMMER TRAINING OPPORTUNITIES

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for this lesson to orient the cadets to General Training and generate an interest in future summer training opportunities.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have discussed summer training opportunities.

IMPORTANCE

It is important for the cadets to understand the training opportunities available to them during the year one summer so they are aware of what qualifications they are eligible to attend. It is also important to know what opportunities are available in future summers in order to start thinking about what qualifications they may wish to complete in the future.

Teaching Point 1 **Discuss General Training (GT).**

Time: 15 min Method: Interactive Lecture

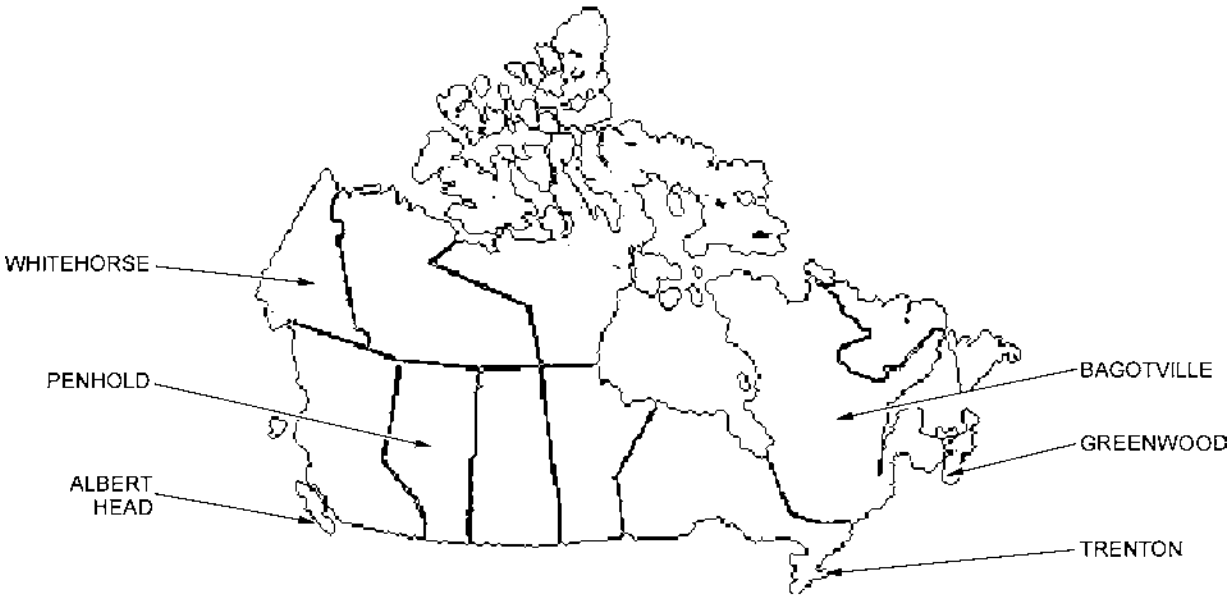
AIM

The GT is two-weeks in duration. The aim of GT is to familiarize qualified level one cadet with life at the cadet summer training centre, introduce cadets to all summer training program areas, and further develop the fundamentals of air cadet training.

LOCATIONS

GT is conducted at various summer training centres across the country including:

- Whitehorse, YT
- Albert Head, BC.
- Penhold, AB.
- Trenton, ON
- Bagotville, QC.
- Greenwood, NS.



www.theodora.com/maps

Figure 1 Map of Summer Training Centres Across Canada

GT is comprised of the following training subjects and performance objectives:

Common Training (this is training that is common also to Sea and Army Cadets attending their respective GT at CSTC):

- Leadership - PO S103 Participate as a Member of a Team.
- Fitness and Sports - PO S105 Participate in Physical Activities.

- Air Rifle Marksmanship - PO S106 Participate in Recreational Marksmanship Using the Cadet Air Rifle.
- General Cadet Knowledge - PO S107 Adapt to the CSTC Environment.

Elemental Training (this is training unique to Air Cadets attending GT):

- Citizenship - PO S101 Participate in Citizenship Activities.
- Drill - PO S108 Participate in a Drill Competition.
- Music Performance - PO S114 Participate in Music Familiarization.
- Aviation - PO S130 Participate in Aviation Activities.
- Aerospace - PO S140 Participate in Aerospace Activities.
- Aerodrome Operations - PO S160 Participate in Aerodrome Operations Activities.
- Aircraft Manufacturing and Maintenance - PO S170 Tour an Aircraft Manufacturing Maintenance Facility.
- Aircrew Survival - PO S190 Participate in an Aircrew Survival Exercise.

CONFIRMATION OF TEACHING POINT 1

QUESTION:

Q1. How long is GT?

Q2. Name one location of GT.

Q3. What are two performance objectives of GT?

ANTICIPATED ANSWERS:

A1. GT is 2 weeks in duration.

A2. GT is conducted in Whitehorse, YT, Albert Head, BC, Penhold, AB, Trenton, ON, Bagotville, QC, and Greenwood, NS.

A3.

- PO S101 Participate in Citizenship Activities.
- PO S103 Participate as a Member of a Team.
- PO S105 Participate in Physical Activities.
- PO S106 Participate in Recreational Marksmanship Using the Cadet Air Rifle.
- PO S107 Adapt to the CSTC Environment.
- PO S108 Participate in a Drill Competition.
- PO S114 Participate in Music Familiarization.
- PO S130 Participate in Aviation Activities.
- PO S140 Participate in Aerospace Activities.
- PO S160 Participate in Aerodrome Operations Activities.
- PO S170 Tour an Aircraft Manufacturing Maintenance Facility.
- PO S190 Participate in an Aircrew Exercise.

Teaching Point 2 **Introduce the summer training program areas.**

Time: 10 min Method: Interactive Lecture

AVIATION

Aviation summer training opportunities include:

- Basic Aviation – three weeks. This qualification can be taken starting in the summer of year two.
- Advanced Aviation – three weeks. This qualification can be taken starting in the summer of year three.
- Glider Pilot Scholarship - six weeks. This qualification can be taken starting in the summer of year three.
- Power Pilot Scholarship – seven weeks. This qualification can be taken starting in the summer of year four.

LEADERSHIP

Leadership summer training opportunities include:

- Basic Leadership – three weeks. This qualification can be taken starting in the summer of year two.
- Leadership and Ceremonial Instructor – six weeks. This qualification can be taken starting in the summer of year three.

AIRCREW SURVIVAL

Aircrew Survival summer training opportunities include:

- Basic Survival – three weeks. This qualification can be taken starting in the summer of year two.
- Survival Instructor – six weeks. This qualification can be taken starting in the summer of year three.

AVIATION TECHNOLOGY AND AEROSPACE

Aviation Technology and Aerospace summer training opportunities include:

- Basic Aviation Technology and Aerospace – three weeks. This qualification can be taken starting in the summer of year two.
- Advanced Aerospace – six weeks. This qualification can be taken starting in the summer of year three.
- Advanced Aviation Technology – Airport Operations – six weeks. This qualification can be taken starting in the summer of year three.
- Advanced Aviation Technology – Aircraft Maintenance – six weeks. This qualification can be taken starting in the summer of year three.

FITNESS AND SPORTS

Fitness and Sports summer training opportunities include:

- Basic Fitness and Sports – three weeks. This qualification can be taken starting in the summer of year two.
- Fitness and Sports Instructor – six weeks. This qualification can be taken starting in the summer of year three.

AIR RIFLE MARKSMANSHIP

Air Rifle Marksmanship has one summer training opportunity:

- Air Rifle Marksmanship Instructor – six weeks. This qualification can be taken starting in the summer of year three.

MILITARY BAND

Military Band summer training opportunities include:

- Military Band Basic Musician – three weeks. This qualification can be taken starting in the summer of year two.
- Military Band Intermediate Musician – six weeks. This qualification can be taken starting in the summer of year three.
- Military Band Advanced Musician – six weeks. This qualification can be taken starting in the summer of year three.

PIPE BAND

Pipe Band summer training opportunities include:

- Pipe Band Basic Musician – three weeks. This qualification can be taken starting in the summer of year two.
- Pipe Band Intermediate Musician – six weeks. This qualification can be taken starting in the summer of year three.
- Pipe Band Advanced Musician – six weeks. This qualification can be taken starting in the summer of year three.

TRIPS AND EXCHANGES

The Trips and Exchanges summer opportunities include:

- Oshkosh Trip – three weeks. This trip can be taken starting in the summer of year four.
- International Air Cadet Exchange – three weeks. This exchange can be taken starting in the summer of year five.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. What qualifications are available starting in the summer of year two?

Q2. What are three of the summer training program areas?

ANTICIPATED ANSWERS:

A1. Basic Aviation, Basic Leadership, Basic Survival, Basic Aviation Technology and Aerospace, Basic Fitness and Sports, Military Band Basic Musician and Pipe Band Basic Musician.

A2. Aviation, leadership, aircrew survival, aviation technology and aerospace, fitness and sports, air rifle marksmanship, military band, pipe band, and trips and exchanges.

CONCLUSION

HOMEWORK/READING/PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Many cadets will have the opportunity to attend summer training centres after completing Proficiency Level One. It is important for them to know what options are available for their first summer. It is also important for them to gain a basic understanding of opportunities available to them in the future.

INSTRUCTOR NOTES/REMARKS

Nil.

REFERENCES

A0-096 CATO 11-04 Director Cadets 2. (2007). *Cadet program outline*. Ottawa, ON: Department of National Defence.

A3-029 CATO 51-01 Director Cadets 3. (2006). *Air cadet program outline*. Ottawa, ON: Department of National Defence.

A3-061 CATO 54-27 Director Cadets 4. (2007). *Power pilot scholarship program*. Ottawa: ON: Department of National Defence.

A3-192 CATO 54-26 Director Cadets 4. (2007). *Glider Pilot Scholarship Program*. Ottawa, ON: Department of National Defence.

C0-043 *Quick Maps*. (2006). Retrieved 10 Apr 06, from www.theodora.com/maps

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 7

EO C107.01 – MAINTAIN THE AIR CADET UNIFORM

Total Time: 60 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Set up the training areas required for the demonstration.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TP 1 as it allows the instructor to present the material.

A demonstration was chosen for TPs 2 – 6 as a practical way for the instructor to demonstrate the skills and care in maintaining the air cadet uniform.

An-class activity was chosen for TP 7 to allow the cadets to practice the skills under supervision in a safe and controlled environment.

INTRODUCTION

REVIEW

Review for this lesson is EO M107.05 (Wear the Air Cadet Uniform).

OBJECTIVES

By the end of this lesson the cadet shall have maintained the Air Cadet uniform.

IMPORTANCE

The cadet uniform is highly recognizable and the standard of personal dress, appearance and grooming shall be such as to reflect credit on the individual and on the Canadian Cadet Organization (CCO).

Teaching Point 1 **Explain the pressing cloth.**

Time: 5 min Method: Interactive Lecture

THE PRESSING CLOTH

There are several points to keep in mind when ironing the uniform. A pressing cloth should always be used to prevent the parts of the uniform from becoming shiny.

Some examples of what can be used as a pressing cloth include:

- thin towel,
- pillow case,
- soft cotton cloth, and
- paper bag.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. What is the purpose of using a pressing cloth?

Q2. What are some items that can be used as a pressing cloth?

ANTICIPATED ANSWERS:

A1. To prevent uniform parts from becoming shiny.

A2. Thin towel, pillowcase, soft cotton cloth and paper bag.

Teaching Point 2 **Demonstrate the correct method of care for the trousers.**

Time: 5 min Method: Demonstration

TROUSERS

The instructor shall demonstrate the correct method of care for the trousers to include:

- ensuring trousers are well pressed and free of dirt and lint at all times; and
- pressing the trousers, IAW the standard outlined in M107.05 (Wear the Air Cadet Uniform), which is achieved by:
    - lining the pant leg up by the seams to ensure the creases are properly positioned at the centre of the front and back of the leg;
    - laying the pant leg flat on the ironing board;
    - spraying the pants with water from a water bottle;
    - placing a pressing cloth over the pant leg;
    - ironing the pants until a sharp crease extends down the centre of each leg in the front and back, from the top of the leg to the bottom; and
    - ironing on the same crease each time in order to avoid double creases.

Teaching Point 3 **Demonstrate the correct method of care for the short sleeve shirt.**

Time: 5 min Method: Demonstration

SHORT SLEEVE SHIRT

The instructor shall demonstrate the correct method of care for the short sleeve shirt to include:

- ensuring the short sleeve shirt is clean; and
- pressing the short sleeve shirt, IAW the standard outlined in M107.05 (Wear the Air Cadet Uniform), which is achieved by:
  - pressing the entire short sleeve shirt to ensure it is free of wrinkles by laying it flat on the ironing board;
  - pressing the sleeves flat with the top of the sleeve laid flat to ensure a sharp crease is formed down the centre of each sleeve starting at the centre of each epaulette. There should only be one crease in each sleeve; and
  - the collar may be starched to prevent it from becoming limp.

Teaching Point 4 **Demonstrate the correct method of care for the jacket.**

Time: 5 min Method: Demonstration

JACKET

The instructor shall demonstrate the correct method of care for the jacket to include:

- ensuring the jacket is clean; and
- pressing the jacket, IAW the standard outlined in M107.05 (Wear the Air Cadet Uniform), which is achieved by:
  - pressing the front and back of the jacket to ensure it is free of wrinkles;
  - ensuring the pockets on the front of the jacket are pressed flat; and
  - ensuring the sleeves of the jacket are roll pressed so they are free of creases by ironing the sleeves in sections but not ironing the edges.

Teaching Point 5 **Demonstrate general guidelines for care of the boots.**

Time: 5 min Method: Demonstration

BOOTS

The instructor shall demonstrate caring for the boots to include:

- polishing, IAW the general guidelines outlined in M107.05 (Wear the Air Cadet Uniform), which is achieved by:
  - cleaning the welts of the boot with an old toothbrush and black boot polish;
  - using a polish cloth wrapped around the index finger;
  - applying a moderate amount of polish to the cloth;

- applying the polish in a circular motion to the area being polished;
- starting with large circles to cover the area with polish;
- using smaller circles as the polish gets worked into the boot;
- continuing to work in a circular motion until circles formed by the polish are no longer visible; and
- the whole boot is to be polished, not just the toe.

- lacing the boots, which is achieved by:
  - lacing them straight across;
  - tucking the laces inside the boots; and
  - boots should not be tied to tightly.

Teaching Point 6 **Demonstrate the correct method for wearing the hair.**

Time: 5 min Method: Demonstration

HAIRSTYLES

The instructor shall demonstrate hairstyles IAW M107.05 (Wear the Air Cadet Uniform), which is achieved by ensuring:

- hair is neatly groomed and conservatively styled;
- the wearing of the wedge is not precluded by the length, bulk and style of the hair;
- the style and colour is not bizarre, exaggerated or of unusual appearance;
- the hair is secured or styled back to reveal the face. Any accessories used to secure or control hairstyles shall be unobtrusive;
- that male cadets' hair is taper trimmed at the back, sides and above the ears to blend with the hairstyle;
- the hair is not touching the ears or falling below the top of the eyebrows when the wedge is removed;
- that sideburns are not extending below a line horizontally bisecting the ear, are not squared off horizontally at the bottom edge, and are taper trimmed to conform to the overall hairstyle;
- that female cadets' hair is not extending below the lower edge of the shirt collar;
- that braids are styled conservatively, tied tightly, and secured at the end by a knot or a small unadorned fastener;
- a single braid is worn in the centre of the back; and
- that double braids are worn behind the shoulders.

Further information on acceptable hairstyles can be found in M107.05 (Wear the Air Cadet Uniform).

Teaching Point 7 **Supervise and advise cadets as they practise maintaining the uniform.**

Time: 25 min Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets practise maintaining the uniform.

RESOURCES

- Uniform pieces presented in the lesson.
- Irons.
- Ironing boards/tables.
- Pressing cloths.
- Water bottle.
- Black boot polish.
- Soft boot cloth.
- Old tooth brush.
- Hair elastics.
- Hair nets.
- Bobby pins.
- Hairspray.
- Scissors.
- Assistants if available.

ACTIVITY LAYOUT

Set up five activity stations:

- Station One: Maintain the trousers
- Station Two: Maintain the short sleeve shirt
- Station Three: Maintain the jacket
- Station Four: Maintain the boots
- Station Five: Correct wear of the hair

ACTIVITY INSTRUCTIONS

1. Divide the cadets into five groups.
2. Assign one group to each station.
3. Use assistant instructors at each station to explain to the cadets the steps required at the station. Have the assistant instructors assist, guide and supervise the cadets at each station.

4. After every five minutes, have the groups rotate stations until all groups have been to all stations.

SAFETY

Cadets must be carefully supervised while using hot irons.

INSTRUCTOR GUIDELINES

- During the activity supervise and praise the cadets as they maintain each part of the uniform.
- Assistant instructors should be made available to help supervise at the stations.
- If only the instructor is available they are to rotate around the stations to supervise all cadets.
- Signal timings for station rotations.

END OF LESSON CONFIRMATION

The cadets' participation in the activity will serve as confirmation of the lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

The air cadet uniform should be worn properly at all times. The cadet uniform is highly recognizable and the standard of personal dress, appearance and grooming shall be such as to reflect credit on the individual and the CCO. The intent is to ensure a high standard of grooming consistent with that expected of cadets.

INSTRUCTOR NOTES/REMARKS

This EO should be conducted once the cadets have been issued their uniform.

This EO should be conducted after M107.05 (Wear the Air Cadet Uniform) has been delivered.

Assistant instructors will be required for this lesson.

REFERENCES

A3-006 Cadets Canada. (2005). CATO 55-04: *Royal Canadian Air Cadet Dress Instructions*. In Cadet Administrative and Training Orders (Vol. 5). Ottawa, ON.

A0-001 A-AD-265-000/AG-001 DHH 3-2. (2001). *Canadian Forces Dress Instructions*. Ottawa, ON.

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 8

EO C107.02 – IDENTIFY THE RCAF NCM RANK STRUCTURE OF THE CF

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Have one RCAF NCM rank slip-on for each cadet. If slip-ons are unavailable, use the images from: http://www.forces.gc.ca/site/acf-apfc/Insig/air-eng.asp to make paper slip-ons for each cadet.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TP 1 as a way to present the information to the cadets.

An in-class activity was chosen for TP 2 as it is a fun way to confirm the cadets' comprehension of the material.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have identified the RCAF NCM rank structure of the CF.

IMPORTANCE

It is important for cadets to be able to identify RCAF NCMs by their rank.

Teaching Point 1 **Describe the RCAF NCM rank structure.**

Time: 10 min Method: Interactive Lecture

RCAF FORCE NCM RANK STRUTURE

The RCAF NCM rank structure is:

Private recruit (Pte recruit) - The private recruit rank has no rank badge.

www.forces.gc.ca/site/community/insignia/aira_e.asp#noncommisionned

Figure 1 Private Recruit Rank

Private (Pte) – The private rank consists of one chevron.

www.forces.gc.ca/site/community/insignia/aira_e.asp#noncommisionned

Figure 2 Private Rank

Corporal (Cpl) – The corporal rank consists of two chevrons.

www.forces.gc.ca/site/community/insignia/aira_e.asp#noncommisionned

Figure 3 Corporal Rank

Master Corporal (MCpl) – The master corporal rank consists of two chevrons with a maple leaf on top.

www.forces.gc.ca/site/community/insignia/aira_e.asp#noncommisionned

Figure 4 Master Corporal Rank

Sergeant (Sgt) – The sergeant rank consists of three chevrons with a maple leaf on top.

www.forces.gc.ca/site/community/insignia/aira_e.asp#noncommisionned

Figure 5 Sergeant Rank

Warrant officer (WO) – The warrant officer rank consists of a Tudor crown.

www.forces.gc.ca/site/community/insignia/aira_e.asp#noncommisionned

Figure 6 Warrant Officer Rank

Master warrant officer (MWO) – The master warrant officer rank consists of a Tudor crown surrounded by a wreath.

www.forces.gc.ca/site/community/insignia/aira_e.asp#noncommisionned

Figure 7 Master Warrant Officer Rank

Chief warrant officer (CWO) – The chief warrant officer rank consists of the Canadian Coat of Arms.

www.forces.gc.ca/site/community/insignia/aira_e.asp#noncommisionned

Figure 8 Chief Warrant Officer Rank

The cadets should be able to identify the ranks from the badges or from pictures of the badges. The cadets should also be able to put the ranks in their proper sequence.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. Which rank comes after Master Corporal?

Q2. Which rank is identified by the Canadian Coat of Arms?

Q3. How many chevrons identify the Corporal rank?

ANTICIPATED ANSWERS:

A1. Sergeant.

A2. Chief warrant officer.

A3. 2.

Teaching Point 2 **Conduct an RCAF NCM rank structure identity activity.**

Time: 15 min Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of this activity is for the cadets to become familiar with the RCAF NCM rank structure.

RESOURCES

- One RCAF NCM slip-on for each cadet. If slip-ons are not available, make paper copies for each cadet (use as many ranks as the number of cadets in the class; if there are more than eight cadets there can be more than one cadet with the same rank).
- Tape.

ACTIVITY INSTRUCTIONS

1. Tape one rank to the back of each cadet (the cadet does not get to see the rank that is on their back).
2. Have the cadets walk around and ask other cadets yes or no questions to determine what rank they are wearing. For example, “Do I have two chevrons?” The cadet has to determine from the answers to their questions what rank they are.
3. The cadets can only ask one question to each of the other cadets. They cannot ask the same cadet more than one question to determine what rank they are. This will ensure the cadets are interacting fully with the other members of the class.
4. Once cadets have determined what rank they think they are, have them form a group with any other cadets who are the same rank, if there are any.
5. After 10 minutes, have the cadets split into their rank groups. They will then present what rank they think they are based on the information they received. For example, if a group has determined they have only two chevrons on their back, they would present themselves as the corporal group / individual.

SAFETY

Nil.

INSTRUCTOR GUIDELINES

Nil.

END OF LESSON CONFIRMATION

The cadets’ participation in the activity will serve as confirmation of the lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Cadets should be able to identify RCAF NCM ranks.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A3-008 Department of National Defence. Retrieved 6 April 2006, from www.forces.gc.ca/site/Community/insignia/aira_e.asp#commisioned

A3-005 QR&O 3.01 Department of National Defence. (2006). *QR&O 3.01: Ranks and designations of rank*. In Queen's Regulations and Orders for the Canadian Forces (Vol. 1, Ch 3), Ottawa, ON.

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 9

EO C107.03 – TOUR THE SQUADRON

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An in-class activity was chosen for this lesson as it is an interactive way for cadets to learn about the facilities of their cadet squadron in a safe and controlled environment.

INTRODUCTION

REVIEW

The review for this lesson is from EO M107.03 (Identify Air Cadet Ranks and RCAF Officer Ranks) and EO M107.03 (Observe Rules and Procedures for the Paying of Compliments).

OBJECTIVES

By the end of this lesson the cadet shall have toured the squadron.

IMPORTANCE

Being familiar with the location of all the squadron facilities can aid the cadets in following instructions, finding information and participating in squadron activities.

BACKGROUND KNOWLEDGE

This information is representative only. Information presented must be tailored to be specific to the squadron. Individual squadrons may have information that will vary from the information given in this guide.

PARADE SQUARE

The parade square is where cadets have parades. It is where inspections and drill classes usually take place and where the squadron holds parades and other ceremonial events. Appropriate squadron protocols should be followed regarding the parade square.

CLASSROOMS

Classrooms are the areas where cadets participate in most of their training. The classroom space must be respected, especially in facilities that are shared with other groups. Anything that does not belong to the squadron should be left alone. Protocol for entering and leaving the classroom should be followed.

BREAK AREAS

Break areas are where the cadets should be when not tasked. The squadron guidelines for the use of the area should be discussed.

CANTEEN

The canteen is a store for snacks and other items. The money raised through the canteen may be used to benefit the squadron. Hours of operation, personnel responsible and how the money is used should be discussed.

WASHROOMS

The location of the facilities should be pointed out.

COMMUNICATIONS AREAS

Communications areas could include bulletin boards, activity sign-up sheets, and the location of the standing orders and routine orders. The standing orders contain squadron policies. The routine orders contain information on duties, events, activities and personnel changes. Authorization to post information should be discussed.

COMMANDING OFFICER'S OFFICE

If the CO is available, they should introduce themselves and state briefly what they do. If the CO is not available, the tour guide will provide this information. The CO is at the top of the chain of command within the squadron. The CO is responsible for the training and administration of the cadets, civilian instructors and officers working with the squadron. Cadets will normally only visit the CO's office at the COs request, or if directed by another officer. Protocol for entering and leaving an office should be reviewed.

ADMINISTRATION OFFICE

If the administration staff is available, they should introduce themselves and state very briefly what they do. If they are not available, the tour guide will provide this information. The administration officer (Admin O) is responsible for handling the administrative duties. They are responsible for ensuring forms such as cadet enrolments and summer training applications are completed in full and returned in a timely fashion. They could also be responsible for ensuring attendance is taken for all squadron activities. Other administrative staff

may include assistant administration officers. Cadets may need to go to the administration office to complete paperwork, report absences or to pick up forms. Protocol for entering and leaving an office should be reviewed.

TRAINING OFFICE

If the training staff is available, they should introduce themselves and state very briefly what they do. If they are not available, the tour guide will provide this information. The training officer (Trg O) is responsible for the coordination and implementation of the squadron training program. They are responsible to ensure that training is planned in a logical fashion, instructors are prepared for classes and training materials are readily available for classes. They are also responsible for any administrative forms that are directly related to training, such as training records. Other training staff could include an assistant Trg O, standards officer and level Trg O's. Cadets will normally only visit the training office if the training officer has requested them, or they have been directed by another staff member or cadet NCO. Protocol for entering and leaving an office should be reviewed if applicable.

SUPPLY OFFICE

If the supply staff is available, they should introduce themselves and state very briefly what they do. If they are not available, the tour guide will provide this information. The supply officer (Sup O) is responsible for ordering uniform parts, issuing uniforms parts as necessary and distributing other equipment. They are responsible for all administrative forms that are directly related to supply. Other supply staff could include assistant Sup O's. Cadets will normally visit the supply office to receive their uniform and to exchange items that no longer fit or have become damaged. Appointments may be necessary. If the supply section has specific hours when it is open to cadets, these hours should be stated. Protocol for entering and leaving an office should be reviewed, if applicable.

OUT OF BOUNDS AREAS

Any areas that are out of bounds to cadets should be pointed out. The consequences for violating this policy should be explained.

ACTIVITY

Time: 20 min

OBJECTIVE

This activity is designed to familiarize the cadet with the facilities and staff of their squadron.

RESOURCES

Nil.

ACTIVITY INSTRUCTIONS

1. Divide the cadets into groups of four and assign each group a tour guide.

Group size may be adjusted based on the number of available tour guides and the number of cadets in the class.

2. Have each group start their tour at a different location.

3. Have each group visit each area of the squadron on the tour. Tour guides will present the appropriate information at each point.

SAFETY

Nil.

INSTRUCTOR GUIDELINES

- Brief the tour guides on activity layout and their role.
- Circulate throughout the squadron facilities to watch for bottlenecks and move groups along as necessary.
- Answer questions.
- Ensure protocols are being observed.

REFLECTION

Time: 5 min Method: Group Discussion

TIPS FOR ANSWERING/FACILITATING DISCUSSION:

- Ask questions that help facilitate discussion; in other words, avoid questions with yes or no answers.
- Prepare questions ahead of time.
- Be flexible (you are not bound to only the prepared questions).
- Encourage cadets to participate by using praise such as “great idea” or “excellent response, can anyone add to that?”.
- Try to involve everyone by directing questions to non-participants.

SUGGESTED QUESTIONS:

Q1. Why is it important to know where all of the squadron facilities are located?

Q2. How do you feel now that you know where everything is located?

Q3. What other information about the squadron facilities would help you feel more comfortable at cadets?

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Knowing the location of all the squadron facilities will assist cadets in following instructions, finding information and participating effectively in squadron activities.

INSTRUCTOR NOTES / REMARKS

Additional instructors can be used a tour guides.

REFERENCES

Nil.

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 10

EO C107.04 – PARTICIPATE IN AN ACTIVITY ABOUT THE HISTORY OF THE SQUADRON

Total Time: 60 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Research the squadron history and prepare the necessary items for the activity. Obtain any memorabilia (e.g. historical documents, photos, videos, awards, etc) that would enhance the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An in-class activity was chosen for TP 1 as it is an interactive way to provoke thought and stimulate interest among cadets about the history of the squadron.

A group discussion was chosen for TP 2 as it allows the cadets to interact with their peers.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have participate in an activity about the history of the squadron.

IMPORTANCE

The history of a squadron is a source of pride for those within it. Understanding the history of the squadron allows the cadet to see what has shaped the unit since its inception and recognize its progress.

BACKGROUND KNOWLEDGE

SQUADRON FORMATION

There are a number of events that are historically important during the creation of a squadron. These include:

- the charter date for the squadron;
- the initial composition of the squadron, staff and cadets; and
- the first sponsor of the squadron.

SQUADRON DEVELOPMENTS

Squadrons participate in a number of community service events. Some events may happen annually, while others may occur only during special occasions. These events include, but are not limited to:

- ceremonial parades,
- fundraising events for charities, and
- civic events.

Also, squadron personnel are involved in a number of activities within their unit, which are an important part of the unit's history. These activities may include, but are not limited to:

- formation of various activities within the squadron (such as a drill team, band, first aid team, marksmanship team, etc.),
- participation in exchanges, and
- squadron trips to various locations.

Other important developments in the history of a squadron include:

- the development of a squadron crest, and
- the affiliation of a squadron with a Canadian Forces (CF) military unit.

SQUADRON AWARDS AND ACCOMPLISHMENTS

There are a number of ways that a squadron can be recognized. The recognition may come from winning a competition, or for demonstrating excellence in a particular area. These awards can be won on provincial, regional, national, and in some circumstances, international levels.

Many opportunities exist for cadets to win awards at all levels of the Canadian Cadet Organization (CCO). Cadets winning such awards reflect well upon the squadron.

Memorial awards are awards that are left in memory of someone that has made significant contributions to the local squadron or the CCO. Memorial awards that may be given are an important source of historical information within the squadron.

Outside of awards, there are a number of other cadet accomplishments that make up a fundamental part of the squadron history. They include, but are not limited to:

- civilian careers of former cadets, and
- military careers of former cadets.

ACTIVITY

Time: 40 min

OBJECTIVE

The objective of this activity is to familiarize the cadets with the history of their squadron.

RESOURCES

- Squadron photographs.
- Squadron videos.
- Squadron awards.
- Flip chart paper.
- Flip chart markers.
- Construction paper.
- Three tables.
- Bristol board.

ACTIVITY LAYOUT

Before the activity:

- Prepare learning stations based on three topic areas:
  - squadron formation;
  - squadron developments; and
  - squadron accomplishments.
- Ensure each learning station is dynamic by using photos, newspaper clippings, video clips; timelines, memorabilia, summaries on Bristol board or other items.

ACTIVITY INSTRUCTIONS

1. Divide the cadets into three groups. Place one group at each learning station.
2. Have the cadets interact with the material at each station. Be present to answer questions.
3. Have the cadets rotate to the remaining two stations.

SAFETY

Nil.

REFLECTION

Time: 10 min | Method: Group Discussion

GROUP DISCUSSION

Once the activity is completed, the instructor shall have the groups come up to present their information to the class. The instructor shall call up groups with respect to the topic order listed in background information. The instructor should ensure they highlight any missed information after each topic has been presented.

DISCUSSION QUESTIONS

- During this stage the instructor should quickly pose some questions to the class to confirm their understanding of the knowledge presented in the lesson.
- Some of the questions below may not have been directly answered through the learning station. It is the responsibility of the instructor to create a brief discussion around these questions, emphasizing important points brought forth by the cadets.

SUGGESTED QUESTIONS:

Q1. Why is it important for members of the squadron to be familiar with how it was formed?

Q2. Why are memorial awards important to the history of a squadron?

Q3. Why is it important for cadets to understand the history of the corps'/squadrons' involvement within their community?

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Being familiar with the history of the squadron will give cadets a reason to take pride in being a part of it. Having a good understanding of this information can give cadets more of an appreciation of the squadron and allow them to pass this information on to others.

CHAPTER 8

PO 108 – PERFORM DRILL MOVEMENTS DURING AN ANNUAL CEREMONIAL REVIEW

COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 1

EO M108.01 – ADOPT THE POSITIONS OF ATTENTION, STAND AT EASE AND STAND EASY

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A demonstration and performance was chosen for this lesson as it allows the instructor to explain and demonstrate the skill the cadets are expected to acquire while providing an opportunity for the cadets to practice the skill under supervision.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have adopted the positions of attention, stand at ease and stand easy.

IMPORTANCE

It is important for cadets to be able to perform drill movements at a competent level, developing sharpness, esprit-de-corps, physical coordination and alertness. These movements should be executed with ease ensuring that the cadets move together as one, which promotes discipline, alertness, precision, pride, steadiness and cohesion, and helps develop teamwork.

Develop and use a vocabulary of short, concise words to impress on the cadets that the movements must be performed smartly. For example, the words "crack", "drive", "seize" and "grasp" suggest the degree of smartness required. Profanity or personal sarcasm shall never be used.

Proper drill movements shall be combined with a professional demeanour throughout this lesson.

This lesson is broken down into movements. Explain demonstrate, and allow time for the cadets to practice, in a variety of positions.

Capitalization indicates the words of command for each movement.

Cadence is to be maintained when completing movements.

The term squad is a generic name for a group of cadets, used to teach drill movements. This term can be interchanged with platoon, flight, division or any other applicable elemental or regimental term.

Assistant instructors may be required for this lesson.

Teaching Point 1 **Explain, demonstrate and have the cadets adopt the position of attention.**

Time: 5 min Method: Demonstration and Performance

ADOPT THE POSITION OF ATTENTION

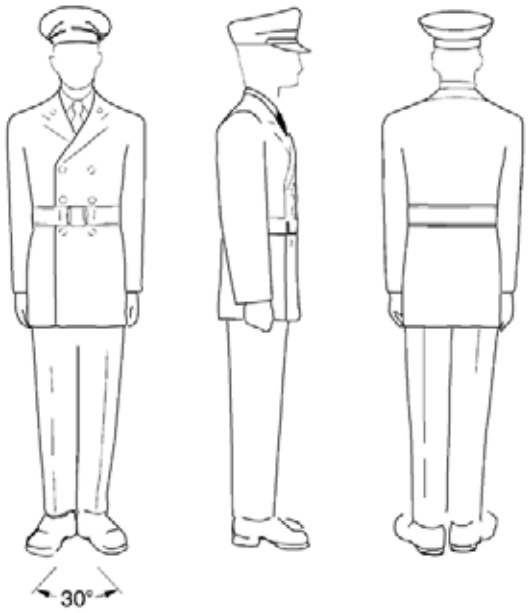
The cadet shall adopt the position of attention, by ensuring:

1. heels are together and in line;
2. feet are turned out to form an angle of 30 degrees;
3. body is balanced and weight distributed evenly on both feet,
4. shoulders are level, square to the front,
5. arms are hanging as straight as the natural bend will allow, with elbows and wrists touching the body,

6. wrists are straight, the back of the hands outwards, fingers aligned, touching the palm of the hand, thumbs placed on the side of the forefinger at the middle joint with the thumbs and back of the fingers touching the thighs lightly and the thumbs in line with the seam of the trousers,

7. head is held erect, neck touching the back of the collar, eyes steady, looking their height and straight to the front, and

8. no part of the body is strained.



Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 2-3), by Director of History and Heritage 3-2, 2006, Ottawa, ON: Department of National Defence.

Figure 1 Position of Attention

Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 2-3), by Director of History and Heritage 3-2, 2006, Ottawa, ON: Department of National Defence.

Figure 2 Fists at Position of Attention

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Emphasize any movements with which the cadets had difficulty during the TP.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include:

- back arched or hips too far forward,
- shoulders and body tense,
- leaning to the front or rear,
- thumbs not along the seams of the trousers, and,
- feet placed at an improper angle.

CONFIRMATION OF TEACHING POINT 1

The cadets' adopting the position of attention will serve as the confirmation of this TP.

Teaching Point 2 **Explain, demonstrate and have the cadets adopt the position of stand at ease.**

Time: 5 min Method: Demonstration and Performance

ADOPT THE POSITION OF STAND AT EASE

The position of standing at ease is an intermediate position between attention and standing easy. It allows no relaxation, but can be maintained without strain for a longer time than the position of attention.

On the command STAND AT EASE BY NUMBERS, SQUAD—ONE, the cadet shall bend the left knee.

Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 2-4), by Director of History and Heritage 3-2, 2005, Ottawa, ON: Department of National Defence.

Figure 3 First Part of the Movement – Stand at Ease

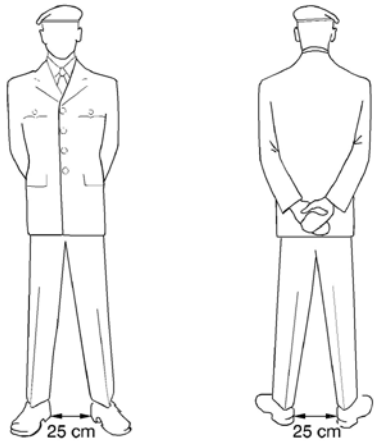
Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include:

- arms not held straight and firmly to the sides,
- moving wrong foot,
- lifting the foot instead of bending the knee, and
- lower leg and foot hanging at an unnatural angle.

On the command SQUAD—TWO, the cadet shall:

1. ensure heels are together and in line;
2. carry the left foot to the left, straightening it in double time, and place it smartly flat on the ground with the inside of the heels 25 cm apart;
3. simultaneously, with a quick motion, bring the arms behind the back, stretched to their full extent, and place the back of the right hand in the palm of the left, with thumbs crossed right over left, the fingers together and extended; and
4. balance the body with the weight evenly distributed on both feet.



Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 2-4), by Director of History and Heritage 3-2, 2006, Ottawa, ON: Department of National Defence.

Figure 4 Position of Stand at Ease

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Emphasize any movements with which the cadets had difficulty during the TP.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include:

- foot carried over an improper distance,
- right hand not placed fully into palm of the left hand,
- thumbs hooked together, and
- straining the arms in an attempt to lock the elbows

CONFIRMATION OF TEACHING POINT 2

The cadets' adopting the position of stand at ease will serve as the confirmation of this TP.

Teaching Point 3 **Explain, demonstrate and have the cadets adopt the position of attention from stand at ease.**

Time: 5 min Method: Demonstration and Performance

ADOPT THE POSITION OF STAND AT EASE

On the command ATTENTION BY NUMBERS, SQUAD—ONE, bend the left knee and shift the balance to the right foot.

On the command SQUAD—TWO, the cadet shall:

1. straighten the left leg in double time, place the foot on the ground, toe touching first, followed by the heel, and with heels aligned; and
2. simultaneously, with a quick motion, bring the arms and hands to the position of attention.

On the command ATTEN—TION, combine the two movements. The timing is “ONE.”

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults are the same as standing at attention and stand at ease.

CONFIRMATION OF TEACHING POINT 3

The cadets' adopting the position of attention from stand at ease will serve as the confirmation of this TP.

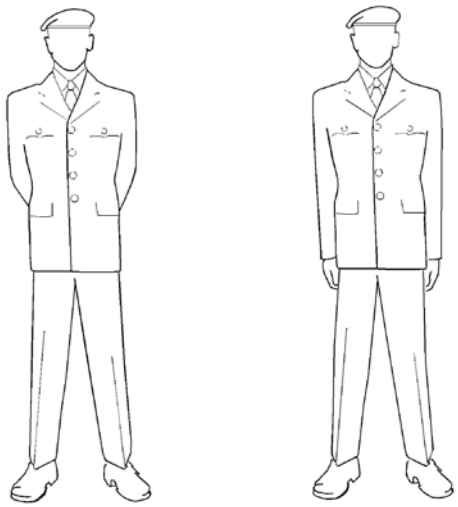
Teaching Point 4 **Explain, demonstrate and have the cadets adopt the position of stand easy.**

Time: 5 min Method: Demonstration and Performance

ADOPT THE POSITION OF STAND EASY

The position of stand easy is ordered when the squad may relax. This command is only given when the squad is in the position of stand at ease.

On the command STAND—EASY, the cadet shall close the hands and bring the arms to the position of attention and relax.



Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 2-5), by Director of History and Heritage 3-2, 2006, Ottawa, ON: Department of National Defence.

Figure 5 Position of Stand Easy

When standing easy, with permission, cadets may adjust clothing and equipment, but shall not move feet or talk.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include moving or fidgeting and talking without permission.

CONFIRMATION OF TEACHING POINT 4

The cadets' adopting the position of stand easy will serve as the confirmation of this TP.

Teaching Point 5 **Explain, demonstrate and have the cadets adopt the position of stand at ease from stand easy.**

Time: 5 min Method: Demonstration and Performance

ADOPT THE POSITION OF STAND AT EASE FROM STAND EASY

On the cautionary command SQUAD, the cadet shall assume the position of stand at ease.

This TP is best taught as a group practice to ensure adherence to timings and togetherness of the squad.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include not paying attention.

CONFIRMATION OF TEACHING POINT 5

The cadets' adopting the position of stand at ease from stand easy will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' adopting the positions of attention, stand at ease and stand easy will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Drill develops and reinforces in cadets many qualities such as patience and determination through self-discipline and practice. Drill requires that cadets move together as one, which promotes discipline, alertness, precision, pride, steadiness and cohesion, and helps develop teamwork.

INSTRUCTOR NOTES / REMARKS

It is recommended that ongoing feedback be provided to the cadets during drill practices, parade nights and ceremonial parades. All corrections shall be made immediately so that bad habits do not persist.

REFERENCES

A0-002 A-DH-201-000/PT-001 Director History and Heritage 3-2. (2006). *The Canadian Forces manual of drill and ceremonial*. Ottawa, ON: Department of National Defence.

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COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 2

EO M108.02 – EXECUTE A SALUTE AT THE HALT WITHOUT ARMS

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A demonstration and performance was chosen for this lesson as it allows the instructor to explain and demonstrate the skill the cadets are expected to acquire while providing an opportunity for the cadets to practice the skill under supervision.

INTRODUCTION

REVIEW

Review the drill movements from EO M108.01 (Adopt the Positions of Attention, Stand at Ease and Stand Easy).

OBJECTIVES

By the end of this lesson the cadet shall have executed a salute at the halt without arms.

IMPORTANCE

It is important for cadets to be able to perform drill movements at a competent level, developing sharpness, esprit-de-corps, physical coordination and alertness. These movements should be executed with ease ensuring that the cadets move together as one, which promotes discipline, alertness, precision, pride, steadiness and cohesion, and helps develop teamwork.

Develop and use a vocabulary of short, concise words to impress on the cadets that the movements must be performed smartly. For example, the words "crack", "drive", "seize" and "grasp" suggest the degree of smartness required. Profanity or personal sarcasm shall never be used.

Proper drill movements shall be combined with a professional demeanour throughout this lesson.

This lesson is broken down into movements. Explain, demonstrate and allow time for the cadets to practice, in a variety of positions.

Capitalization indicates the words of command for each movement.

Cadence is to be maintained when completing movements.

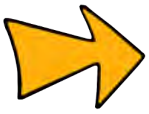
The term squad is a generic name for a group of cadets, used to teach drill movements. This term can be interchanged with platoon, flight, division or any other applicable elemental or regimental term.

Assistant instructors may be required for this lesson.

Teaching Point 1 **Explain, demonstrate and have the cadets execute a salute to the front.**

Time: 15 min Method: Demonstration and Performance

EXECUTE A SALUTE TO THE FRONT



The salute is given with the right hand. When physical incapacity or carrying of articles makes a salute with the right hand impracticable, compliments will be paid by turning the head and eyes to the left or right or standing to attention.

On the command TO THE FRONT SALUTE BY NUMBERS, SQUAD—ONE, the cadet shall:

1. bend the right elbow and open the palm of the right hand as it passes the shoulder; and

2. force the right hand by its shortest route to the front of the headdress ensuring:

   (a) the palm of the hand is facing down,

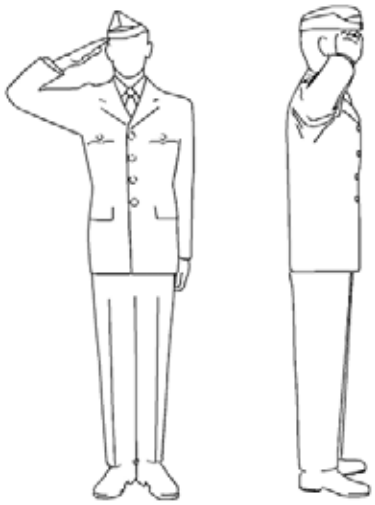
   (b) the thumb and fingers are fully extended and close together,

   (c) the tip of the second finger is 2 cm above and in line with the outside of the right eyebrow and touching the lower edge of the headdress,

   (d) the hand, wrist and forearm are in a straight line and at a 45 degree angle to the upper arm,

   (e) the elbow is in line with the shoulders, and

   (f) the upper arm is parallel to the ground.



Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 2-3), by Director of History and Heritage 3-2, 2006, Ottawa, ON: Department of National Defence.

Figure 1 Saluting to the Front Without Arms

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include:

- second finger not touching the headdress,
- wrist and fingers not straight,
- thumb not in line with the fingers,

- palm turned to face forward or to the rear, and
- second finger touching the arm of glasses, if worn.

On the command SQUAD—TWO, the hand is brought sharply to the position of attention, and simultaneously the head and eyes are turned to the front.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

On the command TO THE FRONT—SALUTE, the two movements are combined. The standard pause shall be observed between movements.

Standard Pause: The standard pause between each movement is two beats in quick time.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Emphasize any movements with which the cadets had difficulty during the TP.

CONFIRMATION OF TEACHING POINT 1

The cadets' executing a salute to the front will serve as the confirmation of this TP.

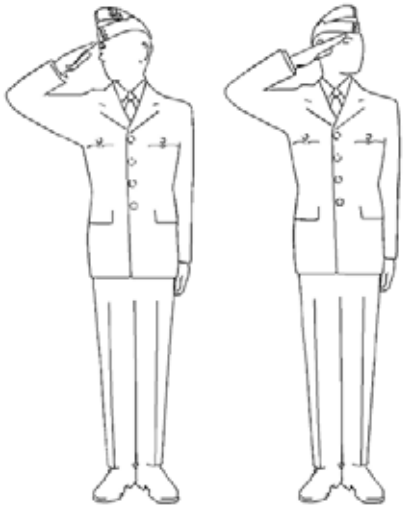
Teaching Point 2 — **Explain, demonstrate and have the cadets execute a salute to the right and to the left.**

Time: 10 min — Method: Demonstration and Performance

EXECUTE A SALUTE TO THE RIGHT AND TO THE LEFT

On the command TO THE RIGHT (LEFT) SALUTE BY NUMBERS, SQUAD—ONE, saluting shall be executed as detailed in TP1, except that the head and eyes shall be turned smartly to the right (left) as far as possible without straining, ensuring that:

1. when saluting to the left, the right hand, wrist and arm are brought further over to the left to the correct position 2 cm above and in line with the outside edge of the right eyebrow and touching the headdress; and
2. when saluting to the right, the arm is moved to the rear, with the tip of the second finger remaining 2 cm above and in line with the outside edge of the right eyebrow and touching the headdress.



Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 2-11), by Director of History and Heritage 3-2, 2006, Ottawa, ON: Department of National Defence.

Figure 2 Saluting to the Right and Left

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults are the same as saluting to the front.

On the command SQUAD—TWO, the hand is brought sharply to the position of attention, and simultaneously the head and eyes are turned smartly to the front

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Emphasize any movements with which the cadets had difficulty during the TP.

On the command TO THE RIGHT (LEFT)—SALUTE, the two movements are combined. The standard pause shall be observed between movements.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Emphasize any movements with which the cadets had difficulty during the lesson.

CONFIRMATION OF TEACHING POINT 2

The cadets' executing a salute to the right and to the left will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' executing a salute at the halt without arms will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Drill develops and reinforces in cadets many qualities such as patience and determination through self-discipline and practice. Drill requires that cadets move together as one, which promotes discipline, alertness, precision, pride, steadiness and cohesion, and helps develop teamwork.

INSTRUCTOR NOTES / REMARKS

It is recommended that ongoing feedback be provided to the cadets during drill practices, parade nights and ceremonial parades. All corrections shall be made immediately so that bad habits do not persist.

REFERENCES

A0-002 A-DH-201-000/PT-001 Director History and Heritage 3-2. (2006). *The Canadian Forces manual of drill and ceremonial*. Ottawa, ON: Department of National Defence.

COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 3

EO M108.03 – EXECUTE TURNS AT THE HALT

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A demonstration and performance was chosen for this lesson as it allows the instructor to explain and demonstrate the skill the cadets are expected to acquire while providing an opportunity for the cadets to practice the skill under supervision.

INTRODUCTION

REVIEW

Review the drill movements from EO M108.02 (Execute a Salute at the Halt Without Arms).

OBJECTIVES

By the end of this lesson the cadet shall have executed turns at the halt.

IMPORTANCE

It is important for cadets to be able to perform drill movements at a competent level, developing sharpness, esprit-de-corps, physical coordination and alertness. These movements should be executed with ease ensuring that the cadets move together as one, which promotes discipline, alertness, precision, pride, steadiness and cohesion, and helps develop teamwork

Develop and use a vocabulary of short, concise words to impress on the cadets that the movements must be performed smartly. For example, the words "crack", "drive", "seize" and "grasp" suggest the degree of smartness required. Profanity or personal sarcasm shall never be used.

Proper drill movements shall be combined with a professional demeanour throughout this lesson.

This lesson is broken down into movements. Explain, demonstrate and allow time for the cadets to practice, in a variety of positions.

Capitalization indicates the words of command for each movement.

Cadence is to be maintained when completing movements.

The term squad is a generic name for a group of cadets, used to teach drill movements. This term can be interchanged with platoon, flight, division or any other applicable elemental or regimental term.

Assistant instructors may be required for this lesson.

Teaching Point 1 **Explain, demonstrate and have the cadets execute a right turn.**

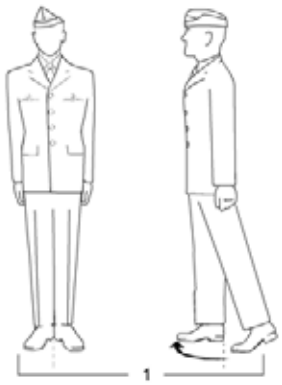
Time: 10 min Method: Demonstration and Performance

EXECUTE A RIGHT TURN

Turns are made to change direction. Right or left turns change direction by 90 degrees, and about turns by 180 degrees.

On the command RIGHT TURN BY NUMBERS, SQUAD—ONE, the cadets shall turn 90 degrees to the right by pivoting on the right heel and left toe and raising the left heel and right toe simultaneously. Both knees

should be kept braced during the turn, arms at the sides and body erect. On the completion of the movement, the weight of the body is placed on the right foot and the left leg is braced with the heel off the ground.



Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 2-13), by Director of History and Heritage 3-2, 2006, Ottawa, ON: Department of National Defence.

Figure 1 First Part of the Movement – Right Turn at the Halt

Practice the movements with:

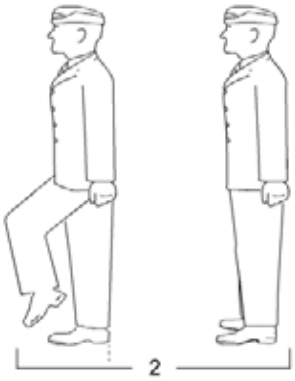
- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include:

- weight transferred to the left foot,
- right leg bent instead of straight, and
- arms not held firmly to the side.

On the command SQUAD—TWO, the cadets shall bend the left knee, straightening it in double time and placing the left foot beside the right to assume the position of attention.



Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 2-13), by Director of History and Heritage 3-2, 2006, Ottawa, ON: Department of National Defence.

Figure 2 Second Part of the Movement – Right Turn at the Halt

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include:

- arms not held straight and firmly to the sides,
- moving wrong foot,
- lifting the foot rather than lifting the knee, and
- lower leg and foot not allowed to hang at a natural angle.

On the command RIGHT—TURN, combine the two movements. The standard pause shall be observed between the movements.

Standard Pause: The standard pause between each movement is two beats in quick time.

Practice the movement with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Emphasize any movements with which the cadets had difficulty during the TP.

CONFIRMATION OF TEACHING POINT 1

The cadets' executing a right turn will serve as the confirmation of this TP.

Teaching Point 2 **Explain, demonstrate and have the cadets execute a left turn.**

Time: 5 min Method: Demonstration and Performance

EXECUTE A LEFT TURN

On the command LEFT TURN BY NUMBERS, SQUAD–ONE, have the cadets turn 90 degrees to the left by pivoting on the left heel and right toe and raising the right heel and left toe simultaneously. Both knees should be kept braced during the turn, arms at the sides and body erect. On the completion of the movement, the weight of the body is placed on the left foot and the right leg is braced with the heel off the ground.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults are the same as turning to the right except that references to left and right are to be reversed.

On the command SQUAD–TWO, the hand is brought sharply to the position of attention, and simultaneously the head and eyes are turned smartly to the front

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

On the command LEFT – TURN, combine the two movements. The standard pause shall be observed between the movements.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Emphasize any movements with which the cadets had difficulty during the TP.

CONFIRMATION OF TEACHING POINT 2

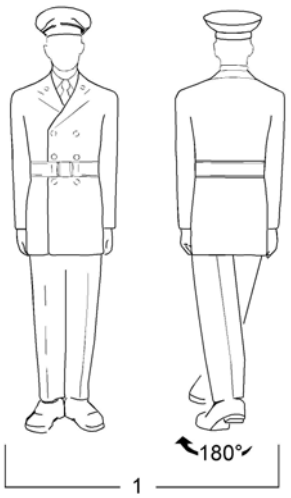
The cadets' executing a left turn will serve as the confirmation of this TP.

Teaching Point 3 **Explain, demonstrate and have the cadets execute an about turn.**

Time: 10 min Method: Demonstration and Performance

EXECUTE AN ABOUT TURN

On the command ABOUT TURN BY NUMBERS, SQUAD—ONE, the cadets shall turn 180 degrees to the right by pivoting on the right heel and left toe and raising the left heel and right toe simultaneously. Both knees should be kept braced during the turn, arms at the sides and body erect. On the completion of the movement, the weight of the body is placed on the right foot and the left leg is braced with the heel off the ground.



Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 2-14), by Director of History and Heritage 3-2, 2006, Ottawa, ON: Department of National Defence.

Figure 3 First Part of the Movement – About Turn at the Halt

Practice the movements with:

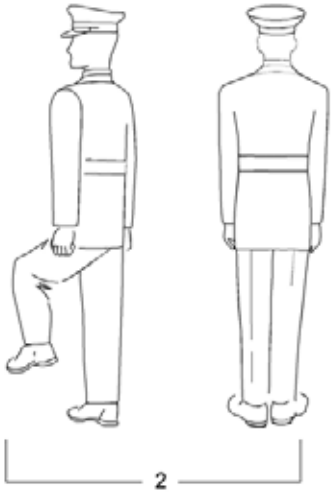
- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include the ones listed for the right turn and also include:

- turning to the left instead of the right,
- turning less than or more than 180 degrees, and
- losing balance.

On the command SQUAD—TWO, the cadet shall bend the left knee, straightening it in double time and placing the left foot beside the right to assume the position of attention.



Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 2-14), by Director of History and Heritage 3-2, 2006, Ottawa, ON: Department of National Defence.

Figure 4 Second Part of the Movement – About Turn at the Halt

On the command ABOUT—TURN, combine the two movements. The standard pause shall be observed between the movements.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Emphasize any movements with which the cadets had difficulty during the lesson.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults are the same as executing a right turn.

CONFIRMATION OF TEACHING POINT 3

The cadets' executing an about turn will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' executing turns at the halt will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Drill develops and reinforces in cadets many qualities such as patience and determination through self-discipline and practice. Drill requires that cadets move together as one, which promotes discipline, alertness, precision, pride, steadiness and cohesion, and helps develop teamwork.

INSTRUCTOR NOTES / REMARKS

It is recommended that ongoing feedback be provided to the cadets during drill practices, parade nights and ceremonial parades. All corrections shall be made immediately so that bad habits do not persist.

REFERENCES

A0-002 A-DH-201-000/PT-001 Director History and Heritage 3-2. (2006). *The Canadian Forces manual of drill and ceremonial*. Ottawa, ON: Department of National Defence.

COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 4

EO M108.04 – CLOSE TO THE RIGHT AND LEFT

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A demonstration and performance was chosen for this lesson as it allows the instructor to explain and demonstrate the skill the cadets are expected to acquire while providing an opportunity for the cadets to practice the skill under supervision.

INTRODUCTION

REVIEW

Review the drill movements from EO M108.03 (Execute Turns at the Halt).

OBJECTIVES

By the end of this lesson the cadet shall have closed to the right and left.

IMPORTANCE

It is important for cadets to be able to perform drill movements at a competent level, developing sharpness, esprit-de-corps, physical coordination and alertness. These movements should be executed with ease ensuring that the cadets move together as one, which promotes discipline, alertness, precision, pride, steadiness and cohesion, and helps develop teamwork.

Develop and use a vocabulary of short, concise words to impress on the cadets that the movements must be performed smartly. For example, the words "crack", "drive", "seize" and "grasp" suggest the degree of smartness required. Profanity or personal sarcasm shall never be used.

Proper drill movements shall be combined with a professional demeanour throughout this lesson.

This lesson is broken down into movements. Explain, demonstrate and allow time for the cadets to practice, in a variety of positions.

Capitalization indicates the words of command for each movement.

Cadence is to be maintained when completing movements.

The term squad is a generic name for a group of cadets, used to teach drill movements. This term can be interchanged with platoon, flight, division or any other applicable elemental or regimental term.

Assistant instructors may be required for this lesson.

Teaching Point 1 **Explain, demonstrate and have the cadets close to the right.**

Time: 15 min Method: Demonstration and Performance

CLOSE TO THE RIGHT

Closing to the right is executed to adjust position right. Close march paces to the right shall not be ordered when the distance required to move exceeds eight paces. When the distance is greater, the squad shall be turned and marched the required distance.

On the command ONE PACE RIGHT CLOSE MARCH BY NUMBERS, SQUAD–ONE, the cadet shall:

1. bend the right knee, carrying the foot to the right and placing it on the ground with the inside of the heels one side pace 25 cm apart;
2. balance the weight of the body evenly on both feet; and
3. keep the arms at the sides.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include:

- arms not held straight and firmly to the sides,
- wrong foot moved,
- foot is lifted instead of bending the knee, and
- lower leg and foot hanging at an unnatural angle.

On the command SQUAD—TWO, the cadet shall shift the weight of the body to the right foot; and bend the left knee, placing the left foot by the right to assume the position of attention.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults are the same as the first movement.

On the command ONE PACE RIGHT CLOSE—MARCH, combine the two movements, observing the following timing:

1. one pace, one-one,
2. two paces, one-one, pause, one-two: and
3. three paces, one-one, pause, one-two, pause, one-three.

Standard Pause: The standard pause between each movement is two beats in quick time.

Practice the movement with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Emphasize any movements with which the cadets had difficulty with during the TP.

CONFIRMATION OF TEACHING POINT 1

The cadets' closing to the right will serve as the confirmation of this TP.

Teaching Point 2 **Explain, demonstrate and have the cadets close to the left.**

Time: 10 min Method: Demonstration and Performance

CLOSE TO THE LEFT

On the command ONE PACE LEFT CLOSE MARCH BY NUMBERS, SQUAD—ONE, the cadet shall:

1. bend the left knee, carrying the foot to the left and placing it on the ground with the inside of the heels one side pace 25 cm apart;
2. balance the weight of the body evenly on both feet; and
3. keep the arms still at the sides.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults are the same as closing to the right except with the left foot.

On the command SQUAD—TWO, the cadet shall shift the weight of the body to the left foot; and bend the right knee, placing the right foot by the left to assume the position of attention.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults are the same as the first movement.

On the command ONE PACE LEFT CLOSE—MARCH, combine the two movements, observing the following timing:

1. one pace, one-one;
2. two paces, one-one, pause, one-two; and
3. three paces, one-one, pause, one-two, pause, one-three.

Practice the movement with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Emphasize any movements with which the cadets had difficulty during the lesson.

CONFIRMATION OF TEACHING POINT 2

The cadets' closing to the left will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' closing to the right and left will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Drill develops and reinforces in cadets many qualities such as patience and determination through self-discipline and practice. Drill requires that cadets move together as one, which promotes discipline, alertness, precision, pride, steadiness and cohesion, and helps develop teamwork.

INSTRUCTOR NOTES / REMARKS

It is recommended that ongoing feedback be provided to the cadets during drill practices, parade nights and ceremonial parades. All corrections shall be made immediately so that bad habits do not persist.

REFERENCES

A0-002 A-DH-201-000/PT-001 Director History and Heritage 3-2. (2006). *The Canadian Forces manual of drill and ceremonial*. Ottawa, ON: Department of National Defence.

COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 5

EO M108.05 – EXECUTE PACES FORWARD AND TO THE REAR

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A demonstration and performance was chosen for this lesson as it allows the instructor to explain and demonstrate the skill the cadets are expected to acquire while providing an opportunity for the cadets to practice the skill under supervision.

INTRODUCTION

REVIEW

Review the drill movements from EO M108.04 (Execute to the Right and Left).

OBJECTIVES

By the end of this lesson the cadet shall have executed paces forward and to the rear.

IMPORTANCE

It is important for cadets to be able to perform drill movements at a competent level, developing sharpness, esprit-de-corps, physical coordination and alertness. These movements should be executed with ease ensuring that the cadets move together as one, which promotes discipline, alertness, precision, pride, steadiness and cohesion, and helps develop teamwork.

Develop and use a vocabulary of short, concise words to impress on the cadets that the movements must be performed smartly. For example, the words "crack", "drive", "seize" and "grasp" suggest the degree of smartness required. Profanity or personal sarcasm shall never be used.

Proper drill movements shall be combined with a professional demeanour throughout this lesson.

This lesson is broken down into movements. Explain, demonstrate and allow time for the cadets to practice, in a variety of positions.

Capitalization indicates the words of command for each movement.

Cadence is to be maintained when completing movements.

The term squad is a generic name for a group of cadets, used to teach drill movements. This term can be interchanged with platoon, flight, division or any other applicable elemental or regimental term.

Assistant instructors may be required for this lesson.

Teaching Point 1 **Explain, demonstrate and have the cadets execute paces forward.**

Time: 15 min Method: Demonstration and Performance

PACES FORWARD

Paces forward are executed to adjust position forward and should not exceed three paces. When the distance is greater, the squad shall be marched the required distance.

On the command ONE PACE FORWARD MARCH BY NUMBERS, SQUAD—ONE, the cadet shall shoot the left foot forward one half pace, force the weight forward on the left foot, with the right heel raised; and keep the arms still at the sides.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include:

- incorrect pace size,
- step off with incorrect foot, and
- arms not held firmly at the sides.

On the command SQUAD—TWO, the cadet shall bend the right knee, straighten it in double time, place the right foot on the ground beside the left; and assume the position of attention.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include:

- arms not held straight and firmly to the sides,
- wrong foot moved,
- foot is lifted instead of bending the knee, and
- lower leg and foot hanging at an unnatural angle

On the command ONE PACE FORWARD—MARCH, combine the two movements, observing the following timing:

1. one pace, one-two;
2. two paces, one, one-two; and
3. three paces, one, one, one-two.

When taking paces forward:

1. The cadence shall be in quick time.
2. The length of each step shall be one half pace (35 cm).
3. The arms shall be kept still at the sides.
4. When two paces forward are taken, the left foot is brought into the right to assume the position of attention.

Practice the movement with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Emphasize any movements with which the cadets had difficulty during the TP.

CONFIRMATION OF TEACHING POINT 1

The cadets' executing paces forward will serve as the confirmation of this TP.

Teaching Point 2 **Explain, demonstrate and have the cadets execute paces to the rear.**

Time: 10 min Method: Demonstration and Performance

PACES TO THE REAR

Paces to the rear are executed to adjust position back and should not exceed three paces. When the distance is greater, the squad shall be marched the required distance.

On the command ONE PACE STEP BACK MARCH BY NUMBERS, SQUAD—ONE, the cadet shall shoot the left foot to the rear one half pace with the weight forward on the right foot and the left heel raised; and keep their arms still at the sides.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults are the same as executing paces forward.

On the command SQUAD—TWO, the cadet shall bend the right knee, straighten it in double time, place the right foot on the ground beside the left; and assume the position of attention.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults are the same as executing paces forward.

On the command ONE PACE(S) STEP BACK—MARCH, combine the two movements, observing the following timing:

1. one pace, one-two;
2. two paces, one, one-two; and
3. three paces, one, one, one-two.

Practice the movement with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Emphasize any movements with which the cadets had difficulty during the lesson.

CONFIRMATION OF TEACHING POINT 2

The cadets' executing paces to the rear will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' executing paces forward and to the rear will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Drill develops and reinforces in cadets many qualities such as patience and determination through self-discipline and practice. Drill requires that cadets move together as one, which promotes discipline, alertness, precision, pride, steadiness and cohesion, and helps develop teamwork.

INSTRUCTOR NOTES / REMARKS

It is recommended that ongoing feedback be provided to the cadets during drill practices, parade nights and ceremonial parades. All corrections shall be made immediately so that bad habits do not persist.

REFERENCES

A0-002 A-DH-201-000/PT-001 Director History and Heritage 3-2. (2006). *The Canadian Forces manual of drill and ceremonial*. Ottawa, ON: Department of National Defence.

COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 6

EO M108.06 – EXECUTE THE MOVEMENTS REQUIRED FOR A RIGHT DRESS

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A demonstration and performance was chosen for this lesson as it allows the instructor to explain and demonstrate the skill the cadets are expected to acquire while providing an opportunity for the cadets to practice the skill under supervision.

INTRODUCTION

REVIEW

Review the drill movements from EO M108.05 (Execute Paces Forward and to the Rear).

OBJECTIVES

By the end of this lesson the cadet shall have executed the movements required for a right dress.

IMPORTANCE

It is important for cadets to be able to perform drill movements at a competent level, developing sharpness, esprit-de-corps, physical coordination and alertness. These movements should be executed with ease ensuring that the cadets move together as one, which promotes discipline, alertness, precision, pride, steadiness and cohesion, and helps develop teamwork.

Develop and use a vocabulary of short, concise words to impress on the cadets that the movements must be performed smartly. For example, the words "crack", "drive", "seize" and "grasp" suggest the degree of smartness required. Profanity or personal sarcasm shall never be used.

Proper drill movements shall be combined with a professional demeanour throughout this lesson.

This lesson is broken down into movements. Explain, demonstrate and allow time for the cadets to practice, in a variety of positions.

Capitalization indicates the words of command for each movement.

Cadence is to be maintained when completing movements.

The term squad is a generic name for a group of cadets, used to teach drill movements. This term can be interchanged with platoon, flight, division or any other applicable elemental or regimental term.

Assistant instructors may be required for this lesson.

Teaching Point 1 **Explain, demonstrate and have the cadets execute right dress.**

Time: 15 min Method: Demonstration and Performance

Right Marker. The individual on the right hand side of the front rank.

RIGHT DRESS

Dressing of a squad is required to ensure a uniform, organized appearance when in a formed body. The most common movement used to dress a squad is the right dress.

On the command RIGHT DRESS BY NUMBERS, SQUAD—ONE, the right marker stands fast; and the remainder shoots the left foot forward one half pace, bends the right knee and adopts the position of attention.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include:

- incorrect pace size,
- arms not held straight and firmly to the sides,
- wrong foot moved,
- foot is lifted instead of bending the knee, and
- lower leg and foot hanging at an unnatural angle.

On the command SQUAD—TWO, the right file stands fast and the remainder turn their head and eyes to the right as far as possible without straining. Simultaneously, the front rank, except the right marker, shoots the right arm its full extent behind the shoulder of the cadet on the right. The hand is closed as in the position of attention, back of the hand uppermost and arm parallel to the ground.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

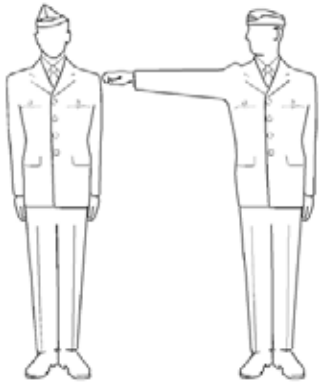
Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include:

- arm not parallel to the ground,
- centre or rear rank raise arms,
- body is twisted, and
- looking in the wrong direction.

On the command SQUAD—THREE, the right marker stands fast; and the remainder take up correct alignment, distance and covering by taking short, quick paces until they are in position.

Movement starts with the left foot.



Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 2-19), by Director of History and Heritage 3-2, 2006, Ottawa, ON: Department of National Defence.

Figure 1 Arm Interval-Right Dress

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include:

- arm striking next person, and
- hand slapping the side of the leg.

On the command RIGHT—DRESS, the three movements are combined, observing the standard pause between the movements. The timing is one-two, pause, arms, pause, move.

Standard Pause: The standard pause between each movement is two beats in quick time.

When dressing by the left, the same drill is followed except the head and eyes are turned left and the left arm is raised. The left marker stands fast, looks to the front, and those in the file behind adopt the appropriate distance between ranks.

Dressing may be ordered by the centre if more than one squad is on parade in line or mass. The command is INWARD—DRESS, and flanking squads shall dress by their left or right as appropriate.

When a squad is formed with only one person in the blank file, that individual shall dress with the front rank when the squad is advancing and with the rear rank when the squad is retiring. When the squad is moving to a flank, the individual shall dress with the directing flank.

Practice the movement with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Emphasize any movements with which the cadets had difficulty during the TP.

CONFIRMATION OF TEACHING POINT 1

The cadets' executing right dress will serve as the confirmation of this TP.

Teaching Point 2 **Explain, demonstrate and have the cadets execute eyes front.**

Time: 5 min Method: Demonstration and Performance

EXECUTE EYES FRONT

On the command EYES—FRONT, the cadets shall snap their head and eyes to the front and cut the right arm to the rear of the individual on the right and to the position of attention without slapping the thigh.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

CONFIRMATION OF TEACHING POINT 2

The cadets' executing eyes front will serve as the confirmation of this TP.

Teaching Point 3 **Explain, demonstrate and have the cadets execute shoulder dressing.**

Time: 5 min Method: Demonstration and Performance

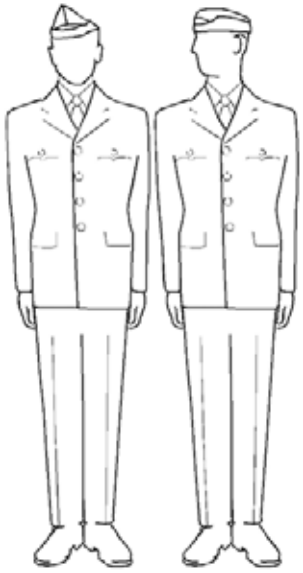
On the command SHOULDER DRESSING, RIGHT—DRESS, the movements are the same as for right dress, except that the arms are not raised and dressing is taken up without arm's length interval. Enough lateral space is left between the shoulders of each person in the rank to complete any movements that may follow the dressing.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults are the same as right dress except that the arm is not raised.



Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 2-19), by Director of History and Heritage 3-2, 2006, Ottawa, ON: Department of National Defence.

Figure 2 Shoulder Dressing

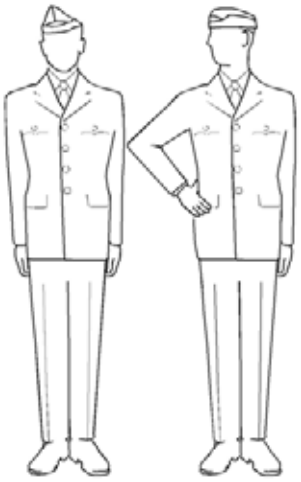
CONFIRMATION OF TEACHING POINT 3

The cadets' executing a shoulder dressing will serve as the confirmation of this TP.

Teaching Point 4 **Explain, demonstrate and have the cadets execute elbow dressing.**

Time: 5 min Method: Demonstration and Performance

On the command ELBOW DRESSING, RIGHT—DRESS, the movements are the same as the right dress except, the right hand is placed on the hip or jacket belt as applicable. The fingers are closed, pointed down and extended forward with thumbs to the rear and the point of the elbow is forced forward and touching the cadet’s arm on the right.



Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 2-19), by Director of History and Heritage 3-2, 2006, Ottawa, ON: Department of National Defence.

Figure 3 Elbow Dressing

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults are the same as dressing at arm's length and also include bending the wrist and hand not on hip.

END OF LESSON CONFIRMATION

The cadets' executing movements required for the right dress will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Drill develops and reinforces in cadets many qualities such as patience and determination through self-discipline and practice. Drill requires that cadets move together as one, which promotes discipline, alertness, precision, pride, steadiness and cohesion, and helps develop teamwork.

INSTRUCTOR NOTES / REMARKS

It is recommended that ongoing feedback be provided to the cadets during drill practices, parade nights and ceremonial parades. All corrections shall be made immediately so that bad habits do not persist.

REFERENCES

A0-002 A-DH-201-000/PT-001 Director History and Heritage 3-2. (2006). *The Canadian Forces manual of drill and ceremonial*. Ottawa, ON: Department of National Defence.

COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 7

EO M108.07 – EXECUTE AN OPEN ORDER AND CLOSE ORDER MARCH

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A demonstration and performance was chosen for this lesson as it allows the instructor to explain and demonstrate the skill the cadet is expected to acquire while providing an opportunity for the cadets to practice the skill under supervision.

INTRODUCTION

REVIEW

Review the drill movements from EO M108.06 (Execute the Movements Required for a Right Dress).

OBJECTIVES

By the end of this lesson the cadet shall have executed an open order and close order march.

IMPORTANCE

It is important for cadets to be able to perform drill movements at a competent level, developing sharpness, esprit-de-corps, physical coordination and alertness. These movements should be executed with ease ensuring that the cadets efficiently moving together as one will promote discipline, alertness, precision, pride, steadiness and cohesion.

Develop and use a vocabulary of short, concise words to impress on the cadets that the movements must be performed smartly. For example, the words "crack", "drive", "seize" and "grasp" suggest the degree of smartness required. Profanity or personal sarcasm shall never be used.

Proper drill movements shall be combined with a professional demeanour throughout this lesson.

This lesson is broken down into movements. Explain, demonstrate and allow time for the cadets to practice, in a variety of positions.

Capitalization indicates the words of command for each movement.

Cadence is to be maintained when completing movements.

The term squad is a generic name for a group of cadets, used to teach drill movements. This term can be interchanged with platoon, flight, division or any other applicable elemental or regimental term.

Assistant instructors may be required for this lesson.

Teaching Point 1 **Explain, demonstrate and have the cadets execute an open order march.**

Time: 15 min Method: Demonstration and Performance

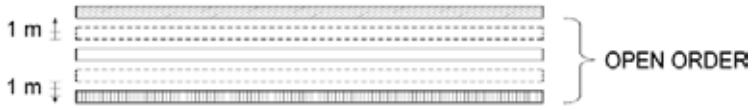
The standard length of a half pace is 35 cm.

OPEN ORDER MARCH

When in a formed body, cadets are inspected at the open order. To adopt this formation, cadets are required to execute an open order march.

The cadet shall execute the open order march, to include:

1. the front rank moving forward three half paces;
2. the rear rank stepping back three half paces; and
3. the centre rank standing fast.



Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 2-22), by Director of History and Heritage 3-2, 2006, Ottawa, ON: Department of National Defence.

Figure 1 Open Order March in Three Ranks

When formed in two ranks, the front rank stands fast and the rear rank steps back three half paces.

Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 2-23), by Director of History and Heritage 3-2, 2006, Ottawa, ON: Department of National Defence.

Figure 2 Open Order March in Two Ranks

On the command OPEN ORDER–MARCH, the movements shall be executed as for three check paces forward and to the rear, the final movement being executed by:

1. bending the right knee, straightening it in double time and placing the right foot smartly on the ground by the left; and
2. assuming the position of attention.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include:

- taking paces that are too large while moving forward;
- taking paces that are too small while moving back;
- raising the knee while stepping to the front or to the rear; and
- moving in the centre rank.

The cadence shall be in quick time, and the arms shall be kept still at the sides.

The timing for the movements are counted as ONE, ONE, ONE-TWO.

CONFIRMATION OF TEACHING POINT 1

The cadets' executing an open order march will serve as the confirmation of this TP.

Teaching Point 2 **Explain, demonstrate and have the cadets a close order march.**

Time: 10 min Method: Demonstration and Performance

CLOSE ORDER MARCH

The cadet shall execute the close order march, to include:

1. the front rank stepping back three half paces;
2. the rear rank moving forward three half paces; and
3. the centre rank standing fast.

On the command CLOSE ORDER – MARCH, the movements will be executed as for three check paces forward and to the rear, the final movement being executed by:

1. bending the right knee, straightening it in double time and placing the right foot smartly on the ground by the left; and
2. assuming the position of attention.

Practice the movements with:

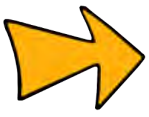
- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults are the same as the open order march.

The cadence shall be in quick time, and the arms shall be kept still at the sides.

The timing for the movements are counted as ONE, ONE, ONE-TWO.



When formed in two ranks, the front rank stands fast and the rear rank moves forward three half paces.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Have the cadets practice as a member of the front, rear and centre ranks.

CONFIRMATION OF TEACHING POINT 2

The cadets' executing a close order march will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' executing an open order and close order march will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Drill develops many qualities such as patience and determination through self-discipline and practice. Drill requires that cadets move together as one, which promotes discipline, alertness, precision, pride, steadiness and cohesion, and helps develop teamwork.

INSTRUCTOR NOTES / REMARKS

It is recommended that ongoing feedback be provided to the cadets during drill practices, parade nights and ceremonial parades.

REFERENCES

A0-002 A-DH-201-000/PT-001 Director History and Heritage 3-2. (2006). *The Canadian Forces manual of drill and ceremonial*. Ottawa, ON: Department of National Defence.

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COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 8

EO M108.08 – MARCH AND HALT IN QUICK TIME

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A demonstration and performance was chosen for this lesson as it allows the instructor to explain and demonstrate the skill the cadet is expected to acquire while providing an opportunity for the cadets to practice the skill under supervision.

INTRODUCTION

REVIEW

Review the drill movements from EO M108.07 (Execute an Open Order and Close Order March).

OBJECTIVES

By the end of this lesson the cadet shall have marched and halted in quick time.

IMPORTANCE

It is important for cadets to be able to perform drill movements at a competent level, developing sharpness, esprit-de-corps, physical coordination and alertness. These movements should be executed with ease ensuring that the cadets efficiently moving together as one will promote discipline, alertness, precision, pride, steadiness and cohesion.

Develop and use a vocabulary of short, concise words to impress on the cadets that the movements must be performed smartly. For example, the words "crack", "drive", "seize" and "grasp" suggest the degree of smartness required. Profanity or personal sarcasm shall never be used.

Proper drill movements shall be combined with a professional demeanour throughout this lesson.

This lesson is broken down into movements. Explain, demonstrate and allow time for the cadets to practice, in a variety of positions.

Capitalization indicates the words of command for each movement.

Cadence is to be maintained when completing movements.

The term squad is a generic name for a group of cadets, used to teach drill movements. This term can be interchanged with platoon, flight, division or any other applicable elemental or regimental term.

Assistant instructors may be required for this lesson.

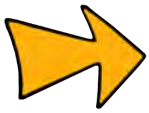
Teaching Point 1 **Explain, demonstrate and have the cadets march in quick time.**

Time: 10 min Method: Demonstration and Performance

The standard length of a pace is 75 cm.

MARCH IN QUICK TIME

Corps / Squadrons march and manoeuvre on foot in quick, slow, and double time. When marching in quick time, the cadence is set at 120 paces per minute.



The quick march can be maintained for long periods of time and is the standard for routine duty.

On the command QUICK MARCH BY NUMBERS, SQUAD–ONE, the cadet shall shoot the left foot forward one half pace, toe up; strike the heel on the ground first and keep the toe pointed directly forward; and simultaneously, swing the right arm straight forward and the left arm straight to the rear, waist high.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include:

- taking a pace greater than 35 cm (one half pace);
- placing or slapping the left foot flat on the ground instead of striking the heel first; and
- swinging the arms at an incorrect height.

On the command SQUAD—TWO, the cadets shall continue to march with subsequent paces of standard length; bringing the legs forward successively in a straight line; swinging the arms forward successively in a straight line from the shoulder, front to rear, with hands closed as in the position of attention; and maintaining dressing by the directing flank.

The directing flank is the rank or file assigned by the commander as that from which the dressing is to be taken, when formed as a squad.

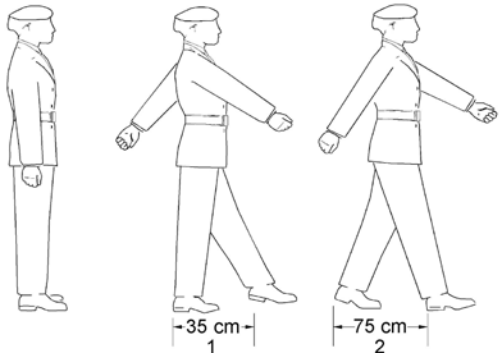
Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults are the same as for the initial pace except the pace is greater or less than 75 cm.

On the command QUICK—MARCH, combine the two movements. The timing will be “LEFT—RIGHT—LEFT”



Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 3-6), by Director of History and Heritage 3-2, 2006, Ottawa, ON: Department of National Defence.

Figure 1 Marching in Quick Time

CONFIRMATION OF TEACHING POINT 1

The cadets' marching in quick time will serve as the confirmation of this TP.

Teaching Point 2 **Explain, demonstrate and have the cadets halt in quick time.**

Time: 10 min Method: Demonstration and Performance

HALT IN QUICK TIME

On the command HALT BY NUMBERS, SQUAD—ONE, given as the left foot is forward and on the ground, the cadet shall check the forward movement by placing the right foot flat on the ground, use the heel as a brake; and swing the left arm forward and the right arm to the rear.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include taking a pace larger or smaller than 75 cm; and not swinging the arms to the front and rear.

On the command SQUAD—TWO, the cadet shall take a half pace with the left foot, place it flat on the ground; and swing the right arm forward and the left to the rear.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults are the same as the initial pace except taking a pace larger then 35 cm (one half pace).

On the command SQUAD—THREE, the cadet shall bend the right knee, straighten it in double time; and simultaneously, cut the arms to the side and assume the position of attention.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

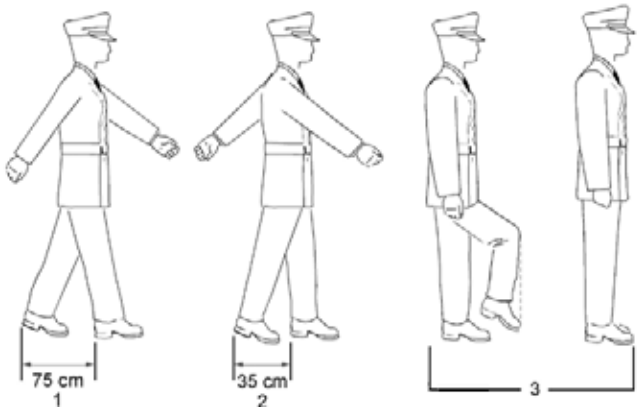
Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include not cutting the arms to the side; and not bending the right knee and straightening in double time.

On the command SQUAD—HALT, combine the three movements in quick time. The timing for the movements is counted as ONE, ONE, ONE-TWO.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.



Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 3-3), by Director of History and Heritage 3-2, 2006, Ottawa, ON: Department of National Defence.

Figure 2 Halting in Quick Time

CONFIRMATION OF TEACHING POINT 2

The cadets' halting in quick time will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' marching and halting in quick time will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Drill develops many qualities such as patience and determination through self-discipline and practice. Drill requires that cadets move together as one, which promotes discipline, alertness, precision, pride, steadiness and cohesion, and helps develop teamwork.

INSTRUCTOR NOTES / REMARKS

It is recommended that ongoing feedback be provided to the cadets during drill practices, parade nights and ceremonial parades.

REFERENCES

A0-002 A-DH-201-000/PT-001 Director History and Heritage 3-2. (2006). *The Canadian Forces manual of drill and ceremonial*. Ottawa, ON: Department of National Defence.

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COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 9

EO M108.09 – EXECUTE MARKING TIME, FORWARD AND HALTING IN QUICK TIME

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A demonstration and performance was chosen for this lesson as it allows the instructor to explain and demonstrate the skill the cadet is expected to acquire while providing an opportunity for the cadets to practice the skill under supervision.

INTRODUCTION

REVIEW

Review the drill movements from EO M108.08 (March and Halt in Quick Time).

OBJECTIVES

By the end of this lesson the cadet shall have executed marking time, forward and halting in quick time.

IMPORTANCE

It is important for cadets to be able to perform drill movements at a competent level, developing sharpness, esprit-de-corps, physical coordination and alertness. These movements should be executed with ease ensuring that the cadets efficiently moving together as one will promote discipline, alertness, precision, pride, steadiness and cohesion.

Develop and use a vocabulary of short, concise words to impress on the cadets that the movements must be performed smartly. For example, the words "crack", "drive", "seize" and "grasp" suggest the degree of smartness required. Profanity or personal sarcasm shall never be used.

Proper drill movements shall be combined with a professional demeanour throughout this lesson.

This lesson is broken down into movements. Explain, demonstrate and allow time for the cadets to practice, in a variety of positions.

Capitalization indicates the words of command for each movement.

Cadence is to be maintained when completing movements.

The term squad is a generic name for a group of cadets, used to teach drill movements. This term can be interchanged with platoon, flight, division or any other applicable elemental or regimental term.

Assistant instructors may be required for this lesson.

Teaching Point 1 **Explain, demonstrate and have the cadets mark time.**

Time: 10 min Method: Demonstration and Performance

MARK TIME

Marking time is executed when ceasing forward motion for a short period of time, while on the march. Marking time is carried out at the same cadence as for marching. Only the legs are moved and the upper portion of the body remains in the position of attention with arms at the side.

The command for mark time is given as the right foot is forward on the ground.

On the command MARK TIME BY NUMBERS, SQUAD—ONE, the cadet shall take a half pace with the left foot, placing the foot flat on the ground naturally. Maintaining the same cadence, bring the right foot into the left in a straight leg manner, not scraping the ground; and simultaneously, cut the arms to the sides and assuming the position of attention.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include:

- taking a pace larger than 35 cm (one half pace); and
- scraping the right foot on the ground as it is being brought into the left.

On the command SQUAD—TWO the cadet shall bend the left knee so that the lower leg and foot are allowed to hang at a natural angle and the toe is 15 cm above the ground; place the toe on the ground before the heel as the leg is lowered; and continuing to mark time until the command FOR—WARD or HALT is given.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

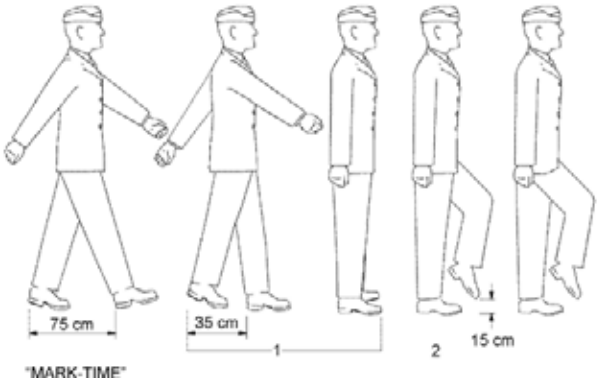
Common faults include:

- not holding the arms straight and firmly to the sides;
- swaying side to side;
- quickening the pace; and
- not maintaining dressing.

On the command MARK – TIME, combine the two movements. The timing is “left—in—left—right—left”.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.



Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 3-16), by Director of History and Heritage 3-2, 2006, Ottawa, ON: Department of National Defence.

Figure 1 Marking Time in Quick Time

CONFIRMATION OF TEACHING POINT 1

The cadets' marking time will serve as the confirmation of this TP.

Teaching Point 2 **Explain, demonstrate and have the cadets execute forward from marking time.**

Time: 10 min Method: Demonstration and Performance

FORWARD FROM MARKING TIME

The command for Forward is given as the left foot is on the ground.

This movement is not taught broken down as it is best learned as a complete movement.

On the command FOR—WARD, the cadet shall straighten the right leg and assume the position of attention; shoot the left foot forward in a half pace; and continue to march in quick time, swinging the right arm forward and the left to the rear.

On the command MARK – TIME, combine the two movements. Utilize the timing: “left – in – left – right – left”.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include:

- arms not held straight and firmly to the sides;
- not stepping off with the rest of the squad;
- stepping off on the wrong foot; and
- initial pace larger than one half pace.

CONFIRMATION OF TEACHING POINT 2

The cadets' executing forward from marking time will serve as the confirmation of this TP.

Teaching Point 3 **Explain, demonstrate and have the cadets execute halting in quick time from marking time.**

Time: 5 min Method: Demonstration and Performance

HALTING IN QUICK TIME FROM MARKING TIME

The command is given as the left foot is on the ground.

This movement is not taught broken down as it is best learned as a complete movement.

On the command SQUAD – HALT, the cadet shall

1. take a further mark time pace with the right foot;
2. take a further mark time pace with the left foot; and
3. straighten the right leg in double time and assume the position of attention.

The timing is "one, one-two".

On the command MARK – TIME, combine the two movements. Utilize the timing: "left – in – left – right – left".

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include not halting at the same time as the rest of the squad.

END OF LESSON CONFIRMATION

The cadets' executing marking time, forward and halting in quick time will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Drill develops many qualities such as patience and determination through self-discipline and practice. Drill requires that cadets move together as one, which promotes discipline, alertness, precision, pride, steadiness and cohesion, and helps develop teamwork.

INSTRUCTOR NOTES / REMARKS

It is recommended that ongoing feedback be provided to the cadets during drill practices, parade nights and ceremonial parades.

REFERENCES

A0-002 A-PH-201-000/PT-001 Director History and Heritage 3-2. (2006). *The Canadian Forces manual of drill and ceremonial*. Ottawa, ON: Department of National Defence.

COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 10

EO M108.10 – EXECUTE A SALUTE ON THE MARCH

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A demonstration and performance was chosen for this lesson as it allows the instructor to explain and demonstrate the skill the cadet is expected to acquire while providing an opportunity for the cadets to practice the skill under supervision.

INTRODUCTION

REVIEW

Review the drill movements from EO M108.02 (Execute a Salute at the Halt Without Arms).

OBJECTIVES

By the end of this lesson the cadet shall have saluted on the march.

IMPORTANCE

It is important for cadets to be able to perform drill movements at a competent level, developing sharpness, esprit-de-corps, physical coordination and alertness. These movements should be executed with ease ensuring that the cadets efficiently moving together as one will promote discipline, alertness, precision, pride, steadiness and cohesion.

Develop and use a vocabulary of short, concise words to impress on the cadets that the movements must be performed smartly. For example, the words "crack", "drive", "seize" and "grasp" suggest the degree of smartness required. Profanity or personal sarcasm shall never be used.

Proper drill movements shall be combined with a professional demeanour throughout this lesson.

This lesson is broken down into movements. Explain, demonstrate and allow time for the cadets to practice, in a variety of positions.

Capitalization indicates the words of command for each movement.

Cadence is to be maintained when completing movements.

The term squad is a generic name for a group of cadets, used to teach drill movements. This term can be interchanged with platoon, flight, division or any other applicable elemental or regimental term.

Assistant instructors may be required for this lesson.

Teaching Point 1 **Execute saluting on the march.**

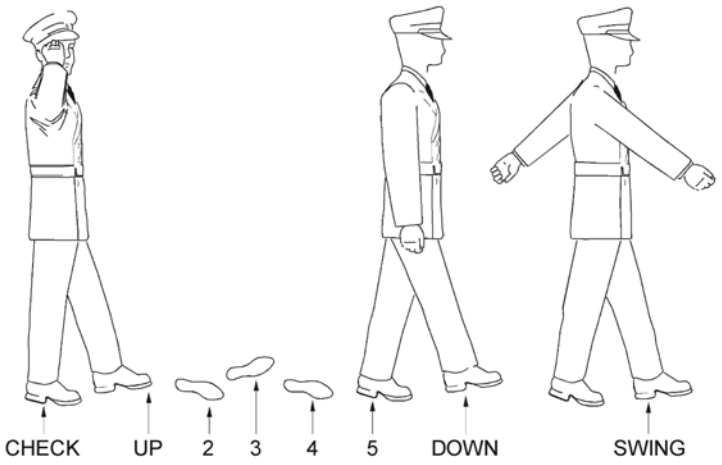
Time: 15 min Method: Demonstration and Performance

DEMONSTRATE THE COMPLETE MOVEMENT WITH TIMING

Instructors are reminded that they are to present the example with regards to drill, from the moment they step onto the parade square. Proper drill movements, combined with a professional demeanour, are of paramount importance, and must be exemplified throughout the period of instruction.

The instructor shall provide a complete demonstration of the drill movement, with timing. A practiced assistant instructor may carry out this demonstration.

The demonstration shall be provided from various vantage points, as required.



A-PD-201-000/PT-000 The Canadian Forces Manual of Drill and Ceremonial, 2001

Figure 1 – Saluting on the March

DEMONSTRATE FIRST PART OF MOVEMENT (FIRST NUMBER)

For ease of instruction, drill commands have been broken down into individual movements, or numbers. The instructor(s) shall demonstrate and explain each number.

On the command TO THE RIGHT (LEFT) SALUTE BY NUMBERS, SQUAD – ONE, given as the left foot is forward and on the ground, the cadet shall execute the first number by:

1. completing the next pace with the right foot; and
2. swinging the left arm forward and the right arm to the rear normally.

PRACTISE THE SQUAD ON THE FIRST MOVEMENT

Practise the squad on the first movement collectively, individually and collectively

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

DEMONSTRATE AND EXPLAIN THE SECOND PART OF THE MOVEMENT (SECOND NUMBER)

On the command SQUAD – TWO the cadet shall execute the second number by:

1. completing the next pace with the left foot;
2. cutting the left arm to the side; and
3. cutting the right arm forward to the side and then up into the salute in one continuous movement.

PRACTISE THE SQUAD ON THE SECOND MOVEMENT

Practise the squad on the second movement collectively, individually and collectively.

DEMONSTRATE AND EXPLAIN THE THIRD PART OF THE MOVEMENT (THIRD NUMBER)

On the command SQUAD – THREE, the cadet shall complete four paces in quick time, ending with the left foot forward.

PRACTISE THE SQUAD ON THE THIRD MOVEMENT

Practise the squad on the third movement collectively, individually and collectively.

DEMONSTRATE AND EXPLAIN THE FOURTH PART OF THE MOVEMENT (FOURTH NUMBER)

On the command SQUAD – FOUR, the cadet shall execute the fourth number by:

1. completing a pace with the right foot; and
2. cutting the right arm to the side.

PRACTISE THE SQUAD ON THE FOURTH MOVEMENT

Practise the squad on the fourth movement collectively, individually and collectively.

DEMONSTRATE AND EXPLAIN THE FIFTH PART OF THE MOVEMENT (FIFTH NUMBER)

On the command SQUAD – FIVE, the cadet shall continue to march.

PRACTISE THE SQUAD ON THE FIFTH MOVEMENT

Practise the squad on the fifth movement collectively, individually and collectively.

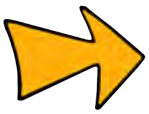
GIVE TWO COMPLETE AND FINAL DEMONSTRATIONS

On the command TO THE RIGHT (LEFT) – SALUTE, the movements and combined, and the timing, “check – up – two – three – four– five – down – swing”, is utilized.

The instructor(s) shall provide a full demonstration and allow time for practice.

Teaching Point 2 **Practise saluting on the march.**

Time: 10 min Method: Demonstration and Performance



While saluting, the head is turned right (left) as far as possible without straining.

On the command TO THE RIGHT (LEFT) – SALUTE, the movements are combined, and the timing, CHECK – UP – TWO – THREE – FOUR– FIVE – DOWN – SWING, is utilized.

Note: This movement requires much practice as a formed body, and the instructor is encouraged to fully utilize this time for said practice.

END OF LESSON CONFIRMATION

The confirmation for this lesson should consist of the cadets, as a squad, practicing saluting on the march **(right and left),** and should emphasise movements that cadets showed difficulty with during the class.

Practise the complete movement with the:

- **Instructor** calling the time;
- **Squad** calling the time; and
- Squad **judging** the time.

END OF LESSON CONFIRMATION

The cadets' saluting on the march will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Drill develops many qualities such as patience and determination through self-discipline and practice. Drill requires that cadets move together as one, which promotes discipline, alertness, precision, pride, steadiness and cohesion, and helps develop teamwork.

INSTRUCTOR NOTES / REMARKS

It is recommended that ongoing feedback be provided to the cadets during drill practices, parade nights and ceremonial parades.

REFERENCES

A0-002 A-DH-201-000/PT-001 Director History and Heritage 3-2. (2006). *The Canadian Forces manual of drill and ceremonial*. Ottawa, ON: Department of National Defence.

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COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 11

EO M108.11 – PAY COMPLIMENTS WITH A SQUAD ON THE MARCH

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A demonstration and performance was chosen for this lesson as it allows the instructor to explain and demonstrate the skill the cadet is expected to acquire while providing an opportunity for the cadets to practice the skill under supervision.

INTRODUCTION

REVIEW

Review the drill movements from EO M108.10 (Execute A Salute on the March).

OBJECTIVES

By the end of this lesson the cadet shall have paid compliments with a squad on the march.

IMPORTANCE

It is important for cadets to be able to perform drill movements at a competent level, developing sharpness, esprit-de-corps, physical coordination and alertness. These movements should be executed with ease ensuring that the cadets efficiently moving together as one will promote discipline, alertness, precision, pride, steadiness and cohesion.

Develop and use a vocabulary of short, concise words to impress on the cadets that the movements must be performed smartly. For example, the words "crack", "drive", "seize" and "grasp" suggest the degree of smartness required. Profanity or personal sarcasm shall never be used.

Proper drill movements shall be combined with a professional demeanour throughout this lesson.

This lesson is broken down into movements. Explain, demonstrate and allow time for the cadets to practice, in a variety of positions.

Capitalization indicates the words of command for each movement.

Cadence is to be maintained when completing movements.

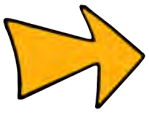
The term squad is a generic name for a group of cadets, used to teach drill movements. This term can be interchanged with platoon, flight, division or any other applicable elemental or regimental term.

Assistant instructors may be required for this lesson.

Teaching Point 1 **Explain, demonstrate and have the cadets execute eyes right (left) to pay compliments with a squad on the march.**

Time: 15 min Method: Demonstration and Performance

EYES RIGHT (LEFT) WITH A SQUAD ON THE MARCH

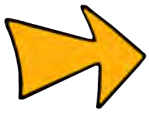


While marching as a member of a squad, do not salute from within the ranks, but turn the head in the direction of the person or object to which compliments are being paid.

The command for paying compliments with a squad on the march is given as the left foot is forward and on the ground.

On the command EYES—RIGHT (LEFT), the cadets shall

1. complete the next pace forward with the right foot;
2. as the left foot comes forward again and strikes the ground, turn the head and eyes to the right (left) as far as possible without straining and look directly into the eyes of the personage being saluted;
3. continue to swing the arms; and
4. maintain dressing, direction, and cadence, while continuing to march.



The leading person on the directing flank shall maintain head and eyes to the front to keep direction.

Directing flank box

The person in command of the squad shall salute.

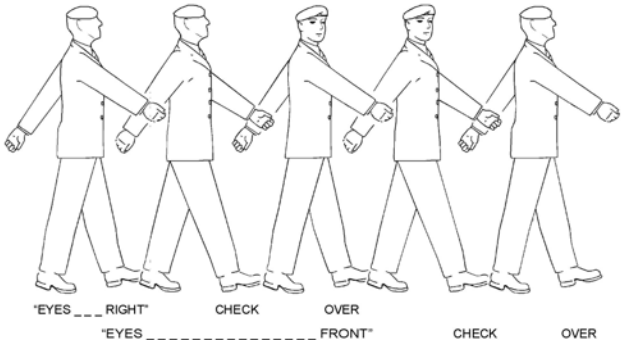
Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include:

- turning the head and eyes immediately rather than turning the head and eyes after the completion of the next pace forward.



Note. From The Canadian Forces Manual of Drill and Ceremonial (p. 3-25), by Director of History and Heritage 3-2, 2006, Ottawa, ON: Department of National Defence.

Figure 1 Eyes Right on the March

CONFIRMATION OF TEACHING POINT 1

The cadets' executing an eyes right (left) to pay compliments on the march will serve as the confirmation of this TP.

Teaching Point 2 **Explain, demonstrate and have the cadets execute eyes front to pay compliments with a squad on the march.**

Time: 10 min Method: Demonstration and Performance

EYES FRONT WITH A SQUAD ON THE MARCH

The command for paying compliments with a squad on the march is given as the left foot is forward and on the ground.

On the command EYES—FRONT, the cadet shall complete the next pace forward with the right foot; and as the left foot comes forward and strikes the ground, cut the head and eyes smartly to the front.

Practice the movements with:

- the **instructor** calling the time;
- the **squad** calling the time; and
- the squad **judging** the time.

Constant checking and correcting of all faults is essential. Faults shall be corrected immediately after they occur.

Common faults include:

- turning the head and eyes immediately rather than turning the head and eyes after the completion of the next pace forward.

CONFIRMATION OF TEACHING POINT 2

The cadets' executing an eyes front to pay compliments on the march will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' executing a salute on the march will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Drill develops many qualities such as patience and determination through self-discipline and practice. Drill requires that cadets move together as one, which promotes discipline, alertness, precision, pride, steadiness and cohesion, and helps develop teamwork.

INSTRUCTOR NOTES / REMARKS

It is recommended that ongoing feedback be provided to the cadets during drill practices, parade nights and ceremonial parades.

REFERENCES

A0-002 A-DH-201-000/PT-001 Director History and Heritage 3-2. (2006). *The Canadian Forces manual of drill and ceremonial*. Ottawa, ON: Department of National Defence.

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COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 12

EO M108.12 – PERFORM DRILL MOVEMENTS DURING ANNUAL CEREMONIAL REVIEW

Total Time:	90 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO

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COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 13

EO C108.01 – EXECUTE SUPPLEMENTARY DRILL MOVEMENTS

Total Time:	180 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO

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COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 14

EO C108.02 – PARTICIPATE IN A DRILL COMPETITION

Total Time: 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Photocopy the Drill Competition Marking Guide located at Attachment C and sufficient copies of the Drill Competition Marking Sheet located at Attachment D for each judge.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A practical activity was chosen for this lesson as it is an interactive way to allow the cadets to participate in a drill competition.

INTRODUCTION

REVIEW

Review the drill movements from EO M108.01 to M108.11

OBJECTIVES

By the end of this lesson the cadet shall have participated in a drill competition.

IMPORTANCE

It is important for cadets to be able to perform drill movements at a competent level, developing sharpness, esprit-de-corps, physical coordination and alertness. These movements should be executed with ease ensuring that the cadets efficiently moving together as one will promote discipline, alertness, precision, pride, steadiness and cohesion.

ACTIVITY

Time: 90 min

OBJECTIVE

The objective of this activity is to have the cadets participate in a drill competition.

RESOURCES

- Tables,
- Chairs,
- Masking Tape,
- Stop Watch,
- Portable hand counters (clickers),
- Drill sequence,
- Pens,
- Parade markers, and
- Judges.

ACTIVITY LAYOUT

Set up the drill hall or outdoor parade square with tables and chairs. The drill area will be marked off, to include a restricted-access area large enough to accommodate execution of the marching and wheeling components of the competition with a judge's table placed mid-point along one of the sides of the drill area.

ACTIVITY INSTRUCTIONS

1. Divide the year one cadets into squads not to exceed 10 cadets.
2. Appoint a team captain (Drill Team Commander), at a minimum, a year three cadet in training to direct the team through the drill sequence.
3. Provide each team time to practice as a squad prior to competing. During this practice, the team captain will review all rehearsed movements from PO 108.
4. Have the drill team commander lead the drill team through the entire drill sequence.
5. Without assistance, acting as a drill team in a competition environment, the flight will follow commands and be marked on its performance of the specified drill sequence. Cadets will respectfully observe the performance of other flight drill teams whenever they are not performing.
6. Marking will be performed by the judges using the marking guide located at Attachment C and the marking sheet located at Attachment D. When numerous flights are competing, it is necessary to maximize the use of time. As the flights rotate through the competition, flights waiting to perform or flights that have already performed can be scheduled for other concurrent activities (eg, while one flight is waiting to perform another flight is undergoing uniform inspections).

SAFETY

Nil.

Capitalization indicates the words of command for each movement.

Cadence is to be maintained when completing movements.

The term squad is a generic name for a group of cadets, used to teach drill movements. This term can be interchanged with platoon, flight, division or any other applicable elemental or regimental term.

Assistant instructors may be required for this lesson.

END OF LESSON CONFIRMATION

The cadets' participation in a drill competition will serve as confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Drill helps a cadet develop many qualities such as patience and determination through self-discipline and practice. Drill requires that cadets move together as one, which promotes discipline, alertness, precision, pride, steadiness and cohesion, and helps develop teamwork.

INSTRUCTOR NOTES / REMARKS

It is recommended that ongoing feedback be provided to the cadets during drill practices, parade nights and ceremonial parades.

REFERENCES

A0-002 A-DH-201-000/PT-001 Director History and Heritage 3-2. (2006). *The Canadian Forces manual of drill and ceremonial*. Ottawa, ON: Department of National Defence.

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GUIDELINES FOR THE CONDUCT OF A YEAR ONE DRILL COMPETITION

OFFICIALS

1. Officials shall be as follows:
   a. Chief Judge – responsible for:
      (1) Judging and marking the Team Captain;
      (2) Awarding penalties; and
      (3) Interpretation of rules; and
   b. Drill Judge(s) – responsible for judging and marking the performance of the team during the drill sequence.

DRESS

2. Dress for the competition will be at the discretion of the squadron TrgO and IAW CATO 55-04. Uniform C-1 is encouraged, though weather conditions at the time of the competition will be the determining factor.

DRILL SEQUENCE

3. When called to compete, the team (accompanied and directed by the team captain) will march on, with the right marker at the designated point opposite the judges table, dressed at the close order. When the Drill Team Commander reports for inspection, the judging will begin approach the Chief Judge, report the name of the team, and request permission to carry on with the competition.

4. On receiving permission from the Chief Judge, the team captain will then direct the team through the drill movements IAW Attachment B. The squad will be returned to its original position following the completion of the movements. The DTC will then report to the Chief Judge, and request permission to march off.

TIMING

5. A maximum of 15 minutes is allowed for each competing team. The timing will commence immediately following the team captain being granted permission to proceed and will terminate when the team captain reports to the Chief Judge upon completion of the drill sequence.

DRILL AUTHORITY

6. All drill movements will be carried out IAW A-PD-201-000/PT- 000 Canadian Forces Manual of Drill and Ceremonial.

MARKING

7. Marking will be performed by the judges using the marking guide located at Attachment C and the marking sheet located at Attachment D. One point will be deducted for each individual fault or infraction to a maximum of 80 point deductions. A maximum of five points will be deducted for a single movement (eg, if a whole team performs a movement incorrectly, a total of five points will be deducted).

PENALTIES

8. Penalties will be deducted for specific infractions. Additional points will not be deducted for an infraction for which a penalty is awarded.

9. The following penalties will be awarded for infractions and will be deducted from the drill score by the Chief Judge:

a.	Omission of a drill movement	5 points.
b.	Drill movement performed out of sequence	1 point.
c.	Late when called to compete	2 points.
d.	Exceeding maximum time allowance for sequence	2 points.

INTERPRETATION OF RULES

10. In any situation where no equitable solution can be found in the rules, the Chief Judge will be empowered to make a ruling, which is binding to all participants.

DRILL SEQUENCE

STANDING DRILL

1. Stand Easy
2. Stand at Ease
3. Attention
4. To the Front Salute
5. Left Turn
6. Right Turn
7. About Turn
8. Right Incline
9. About Turn
10. Open Order March
11. Right Dress
12. Eyes Front
13. Close Order March
14. Right Turn

MARCHING DRILL

1. Quick March
2. Mark Time
3. Forward
4. Mark Time
5. Halt
6. Quick March
7. Left Wheel
8. Left Wheel
9. Salute to the Right on the March
10. Left Wheel
11. Right Wheel
12. Right Wheel
13. Right Wheel
14. Mark Time
15. Halt

STANDING DRILL

1. Left Turn
2. Right Dress
3. Eyes Front

DRILL COMPETITION MARKING GUIDE

INSPECTION

The inspection will be marked out of five possible points in the following areas:

Wedge. Worn on the right side of the head, with the lower point of the front crease in the centre of the forehead and the front edge of the cap 2.5 cm (1 inch) above the right eyebrow.

Male hair. Neatly groomed, taper-trimmed at the back, sides and above the ears with no hair touching the ears or collar. Sideburns shall not extend below a line horizontally bisecting the ear, and shall be squared off horizontally at the bottom edge and taper trimmed to conform to the overall hairstyle. Beards shall not be worn except for those of the Sikh religion.

Female hair. Neatly groomed and not extend below the lower edge of the jacket collar. Bizarre styles or colours are not permitted in uniform. A single braid, if worn, shall be worn in the centre of the back. Double braids, if worn, shall be worn to the back. All multiple braids shall be directed toward the back. Multiple braids, if worn, extending below the lower edge of the collar are to be gathered in a bun. The braid may not extend beyond the armpit. No hair ornaments are to be worn and effort should be made to ensure that bobby pins secure hair and are unobtrusive.

Appearance. Only a wristwatch, medical alert bracelet, and a maximum of two rings may be worn with the uniform (costume rings are not to be worn in uniform). Female cadets may wear a single pair of plain gold, silver stud or white pearl earrings in pierced ears. Makeup shall be applied conservatively. No eyeliner, fake eyelashes, coloured eye shadow or nail polish is to be worn in uniform. Male cadets are not authorized to wear earrings. Covering piercings with a bandage (band-aid) is not acceptable.

Trousers. Pressed with creases down the centre of each leg, and worn with the black belt.

Short-sleeved shirt. Pressed with a crease along the upper edge of each arm. Rank slip-ons shall be worn with the short-sleeved shirt.

Boots. Shined all over, laced across horizontally from side to side, and worn with grey wool socks.

DTC

Reporting. DTC reports to the judges confidently and in the correct manner.

Words of command. The words of command should be correct, called on the correct foot and with the correct interval of timings. They should be clear and loud enough for the entire team to hear and obey.

Ability to control. The ability to command, control and give proper orders to the team carrying out drill movements.

COMPULSORY SEQUENCE

All standing and marching drill for the compulsory sequence will be marked out of a total of five points. One point will be deducted for errors in each of the following areas:

Body drive. The amount of effort put into the movements.

Correctness of movement. This includes immediate and correct response to the command with the standard pause (two beats of quick time) observed where necessary.

Correct dressing. The alignment of ranks and flanks at the halt and on the march.

Steadiness. No excess movements during any portion of the drill sequence, including fidgeting, fixing the uniform, etc.

Precision. Movements are carried out in unison.

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DRILL COMPETITION MARKING SHEET

Team: _____ Date: _____

DTC: _____

Inspection - Maximum 30 Points			
1.	Wedge		/5
2.	Hair		/5
3.	Appearance		/5
4.	Trousers		/5
5.	Short-sleeved shirt		/5
6.	Boots		/5
	Sub-total		**/30**
DTC - Maximum 40 Points			
1.	Reporting		/10
2.	Words of Command		/20
3.	Ability to Control		/10
	Sub-total		**/40**
Drill Movements - Maximum Points			
	Standing Drill		
1.	Stand Easy		/5
2.	Stand at Ease		/5
3.	Attention		/5
4.	To the Front Salute		/5
5.	Left Turn		/5
6.	Right Turn		/5
7.	About Turn		/5
8.	Right Incline		/5
9.	About Turn		/5
10.	Open Order March		/5
11.	Right Dress		/5
12.	Eyes Front		/5
13.	Close Order March		/5
14.	Right Turn		/5
	Marching Drill		/5
1.	Quick March		/5
2.	Mark Time		/5
3.	Forward		/5
4.	Mark Time		/5
5.	Halt		/5
6.	Quick March		/5
7.	Left Wheel		/5
8.	Left Wheel		/5
9.	Salute to the Right on the March		/5
10.	Left Wheel		/5
11.	Right Wheel		/5
12.	Right Wheel		/5
13.	Right Wheel		/5

14.	Mark Time		/5
15.	Halt		/5
	Standing Drill		
1.	Left Turn		/5
2.	Right Dress		/5
3.	Eyes Front		/5
	Sub-total		**/**
	Sub-total		**/**
Comments			
Penalties			
	Penalty Sub-total		
	Inspection		/
	DTC		/
	Compulsory		/
	Less Total Penalties		
	Grand Total		**/**

Name of Judge:	
Date:	Signature of Judge:

CHAPTER 9

PO 111 – PARTICIPATE IN RECREATIONAL SUMMER BIATHLON ACTIVITIES

COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 1

EO C111.01 - PARTICIPATE IN A BIATHLON BRIEFING

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Confirm the number of zones within your region.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for this lesson to introduce biathlon and provide an overview of the sport.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson, the cadet shall have participated in a biathlon briefing.

IMPORTANCE

It is important for cadets to participate in a biathlon briefing because it introduces the history and components of biathlon, as well as assists in preparing for a biathlon event.

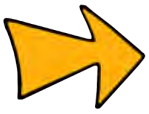
Teaching Point 1 **Introduce biathlon.**

Time: 10 min Method: Interactive Lecture

THE SPORT OF BIATHLON

Traditionally, biathlon consists of two activities—small bore marksmanship and free technique cross country skiing. There are other forms of biathlon competition—these competitions must include a cardiovascular activity and a marksmanship component. The marksmanship component of biathlon demands fine motor control, great stability and precision. Traditionally a .22 cal small bore rifle is used. The combination of these two very contradictory activities makes the sport of biathlon.

Biathlon is considered a life sport. The first recorded biathlon competition took place near the Swedish / Norwegian border in 1767, between companies of border guards from the two countries. Biathlon continued to develop through hunting and warfare until it was introduced as a demonstration sport at the winter Olympics in Charmoix, France in 1924. It was not until 1960 in Squaw Valley, California and a change to small bore that biathlon became a fully-sanctioned Olympic event for men. In 1992 in Albertville, France, it became an Olympic event for women as well.



Cave drawings found in Norway, depicting Nordic skiing and the carrying of a weapon, date Biathlon back more than 5,000 years.

TYPES OF RACES

There are six different types of races used in biathlon competitions in the CCM.

INDIVIDUAL

An individual race consists of a single competitor start. It is a race of varying distances based on age, gender, weather, and the geographical constraints of the course location. An individual race consists of sequential bouts of skiing and firing, which may include:

1. skiing;
2. firing five rounds;
3. skiing;
4. firing five rounds;
5. skiing;
6. firing five rounds;
7. skiing; and
8. crossing the finish line.

The race is over when the last competitor crosses the finish line.

A time penalty of 40 seconds for every missed target is added to the competitor's final time.

SPRINT

A sprint race consists of a single competitor or group start. It is a race of varying distances based on age, gender, weather, and the geographical constraints of the course location. A sprint race consists of sequential bouts of skiing and firing, which may include:

1. skiing;
2. firing five rounds;
3. skiing;
4. firing five rounds;
5. skiing and
6. crossing the finish line.

The race is over when the last competitor crosses the finish line.

A penalty of skiing one loop for every missed target is added to the competitor's final time.

MASS

A mass race consists of a simultaneous start. It is a race of varying distances based on age, gender, weather, and the geographical constraints of the course location. A mass race consists of sequential bouts of skiing and firing, which may include:

1. skiing;
2. firing five rounds;
3. skiing;
4. firing five rounds;
5. skiing;
6. firing five rounds;
7. skiing;
8. fire five rounds;
9. skiing and
10. crossing the finish line.

The race is over when the last competitor crosses the finish line.

A penalty of skiing one loop for every missed target is added to the competitor’s final time.

PURSUIT

A pursuit race consists of a single competitor start on random draw or results from a previous event during the same championship. It is a race of varying distances based on age, gender, weather, and the geographical constraints of the course location. A pursuit race consists of sequential bouts of skiing and firing, which may include:

1. skiing;
2. firing five rounds;

3. skiing;
4. firing five rounds;
5. skiing;
6. firing five rounds;
7. skiing;
8. firing five rounds;
9. skiing; and
10. crossing the finish line.

The race is over when the last competitor crosses the finish line.

A penalty of skiing one loop for every missed target is added to the competitor's final time.

RELAY

A relay race consists of a simultaneous start. It is a race of varying distances, based on age, gender, weather, and the geographical constraints of the course location. A relay race consists of sequential bouts of skiing and firing for each relay team member, which may include:

1. skiing;
2. firing five rounds (three spare);
3. skiing;
4. firing five rounds (three spare);
5. skiing;
6. tagging / touching either the torso, arms, hands, legs, feet, head or the rifle of the outgoing member of the team in the relay handover zone; and
7. the last skier completing the above sequence with no tagging / touching. They end the race by crossing the finish line.

The race is over when the last competitor of the last team crosses the finish line.

A penalty of skiing one loop for every missed target is added to the competitor's final time.

PATROL

A patrol race consists of a simultaneous start of a firing bout on the range. It is a race of varying distances, based on age, gender, weather, and the geographical constraints of the course location. The team must ski together with a distance of no further than 30 m apart from the first to the last skier. This distance is measured when they enter the range and cross the finish line. It may also be measured while on a skiing bout. Members of the patrol must carry patrol equipment in a pack. The equipment will vary, but usually consists of four to six wool blankets. The blankets are carried in packs and the division of the blankets is left to the discretion of the team. A patrol race consists of sequential bouts of skiing and firing, which may include:

1. firing up to 20 rounds;
2. skiing;
3. firing up to 20 rounds;

4. skiing;
5. firing up to 20 rounds;
6. skiing;
7. firing unlimited rounds; and finishing when the last paddle on the target indicates a hit.

A penalty of skiing one loop for every missed target is added to the competitor's final time.

Special rules for a patrol race

- Each competitor must fire at least twice.
- Teams cannot leave the range until all targets are hit or all 20 rounds are expended.
- Crossfiring is authorized as per rule 1.9.2. from *Biathlon Canada Handbook*. When a member of a team has hit all five of their targets they may fire at their team member's target. This can only occur after crossfire is called and the competitor who will not be firing unloads their rifle and places it on the mat.
- Five minutes will be added to the team's final time if two competitors fire on the same target at the same time.
- Each team must stay together as a group as per rule 1.9.3. from *Biathlon Canada Handbook*.
- Only during a patrol race may the rifle be supported by the pack on the firing line.
- A patrol member must be wearing or carrying their pack when crossing the finish line or entering the range.
- A patrol member must finish with their pack.

End of Patrol

There is a time limit on the patrol race. At the 45-minute mark, the range is closed to incoming teams and penalties are added to the team's final time. For each ski bout not completed by the team, a 15 minute time will be added to their final time.

FINAL RESULTS FOR ALL TYPES OF RACES

Results are based on ski time(s) combined with any time credits or penalties assessed to produce a final time. First place is awarded to the team with the lowest time.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. What two activities make up the sport of biathlon?

Q2. What are the six types of biathlon races used in biathlon competitions in the CCM?

Q3. In what race is crossfiring allowed?

ANTICIPATED ANSWERS:

A1. A marksmanship and an cardiovascular activity.

A2. Individual, sprint, mass, pursuit, relay, and patrol races.

A3. Only in the patrol race IAW rule 1.9.3. from the *Biathlon Canada Handbook*.

Teaching Point 2 **Describe competitive events in the CCM.**

Time: 15 min Method: Interactive Lecture

LOCAL SQUADRON (STAGE 1)

At stage one the squadron Commanding Officer (CO) is the Officer of Primary Interest (OPI) and will recommend who will participate in the zone competition based on the squadron's biathlon program. If no biathlon program is in place at the corps, cadets may still compete at the CO's discretion. Biathlon teams consist of three competitors of the same gender, one of which must be a junior (have not reached the 15th birthday on or before 15 March of the training year).

ZONE (STAGE 2)

At stage two cadets will compete in a zone competition with corps in the same geographical area. Corps that cannot participate in a zone competition due to geographic limitations may conduct a local competition and mail in the results to the Zone / Regional Biathlon Coordinator who is the OPI for this stage. The regional biathlon coordinator is responsible for posting the names of the competitors who will advance to the provincial / territorial competition, based on the competitor's results, and the region's total allowable competitors.

PROVINCIAL / TERRITORIAL (STAGE 3)

At stage three the number of competitors in each category will depend on the number of zones in the region, and are decided by the Regional Biathlon Coordinator who is the OPI for this stage. These categories are female team, female composite team, male team, and male composite team. Composite teams are composed of top individual competitors in a zone, who are not necessarily from the same corps. Corps teams are selected based on the aggregate score of the fastest three competitors from the corps. Individual members of corps teams do not need to be declared until after the final race results are posted.

NATIONAL (STAGE 4)

Stage four in the selection process is based on the number of teams permitted to compete per region. The OPI for this stage is the National Biathlon Coordinator. Corps teams must contain the fastest junior and fastest senior competitor, plus the next fastest skier from the same corps based on their final time from the qualifying race.

Composite teams are selected based on final race times, from the remaining competitors who are not already selected for a corps team. Each composite team will consist of the next fastest senior competitor, next fastest junior competitor, and the next fastest competitor.

Discuss regional team allowances (located at Figure 1).

Teams	Atlantic				Eastern	Central	Prairie			Pacific	Northern
	NF	NS	NB	PEI	QC	ON	MB	SK	AB	BC	
Female Team	1	1	1	1	1	1	1	1	1	1	
Female Composite Team	1	1	1	1	2	2	1	1	1	1	1
Male Team	1	1	1	1	1	1	1	1	1	1	
Male Composite Team	1	1	1	1	2	2	1	1	1	1	1

Note. Created by D Cdts 4, 2006, Ottawa, ON: Department of National Defence.

Figure 1 Regional Disbursement of Teams

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. What is the minimum number of junior competitors per team?

Q2. How many levels of competitions are there in the CCM?

Q3. How is the composite team selected?

ANTICIPATED ANSWERS:

A1. There is a minimum of one junior competitor per team.

A2. There are four levels of competition:

- squadron,
- zone,
- provincial / territorial, and
- national.

A3. Composite teams are selected based on final race times, from the remaining competitors who are not already selected for a squadron team. Each composite team will consist of the next fastest senior competitor, next fastest junior competitor, and the next fastest competitor.

END OF LESSON CONFIRMATION

The cadets' participation in the biathlon briefing will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Biathlon is a challenging and exciting individual and team sport that is challenging, exciting and promotes physical fitness, which is one of the aims of the cadet program.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A0-036 Cadets Canada. (n.d.). *Canadian cadet movement: Biathlon championship series*. Ottawa, ON: Department of National Defence.

C0-084 Biathlon Canada. (2003). *Biathlon Canada handbook*. Ottawa, ON: Biathlon Canada.

COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 2

EO C111.02 – RUN WIND SPRINTS

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Ensure a first aid station is set up during the practical activities.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TPs 1 and 2 to introduce cadets to the methods of preparing for a biathlon activity and running techniques.

A practical activity was chosen for TPs 3–5 as it is an interactive way to introduce the cadets to running skills in a safe and controlled environment. This activity contributes to the development of running skills and knowledge in a fun and challenging setting.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall be expected to have run wind sprints.

IMPORTANCE

It is important for cadets to run wind sprints because it is a method of increasing endurance, which will be useful when participating in summer biathlon activities.

Teaching Point 1 **Explain how to prepare for summer biathlon activities.**

Time: 5 min Method: Interactive Lecture

CLOTHING

Clothing worn while running is important for keeping the body temperature regulated as well as providing freedom of movement. Layering clothing is important because it maintains body heat and ensures comfort while outdoors.

Show examples of the clothing used for the different layers as they are described.

The Base / Core Layer

The layer next to the skin is called the base layer. It may consist of a synthetic undershirt that is close fitting but not tight. It should be made of a material that will absorb perspiration and move it away from the skin, such as polyester.

Damp clothes draw heat from the body, even in conditions above freezing. This rapid heat loss can cause a dangerous drop in body temperature.

The Mid-Layer

The second layer, called the mid-layer, provides insulation and moves moisture away from the base layer. This layer should be snug, but not constricting. It may consist of a zip-up shirt with a high neck or a shirt with a collar. In hot weather, this layer may be used as an outside layer.

The Outer Layer

The final layer, called the outer layer, provides protection from the elements. It should allow air to circulate and excess moisture to escape. It may consist of a wind shell or a waterproof rain jacket.

It is easier to stay warm rather than trying to warm up after getting cold. Additional insulating layers may be required to keep warm when sitting still in cold temperatures. Most of the heat from a person's body is lost through the head and face. It is always best to wear something on the head regardless of the weather conditions. In the summer, a hat protects the head from the sun and provides shade, while in the winter, a hat helps stop the heat from escaping.

FOOTWEAR

Running shoes should fit comfortably when laced up. Always wear clean, dry socks when wearing running shoes.

HYDRATION

The body is made up of over 60 percent water therefore hydration is crucial, particularly when participating in physical activity. The body continuously loses water through breathing, sweating, and urinating. It is recommended that water be drunk approximately two hours before exercise, often during exercise, and after exercise. Sports drinks are an alternative to water for those who run more than 4 km at one time, or who participate in more than an hour of moderate physical activity.

NUTRITION

It is important to follow the guidelines for healthy eating outlined in *Canada's Food Guide*, particularly for those who are physically active. Meals should be eaten at least 30 minutes prior to physical activity to allow time for the food to digest.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. Why is it important to layer your clothing?

Q2. What percentage of the body is made up of water?

Q3. Where can the guidelines for healthy eating be found?

ANTICIPATED ANSWERS:

A1. It is important to layer clothing to maintain body heat and ensure comfort while outdoors.

A2. Over 60 percent of the body is made up of water.

A3. They can be found in *Canada's Food Guide*.

Teaching Point 2 **Describe running techniques.**

Time: 5 min Method: Interactive Lecture

PACING

Pacing is the speed that should be run in order to cover the distance. It is essential to every runner and is important for maintaining energy and endurance. Individuals should pace themselves based on the signs felt from the body and the environmental conditions. An individual who cannot speak as they are running is considered to be running too fast or too long. This will prevent an individual from being able to run as long as runners who pace themselves accordingly.

In the beginning, the pace should be the anticipated average speed for the run. The pace may be increased at the halfway point, if this pace can be maintained for the remainder of the run. Towards the end of the run, energy should be gauged to determine if speed could be increased for the final portion of the run.

A good method for determining a comfortable pace is to use the "talk test". A runner should be able to talk comfortably while running, if not, the pace should be adjusted.

POSTURE / BODY ALIGNMENT

Having proper posture / body alignment can make running easier on the body and can increase an individual's performance. Basic techniques for posture / body alignment include keeping the hands at waist level to prevent tension in the arms and shoulders; remaining straight and erect, with head up, back straight, and shoulders level, to prevent shin splints and lower-back pain; and landing softly on the feet to avoid bouncing and to prevent wasting energy and to prevent injuries to the feet and legs.

WIND SPRINTS

Wind sprints are short bursts of high intensity movement conducted during regular aerobic activity, meant to make a person momentarily winded. For optimal benefits, physical activity must be continued after the wind

sprint is completed. Wind sprints can be conducted during any type of aerobic activity (eg, running, cycling, or swimming). Regular training with wind sprints may increase overall athletic performance.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. Why is pacing important for running?

Q2. What is a good method of determining a comfortable pace for running?

Q3. Describe one technique for posture / body alignment while running.

ANTICIPATED ANSWERS:

A1. Pacing is important for runners to maintain energy and endurance.

A2. The talk test is a good method of determining a comfortable pace for running.

A3. Basic techniques for posture / body alignment include:

- keeping the hands at waist level, to prevent tension in the arms and shoulders;
- remaining straight and erect, with head up, back straight, and shoulders level, to prevent shin splints and lower-back pain; and
- landing softly on the feet to avoid bouncing and to prevent wasting energy and to prevent injuries to the feet and legs.

Teaching Point 3 **Conduct a warm-up activity consisting of light cardiovascular exercises.**

Time: 5 min Method: Practical Activity

The following information will be explained to the cadets during the warm-up activity.

PURPOSE OF A WARM-UP

A warm-up is composed of stretches and light cardiovascular exercises designed to:

- stretch the muscles;
- gradually increase respiratory action and heart rate;
- expand the muscles' capillaries to accommodate the increase in blood circulation which occurs during physical activity; and
- raise the muscle temperature to facilitate reactions in muscle tissue.

GUIDELINES FOR STRETCHING

The following guidelines should be followed while stretching to prepare for physical activity and to help prevent injury:

- Stretch all major muscle groups, including the back, chest, legs, and shoulders.
- Never bounce while stretching.
- Hold each stretch for 10–30 seconds to let the muscles release fully.
- Repeat each stretch two to three times.
- When holding a stretch, support the limb at the joint.
- Static stretching, which is stretching a muscle and holding it in position without discomfort for 10–30 seconds, is considered the safest method.
- Stretching helps to relax the muscles and improve flexibility, which is the range of motion in the joints.
- As a guide, allow 10 minutes to warm up for every hour of physical activity.

The stretches chosen should focus on the areas of the body that will be used the most during the sports activity.

ACTIVITY

OBJECTIVE

The objective of this warm-up activity is to stretch the muscles and perform light cardiovascular exercises to prepare the body for physical activity and to help prevent injuries.

RESOURCES

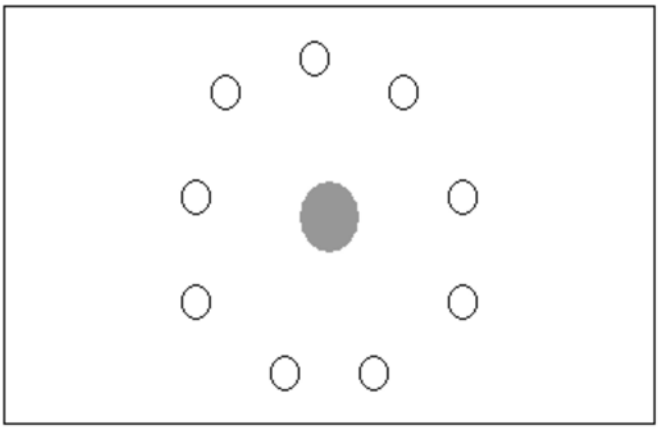
Nil.

ACTIVITY LAYOUT

Nil.

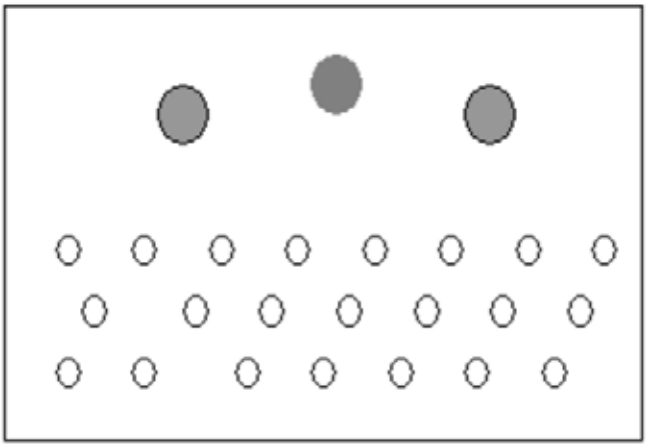
ACTIVITY INSTRUCTIONS

- Arrange the cadets in either a warm-up circle or in rows (as illustrated in Figures 1 and 2).



Note. Created by D Cdts 3, 2006, Ottawa, ON: Department of National Defence.

Figure 1 Instructor in the Centre of a Warm-Up Circle



Note. Created by D Cdts 3, 2006, Ottawa, ON: Department of National Defence.

Figure 2 Instructor at the Front with Two Assistant Instructors

- Demonstrate before having the cadets attempt each stretch / light cardiovascular exercise.
- Assistant instructors can help demonstrate the exercises and ensure the cadets are performing them correctly.
- Have cadets perform each stretch / light cardiovascular exercise.

Light cardiovascular activities should be done to warm up the muscles prior to stretching to avoid injury to or tearing of the muscles. For example, running on the spot for 30 seconds or performing jumping jacks should be performed prior to conducting the stretching activities located at Attachment A.

SAFETY

- Ensure there are at least two arm lengths between the cadets so they can move freely.
- Ensure the cadets perform the stretches and light cardiovascular exercises in a safe manner, following the guidelines for stretching listed in this TP.

CONFIRMATION OF TEACHING POINT 3

The cadets' participation in the warm-up will serve as the confirmation of this TP.

Teaching Point 4 **Supervise while the cadets run wind sprints.**

Time: 5 min Method: Practical Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets practice running short wind sprints.

RESOURCES

- Area with level terrain that is large enough to conduct a run, and
- A whistle.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

- Have the cadets run at a comfortable pace.
- During the run, have the cadets complete a minimum of two wind sprints. To do a wind sprint:
  - give the cadets a warning before they start the wind sprint;
  - sound the start;
  - have the cadets run as fast as they can for approximately 30 seconds;
  - sound the finish of the sprint; and
  - instruct the cadets to return to their normal pace.

SAFETY

- Ensure a designated first aider and first aid kit are available.
- Ensure water is available for the cadets after they complete the run.

CONFIRMATION OF TEACHING POINT 4

The cadets' participation in running wind sprints will serve as the confirmation of this TP.

Teaching Point 5 **Conduct a cool-down session composed of light cardiovascular exercises.**

Time: 5 min Method: Practical Activity

The following information will be explained to the cadets during the cool-down activity.

PURPOSE OF A COOL-DOWN

A cool-down is composed of stretches and light cardiovascular exercises designed to:

- allow the body time to slowly recover from physical activity and to help prevent injury;
- prepare the respiratory system to return to its normal state; and
- stretch the muscles to help relax and restore them to their resting length.

The stretches chosen should focus on the areas of the body that were used the most during the sports activity.

ACTIVITY

OBJECTIVE

The objective of the cool-down is to stretch the muscles and perform light cardiovascular exercises that allow the body time to recover from physical activity, and to prevent injury.

RESOURCES

Nil.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

- Arrange the cadets in either a warm-up circle or in rows (as illustrated in Figures 1 and 2 of TP 3).
- Demonstrate before having the cadets attempt each stretch / light cardiovascular exercise.
- Assistant instructors can help demonstrate the movements and ensure the cadets are performing them correctly.
- Have cadets perform each stretch / light cardiovascular exercise.

SAFETY

- Ensure there are at least two arm lengths between the cadets so they can move freely.
- Ensure the cadets perform the stretches and light cardiovascular exercises in a safe manner, following the guidelines for stretching listed in TP 3.

CONFIRMATION OF TEACHING POINT 5

The cadets' participation in the cool-down will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in running wind sprints will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Wind sprints are a fun and challenging activity that may increase the overall athletic performance of an individual, which will be valuable when participating in summer biathlon activities.

INSTRUCTOR NOTES / REMARKS

Pictures of the clothing, hydration, and nutrition choices may be used in place of the actual items, if these items are not available.

REFERENCES

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C0-089 ISBN 0-936070-22-6 Anderson, B. (2000). *Stretching: 20th anniversary* (Rev. ed.). Bolinas, CA: Shelter Publications, Inc.

C0-100 ISBN 0-662-44467-1 Health Canada. (2007). *Canada's food guide*. Ottawa, ON: Her Majesty the Queen in Right of Canada.

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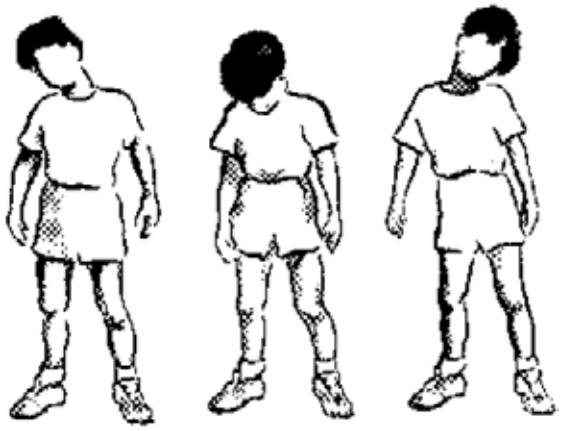
C0-154 Hansen, B. (1999). *Moving on the spot: Fun and physical activity: A collection of 5 minute stretch and movement sessions*. Retrieved October 26, 2006, from http://lin.ca/resource/html/dn3.htm#l1

SAMPLE STRETCHES

a. Neck:

 *Note. From Moving on the Spot: A Collection of 5 Minute Stretch and Movement Sessions, by B. Hanson, 1999, Toronto, ON: Toronto Public Health. Retrieved October 26, 2006, from http://www.lin.ca/resource/html/dn3.htm#I1* Figure A-1 Neck Stretch	Slowly roll your head across your chest from shoulder to shoulder. Do not roll your head backwards.

b. Shoulders:

 *Note. From Moving on the Spot: A Collection of 5 minute Stretch and Movement Sessions, by B. Hanson, 1999, Toronto, ON: Toronto Public Health. Retrieved October 26, 2006, from http://www.lin.ca/resource/html/dn3.htm#l1* Figure A-2 Shoulder Push	Stand and extend your arms behind you, interlocking your fingers. Push up and back with your shoulders. Hold this position for a minimum of 10 seconds.
 *Note. From Moving on the Spot: A Collection of 5 minute Stretch and Movement Sessions, by B. Hanson, 1999, Toronto, ON: Toronto Public Health. Retrieved October 26, 2006, from http://www.lin.ca/resource/html/dn3.htm#l1* Figure A-3 Shoulder Shrug	Stand and raise your shoulders as high as possible and then lower your shoulders, stretching your neck up. Pull your shoulders back as far as possible and then round your shoulders forward by pushing your shoulders forward as far as possible. Hold each position for a minimum of 10 seconds.
 *Note. From Warm Ups, by Martha Jefferson Hospital, Copyright 2001 by Martha Jefferson Hospital. Retrieved October 26, 2006, from http://www.marthajefferson.org/warmup.php* Figure A-4 Arm Circles	Hold your arms straight out, palms up. Make small circles with your arms, gradually increasing the size. Reverse the direction of your circles.
 *Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from http://www.in-motion.ca/walkingworkout/plan/flexibility/* Figure A-5 Shoulder Stretch	Either standing or sitting, take your right arm in your left hand and bring it across your chest, supporting the joint by holding it behind the elbow. Pull lightly on the elbow towards your chest. You should feel the stretch in your right shoulder. Hold this position for a minimum of 10 seconds and repeat on the opposite side.

c. Arms:

 *Note. From Exercises. Copyright 1998 by Impacto Protective Products Inc. Retrieved October 26, 2006, from http://www.2protect.com/home.htm* Figure A-6 Wrist Rotations	Rotate your hands in circular motions at the wrist. Change direction and repeat on both sides.
 *Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from http://www.in-motion.ca/walkingworkout/plan/flexibility/* Figure A-7 Triceps Stretch	Stand and bring your right arm over your head, bent at the elbow. Use your left hand to gently pull your arm down. Hold this position for a minimum of 10 seconds and repeat on the opposite side.
 *Note. From Exercise Programme for Squash, Tennis, Softball, Handball. Retrieved October 26, 2006, from http://www.physionline.co.za/conditions/article.asp?id=49* Figure A-8 Forearm Stretch	In a kneeling position, place your hands on the floor in front of you turned so that your fingers are pointing toward your knees, and your thumbs are pointing out. Keeping your hands flat on the floor, lean back. Hold this position for a minimum of 10 seconds.

d. Chest and Abdominals:

 *Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from http:// www.in-motion.ca/walkingworkout/plan/flexibility/* Figure A-9 Chest Stretch	Stand facing a wall. With your right arm bent and your elbow at shoulder height, place your palm against the wall. Turn your body away from your right arm. You should feel the stretch on the front side of your armpit and across the front of your chest. Hold this position for a minimum of 10 seconds and repeat on the opposite side.
 *Note. From Moving on the Spot: A Collection of 5 minute Stretch and Movement Sessions, by B. Hanson, 1999, Toronto, ON: Toronto Public Health. Retrieved October 26, 2006, from http://www.lin.ca/resource/html/dn3.htm#l1* Figure A-10 Side Stretch	Stand with your left arm up over your head. Bend at your waist towards the right side of your body. Hold this position for a minimum of 10 seconds and repeat on the opposite side.

e. Back:

 *Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from http:// www.in-motion.ca/walkingworkout/plan/flexibility/* Figure A-11 Lower Back Stretch	Lie on your back and bring your knees toward your chest. Grasp the back of your knees. Hold this position for a minimum of 10 seconds.
 *Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from http:// www.in-motion.ca/walkingworkout/plan/flexibility/* Figure A-12 Upper Back Stretch	Extend your arms straight in front of you at shoulder height crossing one arm over the other. With the palms facing each other, intertwine your fingers and press out through your arms. Let your chin fall to your chest as you exhale. You should feel the stretch in the upper back. Hold this position for a minimum of 10 seconds and repeat on the opposite side.

f. Legs:

 *Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from http:// www.in-motion.ca/walkingworkout/plan/flexibility/* Figure A-13 Hamstring Stretch	Lie flat on the floor with your knees bent and your back flat on the floor. Slowly raise and straighten one leg, grasping it behind your thigh with both hands. Hold this position for a minimum of 10 seconds.
 *Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from http:// www.in-motion.ca/walkingworkout/plan/flexibility/* Figure A-14 Inner Thigh Stretch	Sit on the floor with your knees bent and the soles of your feet together. Grab your toes and pull yourself forward while keeping your back and neck straight. Hold this position for a minimum of 10 seconds. Grab your ankles and push your knees down toward the floor with your elbows. Hold this position for a minimum of 10 seconds.
 *Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from http:// www.in-motion.ca/walkingworkout/plan/flexibility/* Figure A-15 Hip Flexor	Kneel on your right knee. Position your left foot in front of you, bending your knee and placing your left hand on that leg for stability. Keep your back straight and abdominal muscles tight. Lean forward, shifting more body weight onto your front leg. You should feel the stretch in the front of your hip and the thigh of the leg you are kneeling on. Cushion your kneecap with a folded towel if necessary. Hold this position for a minimum of 10 seconds and repeat on the opposite side.

f. Legs Continued:

 *Note. From Running Exercises. Retrieved October 26, 2006, http://www.physionline.co.za/conditions/article.asp?id=46* Figure A-16 Ankle Rotations	From a sitting position, rotate your foot in a clockwise, and then a counter-clockwise, direction. Switch and repeat on the opposite side.
 *Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from http:// www.in-motion.ca/walkingworkout/plan/flexibility/* Figure A-17 Calf Stretch	Stand three steps away from and facing a wall. Step in towards the wall with your right leg, bending your right knee and keeping your left leg straight. Extending your arms with your palms forward, reach out to the wall and let your body fall toward the wall. Keep your toes forward and your heels down. Lean your body into the wall with your left leg straight behind your body. You should feel the stretch in your left calf. Hold this position for a minimum of 10 seconds and repeat on the opposite side.
 *Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from http:// www.in-motion.ca/walkingworkout/plan/flexibility/* Figure A-18 Quadriceps Stretch	Stand with your hand against a wall for balance. Lift your left foot off the ground, bending your knee as if you are trying to kick your bottom with your heel. Do not lean forward at the hips. Grab and hold your ankle with your left hand. You should feel the stretch in your left thigh. Hold this position for a minimum of 10 seconds and repeat on the opposite side.

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COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 3

EO C111.03 – SIMULATE FIRING THE CADET AIR RIFLE FOLLOWING PHYSICAL ACTIVITY

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Photocopy EO C111.02 Attachment A for TPs 3 and 5.

Construct a range IAW Chapter 1, Section 8 of A-CR-CCP-177/PPT-*001 Canadian Cadet Movement: Cadet Marksmanship Program Reference Manual*.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TPs 1–2 to introduce techniques to decrease heart rate prior to firing the cadet air rifle at the Biathlon Air Rifle Target (BART).

A practical activity was chosen for TPs 3–5 as it is an interactive way to allow the cadets to experience firing the cadet air rifle following physical activity in a safe and controlled environment.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall be expected to fire the cadet air rifle following physical activity.

IMPORTANCE

It is important for cadets to fire the cadet air rifle following physical activity because these techniques will be useful when participating in summer biathlon activities.

Teaching Point 1 **Identify techniques to decrease heart rate prior to firing the cadet air rifle.**

Time: 5 min Method: Interactive Lecture

TECHNIQUES TO DECREASE HEART RATE

Cardiovascular Fitness

One of the best methods to maintain a lower heart rate is to be physically fit. Being physically fit will also allow the heart to return to the resting heart rate quicker than someone who is not physically fit. The faster the heart rate decreases, the faster, and potentially more accurately firing may commence. A slower heart rate will also reduce the risk of movement and improve motor skills while firing.

VISUALIZATION

Visualization is seeing what you want to achieve. It is a practiced skill. Believing in oneself is directly linked to performance / outcome. To visualize, find a quiet place, close your eyes, and create a mental image of what you want to achieve. As with anything, the more one practices, the clearer the images will become. Visualizations should be positive and realistic. The purpose of visualizations for summer biathlon at this level is to visualize the heart rate slowing down and returning to the resting heart rate.

ACTIVITY

Time: 2 min

OBJECTIVE

The objective of this activity is to visualize better performance.

RESOURCES

Nil.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Have the cadets spread out around the room.
2. Instruct the cadets to hold their right arm out, turn as far to the right as they can without moving their feet, and point at a spot on the wall.
3. Instruct the cadets to return to their original standing position.
4. Have the cadets close their eyes and visualize themselves pointing at a spot on the wall that is farther than their original spot.
5. While keeping their eyes closed, have the cadets point to that spot on the wall using the same method outlined in step two.
6. Have the cadets open their eyes and see how far they have pointed.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in the activity will serve as the confirmation of this TP.

Teaching Point 2 **Describe the Biathlon Air Rifle Target (BART).**

Time: 5 min Method: Interactive Lecture

TARGETS

The BART has the following characteristics:

- five 35 mm diameter drop plate targets,
- pop-up paddles for visual confirmation, and
- a manual reset with a 10 m pull cord.

This target has five black circular targets on white backgrounds. When a target is hit, a white paddle pops up, covering the circle. Once a round of firing is complete and the lane scorer has recorded the score, the cord is pulled and the target is reset.

Note. From "Biathlon Style Airgun Target", by Devin Mfg., Inc., 2005, Devin Manufacturing Incorporated, Copyright 2005 by Devin Mfg., Inc. Retrieved February 15, 2007 from http://www.devinmfg.com/targets1.html

Figure 1 BART

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. What does BART stand for?

Q2. What is one of the characteristics of the BART?

Q3. How many targets are on the BART?

ANTICIPATED ANSWERS:

A1. Biathlon Air Rifle Target.

A2. The Biathlon Air Rifle Target (BART) has the following characteristics:

- five 35 mm diameter drop plate targets,
- pop-up paddles for visual confirmation, and
- a manual reset with a 10 m pull cord.

A3. There are five targets on the BART.

Teaching Point 3 **Conduct a warm-up session composed of light cardiovascular exercises.**

Time: 5 min Method: Practical Activity

The following information will be explained to the cadets during the warm-up activity.

PURPOSE OF A WARM-UP

A warm-up is composed of stretches and light cardiovascular exercises designed to:

- stretch the muscles;
- gradually increase respiratory action and heart rate;
- expand the muscles' capillaries to accommodate the increase in blood circulation which occurs during physical activity; and
- raise the muscle temperature to facilitate reactions in muscle tissue.

GUIDELINES FOR STRETCHING

The following guidelines should be followed while stretching to prepare for physical activity and to help prevent injury:

- Stretch all major muscle groups, including the back, chest, legs, and shoulders.
- Never bounce while stretching.
- Hold each stretch for 10–30 seconds to let the muscles release fully.
- Repeat each stretch two to three times.
- When holding a stretch, support the limb at the joint.
- Static stretching, which is stretching a muscle and holding it in position without discomfort for 10–30 seconds, is considered the safest method.
- Stretching helps to relax the muscles and improve flexibility, which is the range of motion in the joints.
- As a guide, allow 10 minutes to warm up for every hour of physical activity.

The stretches chosen should focus on the areas of the body that will be used the most during the activity.

ACTIVITY

OBJECTIVE

The objective of this warm-up activity is to stretch the muscles and perform light cardiovascular exercises to prepare the body for physical activity and to help prevent injuries.

RESOURCES

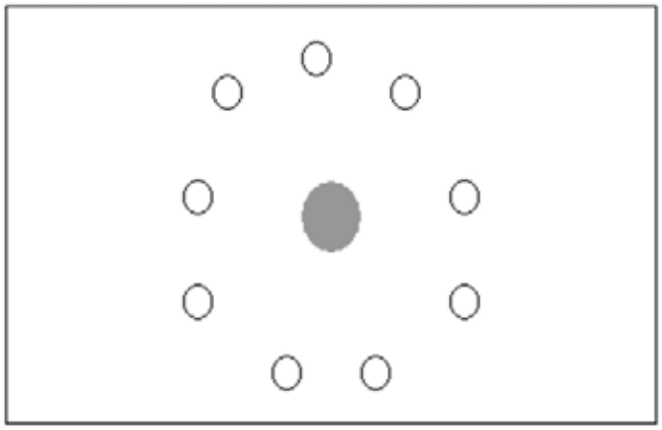
Nil.

ACTIVITY LAYOUT

Nil.

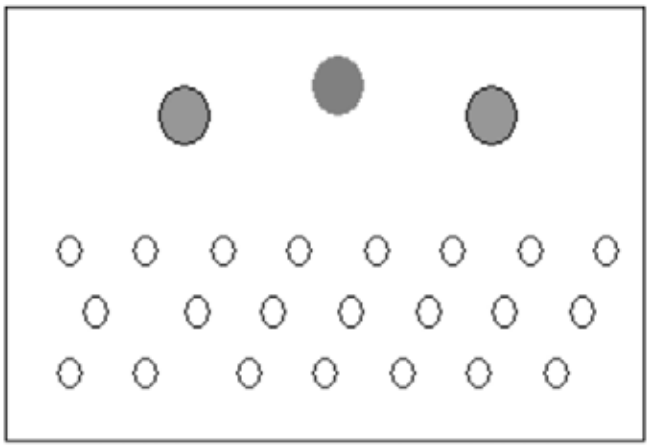
ACTIVITY INSTRUCTIONS

- Arrange the cadets in either a warm-up circle or in rows (as illustrated in Figures 2 and 3).



Note. Created by D Cdts 3, 2006, Ottawa, ON: Department of National Defence.

Figure 2 Instructor in the Centre of a Warm-Up Circle



Note. Created by D Cdts 3, 2006, Ottawa, ON: Department of National Defence.

Figure 3 Instructor at the Front with Two Assistant Instructors

- Demonstrate before having the cadets attempt each stretch / light cardiovascular exercise.
- Assistant instructors can help demonstrate the exercises and ensure the cadets are performing them correctly.
- Have cadets perform each stretch / light cardiovascular exercise.

Light cardiovascular activities should be done to warm up the muscles prior to stretching to avoid injury to or tearing of the muscles. For example, running on the spot for 30 seconds or performing jumping jacks should be performed prior to conducting the stretching activities located at EO C111.02 Attachment A.

SAFETY

- Ensure there are at least two arm lengths between the cadets so they can move freely.
- Ensure the cadets perform the stretches and light cardiovascular exercises in a safe manner, following the guidelines for stretching listed in this TP.

CONFIRMATION OF TEACHING POINT 3

The cadets' participation in the warm-up will serve as the confirmation of this TP.

Teaching Point 4 **Conduct an activity where cadets will fire the cadet air rifle following physical activity.**

Time: 5 min Method: Practical Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to fire the cadet air rifle following physical activity.

RESOURCES

- Cadet air rifles (one per firing lane),
- Marksmanship mats (two per firing lane),
- BART and target frame (one per firing lane), and
- Safety glasses / goggles.

If resources are available the number of firing lanes may be increased.

ACTIVITY LAYOUT

Construct a range IAW A-CR-CCP-177/PT-001 *Canadian Cadet Movement: Cadet Marksmanship Program Reference Manual*.

ACTIVITY INSTRUCTIONS

1. The cadets' heart rate should be elevated from participating in the warm-up activity in TP 3.
2. Have the cadets approach the firing point and prepare to fire using the techniques outlined in TP 1.
3. Have the cadets adopt the prone position and simulate firing at the BART.
4. Repeat steps one to three for each relay until all cadets have participated.

SAFETY

Range activities will be conducted IAW A-CR-CCP-177/PT-001 *Canadian Cadet Movement: Cadet Marksmanship Program Reference Manual*.

CONFIRMATION OF TEACHING POINT 4

The cadets' participation in the activity will serve as the confirmation of this TP.

Teaching Point 5 **Conduct a cool-down session composed of light cardiovascular exercises.**

Time: 5 min Method: Practical Activity

The following information will be explained to the cadets during the cool-down activity.

PURPOSE OF A COOL-DOWN

A cool-down is composed of stretches and light cardiovascular exercises designed to:

- allow the body time to slowly recover from physical activity and to help prevent injury;
- prepare the respiratory system to return to its normal state; and
- stretch the muscles to help relax and restore them to their resting length.

The stretches chosen should focus on the areas of the body that were used the most during the activity.

ACTIVITY

OBJECTIVE

The objective of the cool-down is to stretch the muscles and perform light cardiovascular exercises that allow the body time to recover from physical activity, and to prevent injury.

RESOURCES

Nil.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

- Arrange the cadets in either a warm-up circle or in rows (as illustrated in Figures 2 and 3 of TP 3).
- Demonstrate before having the cadets attempt each stretch / light cardiovascular exercise.
- Assistant instructors can help demonstrate the movements and ensure the cadets are performing them correctly.
- Have cadets perform each stretch / light cardiovascular exercise.

SAFETY

- Ensure there are at least two arm lengths between the cadets so they can move freely.
- Ensure the cadets perform the stretches and light cardiovascular exercises in a safe manner, following the guidelines for stretching listed in TP 3.

CONFIRMATION OF TEACHING POINT 5

The cadets' participation in the cool-down will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the activity in TP 4 will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Being able to use techniques, such as visualization, to slow down the heart rate will be useful when participating in summer biathlon activities.

INSTRUCTOR NOTES / REMARKS

Cadets must have completed PO 106 (Fire the Cadet Air Rifle) prior to participating in this lesson.

REFERENCES

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COMMON TRAINING

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 4

EO C111.04 – PARTICIPATE IN A RECREATIONAL SUMMER BIATHLON ACTIVITY

Total Time: 180 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Ensure that all members involved in conducting this activity are well versed in the competition guidelines located at Attachment A.

Photocopy EO C111.02 Attachment A for TPs 3 and 5.

Photocopy Attachment B as required.

Ensure a first aid station is set up.

Set up a running route of 250–500 m on level terrain and a range IAW A-CR-CCP-177/PT-001 *Canadian Cadet Movement: Cadet Marksmanship Program Reference Manual*.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An experiential approach was chosen for this lesson as it allows the cadets to acquire new knowledge and skills through a direct experience. The cadets experience summer biathlon and define that experience on a personal level. The cadets will be given the opportunity to reflect on and examine what they saw, felt and thought while participating in summer biathlon and consider how it relates to what they already learned and experienced as well as how it will relate to future experiences.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have participated in a recreational summer biathlon activity.

IMPORTANCE

It is important for cadets to participate in a recreational summer biathlon activity because it requires personal discipline, develops marksmanship skills, and promotes physical fitness.

Teaching Point 1 **Conduct the activity briefing.**

Time: 30 min Method: Interactive Lecture

Based on the facilities, the cadet should be made aware of the start area, the course, the firing range, and the finish area.

COURSE LAYOUT

Each cadet will:

- run a loop of 250–500 m;
- fire five to eight pellets in an effort to activate all five targets on the (BART);
- run a loop of 250–500 m;
- fire five to eight pellets in an effort to activate all five targets on the BART;
- run a loop of 250–500 m; and
- finish the race.

The 250–500 m course should be clearly marked prior to the start of this lesson.

RULES AND REGULATIONS

Rules and regulations for the recreational summer biathlon activity include the following:

- Cadets must use the same firing lane for the duration of the activity.
- The run must be completed in the proper sequence and on the marked route.
- Rifles must be placed at the firing point by the range staff and will remain there for the duration of the activity.
- All firing will be done in the prone position.
- The rifle must be made safe upon completion of firing.
- An inoperable rifle will be replaced by the range staff, the target will be reset, and the cadet will fire five to eight shots with the new rifle.
- Safety infractions will result in time penalties.
- Missed targets will result in time penalties.

SCORING

The scoring of this biathlon activity will be based on time and penalties.

PENALTIES

Penalties will be added to the individual's time, to include:

- Each violation of the principles of fair play or good sportsmanship will result in a one-minute penalty, to include:
  - not giving way in an area of congestion;
  - pushing or shoving;
  - using profanity; and
  - interfering with other competitors.
- Each missed target will result in a one-minute penalty.
- Each safety infraction on the firing point will result in a one-minute penalty to include:
  - not keeping control of the cadet air rifle;
  - moving forward of the firing point; and
  - intentionally firing rounds at objects other than the BART.

OUT OF BOUNDS AREAS

Make cadets aware of all out of bounds areas and safety considerations depending on the training area.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. What are two rules / regulations for this biathlon activity?

Q2. How will the recreational summer biathlon activity be scored?

Q3. What is one very minor violation of the principles of fair play / good sportsmanship?

ANTICIPATED ANSWERS

A1. Rules and regulations for the recreational summer biathlon activity include the following:

- Cadets must use the same firing lane for the duration of the activity.
- The run must be completed in the proper sequence and on the marked route.
- Rifles must be placed at the firing point by the range staff and will remain there for the duration of the activity.
- All firing will be done in the prone position.
- The cadet air rifle sling is the only firing aid that may be used.
- The rifle must be made safe upon completion of firing.
- An inoperable rifle will be replaced by the range staff, the target will be reset, and the cadet will fire five to eight shots with the new rifle.
- Safety infractions will result in time penalties.
- Missed targets will result in time penalties.

A2. The activity will be scored based on time and penalties.

A3. A very minor violation of the principles of fair play / good sportsmanship include:

- not giving way in an area of congestion;
- pushing or shoving;
- using profanity; and
- interfering with other competitors.

Teaching Point 2 **Conduct a warm-up session composed of light cardiovascular exercises.**

Time: 10 min Method: Practical Activity

The following information will be explained to the cadets during the warm-up activity.

PURPOSE OF A WARM-UP

A warm-up is composed of stretches and light cardiovascular exercises designed to:

- stretch the muscles;
- gradually increase respiratory action and heart rate;
- expand the muscles' capillaries to accommodate the increase in blood circulation which occurs during physical activity; and
- raise the muscle temperature to facilitate reactions in muscle tissue.

GUIDELINES FOR STRETCHING

The following guidelines should be followed while stretching to prepare for physical activity and to help prevent injury:

- Stretch all major muscle groups, including the back, chest, legs, and shoulders.
- Never bounce while stretching.
- Hold each stretch for 10–30 seconds to let the muscles release fully.
- Repeat each stretch two to three times.
- When holding a stretch, support the limb at the joint.
- Static stretching, which is stretching a muscle and holding it in position without discomfort for 10–30 seconds, is considered the safest method.
- Stretching helps to relax the muscles and improve flexibility, which is the range of motion in the joints.
- As a guide, allow 10 minutes to warm up for every hour of physical activity.

The stretches chosen should focus on the areas of the body that will be used the most during the activity.

ACTIVITY

OBJECTIVE

The objective of this warm-up activity is to stretch the muscles and perform light cardiovascular exercises to prepare the body for physical activity and to help prevent injuries.

RESOURCES

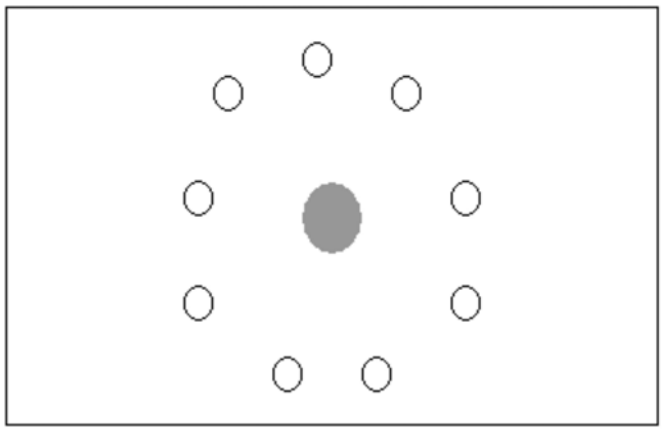
Nil.

ACTIVITY LAYOUT

Nil.

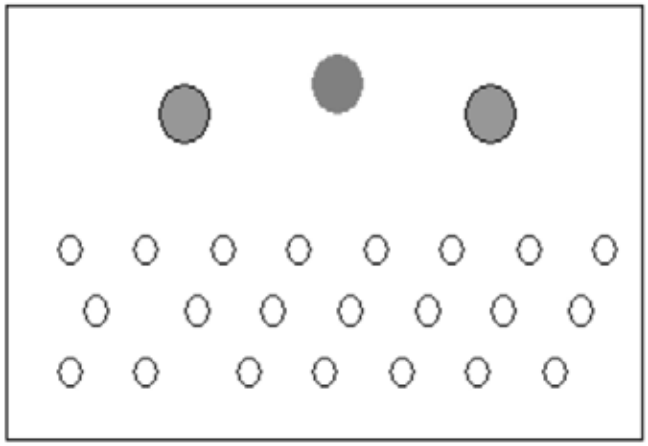
ACTIVITY INSTRUCTIONS

- Arrange the cadets in either a warm-up circle or in rows (as illustrated in Figures 1 and 2).



Note. Created by D Cdts 3, 2006, Ottawa, ON: Department of National Defence.

Figure 1 Instructor in the Centre of a Warm-Up Circle



Note. Created by D Cdts 3, 2006, Ottawa, ON: Department of National Defence.

Figure 2 Instructor at the Front with Two Assistant Instructors

- Demonstrate before having the cadets attempt each stretch / light cardiovascular exercise.
- Assistant instructors can help demonstrate the exercises and ensure the cadets are performing them correctly.
- Have cadets perform each stretch / light cardiovascular exercise.

Light cardiovascular activities should be done to warm up the muscles prior to stretching to avoid injury to or tearing of the muscles. For example, running on the spot for 30 seconds or performing jumping jacks should be performed prior to conducting the stretching activities located at EO C111.03 Attachment A.

SAFETY

- Ensure there are at least two arm lengths between the cadets so they can move freely.
- Ensure the cadets perform the stretches and light cardiovascular exercises in a safe manner, following the guidelines for stretching listed in this TP.

CONFIRMATION OF TEACHING POINT 2

The cadets' participation in the activity will serve as the confirmation of this TP.

Teaching Point 3 **Conduct a recreational summer biathlon activity.**

Time: 100 min Method: Practical Activity

ACTIVITY

OBJECTIVE

The objective of this activity is for cadets to participate in a recreational summer biathlon activity.

RESOURCES

Based on 20 cadets per group, the following resources are required per event:

- Cadet air rifles (5),
- Marksmanship mats (10),
- .177 air rifle pellets (a minimum of 700 pellets),
- Stop watches (5),
- BART and target frame (5),
- Safety glasses / goggles (8),
- Pens / pencils,
- Notice board,
- Biathlon score sheets located at Attachment B,
- Course control sheets located at Attachment B, and
- Range recording sheets located at Attachment B.

ACTIVITY LAYOUT

- Set up a running route of approximately 250–500 m on level terrain.
- Set up an air rifle range IAW Attachment A.
- Set up targets and target frames.
- Place two mats per firing lane.
- Place a cadet air rifle at each firing point.
- Place a pair of safety glasses / goggles at each firing point.

ACTIVITY INSTRUCTIONS

Activity instructions are located at Attachment A.

SAFETY

- Ensure all range safety procedures are followed.
- Ensure cadets drink plenty of water and apply sunscreen.
- Ensure the running route is clearly marked and crossing points are monitored anywhere a road may be crossed.
- Ensure a first aider is identified at the start of the activity and is available at all times.
- Ensure water is available for the cadets during and after the activity.

CONFIRMATION OF TEACHING POINT 3

The cadets' participation in the activity will serve as the confirmation of this TP.

Teaching Point 4 **Conduct a cool-down session composed of light cardiovascular exercises.**

Time: 10 min Method: Practical Activity

The following information will be explained to the cadets during the cool-down activity.

PURPOSE OF A COOL-DOWN

A cool-down is composed of stretches and light cardiovascular exercises designed to:

- allow the body time to slowly recover from physical activity and to help prevent injury;
- prepare the respiratory system to return to its normal state; and
- stretch the muscles to help relax and restore them to their resting length.

The stretches chosen should focus on the areas of the body that were used the most during the activity.

ACTIVITY

OBJECTIVE

The objective of the cool-down is to stretch the muscles and perform light cardiovascular exercises that allow the body time to recover from physical activity, and to prevent injury.

RESOURCES

Area large enough for all cadets to conduct a cool-down activity.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

- Arrange the cadets in either a cool-down circle or in rows (as illustrated in Fig. 1 and 2 of TP 2).
- Demonstrate before having the cadets attempt each stretch / light cardiovascular exercise.
- Assistant instructors can help demonstrate the movements and ensure the cadets are performing them correctly.
- Have cadets perform each stretch / light cardiovascular exercise.

Sample stretches are located at EO C111.02 (Run Wind Sprints) Attachment A.

SAFETY

- Ensure there are at least two arm lengths between the cadets so they can move freely.
- Ensure the cadets perform the stretches and light cardiovascular exercises in a safe manner following the guidelines for stretching listed in TP 2.

CONFIRMATION OF TEACHING POINT 4

The cadets' participation in the activity will serve as the confirmation of this TP.

Teaching Point 5 **Conduct a debriefing.**

Time: 10 min Method: Group Discussion

The point of the group discussion is to allow the cadets to share what they have learned from their experience.

TIPS FOR ANSWERING / FACILITATING DISCUSSION:

- Establish ground rules for discussion, eg, everyone should listen respectfully; don't interrupt; only one person speaks at a time; no one's ideas should be made fun of; you can disagree with ideas but not with the person; try to understand others as much as you hope they understand you; etc.
- Sit the group in a circle, making sure all cadets can be seen by everyone else.
- Ask questions that will provoke thought; in other words avoid questions with yes or no answers.
- Manage time by ensuring the cadets stay on topic.
- Listen and respond in a way that indicates you have heard and understood the cadet. This can be done by paraphrasing their ideas.
- Give the cadets time to respond to your questions.
- Ensure every cadet has an opportunity to participate. One option is to go around the group and have each cadet answer the question with a short answer. Cadets must also have the option to pass if they wish.
- Additional questions should be prepared ahead of time.

SUGGESTED QUESTIONS:

Q1. What did you enjoy the most about the activity?

Q2. What challenges did you encounter while participating in the activity?

Q3. What have you learned about yourself by participating in the activity? About your marksmanship skills? About your physical fitness ability?

CONFIRMATION OF TEACHING POINT 5

The cadets' participation in the activity will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in a recreational summer biathlon activity will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Recreational summer biathlon is an activity that requires personal discipline, develops marksmanship skills, and promotes physical fitness. Competitive biathlon opportunities are available at the local, regional, and national level.

INSTRUCTOR NOTES / REMARKS

Results should be posted for cadets to review. PO 111 is a complementary training activity. It is designed to provide an opportunity for the cadets to participate in a recreational summer biathlon activity.

EO C111.01 (Participate in a Biathlon Briefing), EO C111.02 (Run Wind Sprints), EO C111.03 (Simulate Firing the Cadet Air Rifle Following Physical Activity) shall be taught prior to instructing this lesson.

The start and finish should be located in the same area, close to the firing point

REFERENCES

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GUIDELINES TO CONDUCT A RECREATIONAL SUMMER BIATHLON ACTIVITY

OBJECTIVES

The objectives of the recreational summer biathlon activity are:

- to practice and improve marksmanship skills;
- to improve the level of physical fitness; and
- to introduce cadets to the sport of summer biathlon.

COMPOSITION

Each Proficiency Level One cadet will enter as an individual.

FACILITIES

The facilities required to conduct a recreational summer biathlon activity are:

- a route, on level terrain, of approximately 250–500 m with the start and finish lines located close to the range. The route should be wide enough to accommodate a maximum of 10 cadets running at one time. When roads are to be crossed, they must be clearly marked and a central crossing point established with traffic control provided, and
- an air rifle range constructed IAW Part 1, Section 8 of A-CR-CCP-177/PT-001, with a minimum of one firing lane per cadet per group.

STAFFING

Numerous staff are required to conduct a recreational summer biathlon activity. These appointments may be filled by squadron staff, and shall include:

- **Technical Delegate (TD).** Responsible for the overall conduct of the competition, including issuing penalties, and interpreting the rules.
- **Range Safety Officer (RSO).** Responsible for the overall conduct of the activities on the range.
- **Assistant RSO.** Responsible for targets, issuing ammunition, and assisting the RSO, as required.
- **Lane Scorekeeper.** Responsible for scoring targets and recording results on the range recording sheet (located at Attachment B).
- **Chief of Statistics.**Responsible for compiling all the event data (eg, range results, start / finish time, and any penalties assessed).
- **Runner.**Responsible for collecting the scoring sheets and delivering them to the chief of statistics.
- **Start and Finish Line Chief.** Responsible for starting the run and recording the finish times on the score sheet (located at Attachment B).
- **Course Control.** Responsible for recording each time the cadet runs a loop on the course control sheet (located at Attachment B).
- **First Aider.** Responsible for dealing with any injuries that may occur during the competition.

FORMAT

Team Captain's Meeting

All cadets will attend the team captain's meeting. This meeting includes all the essential information required by the cadets to participate in the recreational summer biathlon activity. The cadets are given:

- start times,
- range lane assignments,
- weather updates, and
- introductions of the competition staff.

The Running Loop

Each cadet will run three separate loops of 250–500 m. Each running loop will consist of:

- assembling for an individual start (cadets will begin at 10-second intervals for the first loop); and
- crossing the finish line.

The Range

Each cadet will fire five to eight pellets in an effort to activate all five targets on the BART. After each bout of firing, the appropriate lane scorer will record the cadet's results and reset the BART.

SEQUENCE

This recreational summer biathlon activity will be conducted in the following sequence:

1. running a loop of 250–500 m;
2. firing five to eight pellets at the BART;
3. running a loop of 250–500 m;
4. firing five to eight pellets at the BART;
5. running a third loop of 250–500 m; and
6. crossing the finish line.

EQUIPMENT

Based on 20 cadets per group, the equipment required to conduct the recreational summer biathlon activity shall include, but is not limited to the following:

- Cadet air rifles (5),
- Marksmanship mats (10),
- .177 air rifle pellets (a minimum of 700 pellets),
- Stop watches (5),
- BART and target frame (5),
- Safety glasses / goggles (8),
- Pens / pencils,
- Notice board,

- Biathlon score sheets located at Attachment B,
- Course control sheets located at Attachment B, and
- Range recording sheets located at Attachment B.

DRESS

Appropriate clothing according to the weather forecast.

RULES AND REGULATIONS

- Cadets must use the same firing lane for the duration of the activity.
- The run must be completed in the proper sequence and on the marked route.
- Rifles must be placed on the firing point by the range staff and will remain there for the duration of the activity.
- All firing will be done in the prone position.
- The rifle must be made safe upon completion of firing.
- An inoperable rifle will be replaced by the range staff, the target will be reset, and the cadet will fire five to eight shots with the new rifle.
- Safety infractions will result in time penalties.
- Missed targets will result in time penalties.

SCORING

Scoring will be completed as follows:

- **Time.** The cadet's final time is the time from the start to finish, plus any issued penalties.
- **Firing.** For each bout of firing, the number of missed targets will be recorded on the range recording sheet by the lane scorekeeper (located at Attachment B). For each missed target, a one-minute penalty will be added to the cadet's total time.

PENALTIES

Penalties will be added to the individual's time, to include:

- Each violation of the principles of fair play or good sportsmanship will result in a one-minute penalty, to include:
    - not giving way in an area of congestion;
    - pushing or shoving;
    - using profanity; and
    - interfering with other competitors.
- Each missed target will result in a one-minute penalty.
- A one-minute penalty will be issued for each safety infraction, to include:
    - not keeping control of the cadet air rifle;
    - moving forward of the firing point; and
    - intentionally firing rounds at objects other than the BART.

OUT OF BOUNDS AREA

Out of bounds areas are clearly identified prior to the start of the recreational summer biathlon activity.

NOTES

- Course control staff will record each time a cadet runs through a loop. See course control sheet located at Attachment B.
- The start and finish line chief will keep records for each cadet. When the sheet is full or nearly full the runner will take the sheet to the chief of statistics. See score sheet located at Attachment B.
- Bibs may be used to identify cadets, if available.

COURSE CONTROL SHEET

Cadet Name	Loop 1 Verification	Loop 2 Verification	Loop 3 Verification

Note. Created by D Cdts 3, 2006, Ottawa, ON: Department of National Defence.

Figure B-1 Course Control Sheet

SCORE SHEET

Cadet Name	Start Time	Loop One	Loop Two	Loop Three	End Time	Run / Safety Penalties	Firing Penalties	Total Time

NOTE:

The start and finish line chief is responsible for recording the run times and presenting the score sheet(s) to the scorekeeper.

RANGE RECORDING SHEET

Scorekeeper's Name: ____________________

Cadet Name:	Lane	Shots Fired				X = Miss					Misses	Comments / Penalties
						○	○	○	○	○		
		3 Spare										
Cadet Name:	Lane	Shots Fired				X = Miss					Misses	
						○	○	○	○	○		
		3 Spare										
Cadet Name:	Lane	Shots Fired				X = Miss					Misses	
						○	○	○	○	○		
		3 Spare										
Cadet Name:	Lane	Shots Fired				X = Miss					Misses	
						○	○	○	○	○		
		3 Spare										
Cadet Name:	Lane	Shots Fired				X = Miss					Misses	
						○	○	○	○	○		
		3 Spare										
Cadet Name:	Lane	Shots Fired				X = Miss					Misses	
						○	○	○	○	○		
		3 Spare										
Cadet Name:	Lane	Shots Fired				X = Miss					Misses	
						○	○	○	○	○		
		3 Spare										
Cadet Name:	Lane	Shots Fired				X = Miss					Misses	
						○	○	○	○	○		
		3 Spare										
Cadet Name:	Lane	Shots Fired				X = Miss					Misses	
						○	○	○	○	○		
		3 Spare										
Cadet Name:	Lane	Shots Fired				X = Miss					Misses	
						○	○	○	○	○		
		3 Spare										

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CHAPTER 10

PO X20 – PARTICIPATE IN CANADIAN FORCES (CF) FAMILIARIZATION ACTIVITIES

COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

CANADIAN ARMED FORCES (CAF) FAMILIARIZATION

SECTION 1

EO MX20.01A – PARTICIPATE IN A CAF ACTIVITY

Total Time:	One session (3 Periods) = 90 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO. REFER TO THE LESSON SPECIFICATION LOCATED IN A-CR-CCP-801/PG-001, *ROYAL CANADIAN AIR CADETS PROFICIENCY LEVEL ONE QUALIFICATION STANDARD AND PLAN*.

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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

CANADIAN ARMED FORCES (CAF) FAMILIARIZATION

SECTION 2

EO MX20.01B – PARTICIPATE IN A CAF FAMILIARIZATION TOUR

Total Time:	One session (3 periods) = 90 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO. REFER TO THE LESSON SPECIFICATION LOCATED IN A-CR-CCP-801/PG-001, *ROYAL CANADIAN AIR CADETS PROFICIENCY LEVEL ONE QUALIFICATION STANDARD AND PLAN*.

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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

CANADIAN ARMED FORCES (CAF) FAMILIARIZATION

SECTION 3

EO MX20.01C – FIRE THE C7 RIFLE

Total Time: 320 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Royal Canadian Air Cadets Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Photocopy the C7 Rifle Handing Test located at Attachment A for each cadet.

Assistant instructors are required for this lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TPs 1–3 to present background information and give direction on procedures.

A demonstration and performance was chosen for TPs 4 and 7–12 as it allows the instructor to explain and demonstrate how to complete a safety check and the actions in response to range commands while providing an opportunity for the cadet to practice under supervision.

A performance was chosen for TP 5 as it allows the cadet to practice handling the C7 rifle in a controlled environment.

A demonstration was chosen for TPs 6 and 14–16 as it allows the instructor to explain and demonstrate aiming a C7 rifle as well as the procedures required for stripping, cleaning and assembling the C7 rifle.

A practical activity was chosen for TPs 13 and 17 as it is an interactive way for the cadet to practice and experience range procedures and develop marksmanship skills and knowledge in a safe and controlled environment.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have fired the C7 rifle.

IMPORTANCE

It is important for cadets to complete a variety of training on the C7 rifle before firing it. Safety precautions are essential to ensure all participants are safe when on a range. Being safe is the highest priority when firing the C7 rifle. Learning and practicing range commands will increase the level of safety on the range and will help ensure that all the cadets have a positive firing experience. Each cadet who fires the C7 rifle must understand the steps for every range command, as well as what to do on the firing point if the rifle does not fire. Knowing how to clean the C7 rifle will ensure that the rifle will continue to operate effectively. Before cleaning the rifle, it must be stripped to provide access to all the parts. After cleaning the rifle, it must be put back together and then tested to ensure it functions properly. This knowledge will ensure the familiarization fire is conducted safely and efficiently.

Strict emphasis must be placed on safety throughout all C7 rifle training. Any cadet who does not adhere to the rules and regulations shall not fire the C7 rifle.

Teaching Point 1 **Explain safety rules and regulations pertaining to the C7 rifle.**

Time: 5 min Method: Interactive Lecture

The following are safety rules and regulations pertaining to the C7 rifle:

- Always complete a safety check when picking up or being handed a rifle.
- Always control the rifle when holding it.
- Always treat the rifle as if it were loaded.
- Always have the fire control selector set to 'S' (safe) when the rifle is cocked.
- Never touch the trigger unless firing on a range.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. When are safety checks completed?

Q2. Where is the fire control selector set when the rifle is cocked?

Q3. When will the trigger be touched?

ANTICIPATED ANSWERS:

A1. When picking up or being handed a rifle.

A2. 'S' (safe).

A3. Only when firing on a range.

Teaching Point 2 **Identify the parts of the C7 rifle.**

Time: 10 min Method: Interactive Lecture

When identifying the parts of the C7 rifle, keep the cadets involved by pointing at each part as it is discussed.

The upper and lower receiver groups can be separated by removing the takedown pin.

PARTS OF THE C7 RIFLE

The C7 rifle can be separated into two parts. There are two pins that hold the rifle together—the takedown pin and the receiver pivot pin. Both pins separate the upper receiver group from the lower receiver group. When stripping the rifle, the takedown pin will be used. Cadets will rarely be required to use the receiver pivot pin.

Upper Receiver Group

The upper receiver group is comprised of the following:

- **Upper Receiver**
  - **Carrying handle.** A carrying handle which incorporates the rear sight and is attached to the top of the upper receiver.
  - **Ejection port.** Rounds are expelled from the rifle through the ejection port on the right side of the upper receiver.
  - **Ejection port cover.** The ejection port is protected by a dust cover which is opened by the forward / rearward movement of the bolt.
  - **Spent casing deflector.** To the rear of the ejection port cover is a spent casing deflector for those who are left-handed firers.
  - **Forward assist.** A manually-operated forward assist fitted on the right rear of the upper receiver is always used to push the bolt fully forward.
  - **Front and rear sights.** The sights, when used together, assist the firer when aiming the rifle.
- **Barrel**
  - **Flash suppressor.** The rifle is fitted with a flash suppressor that directs hot gas from the barrel end. It also reduces the visibility of the muzzle flash when firing.
  - **Hand guards.** Surrounded by two interchangeable aluminum-lined, glass fibre filled nylon hand guards are notched to allow air to circulate.
- **Bolt and cocking handle.** The bolt is operated by the cocking handle located at the top rear of the upper receiver group. The bolt has a rotating head which locks into the barrel when the rifle is to be fired.

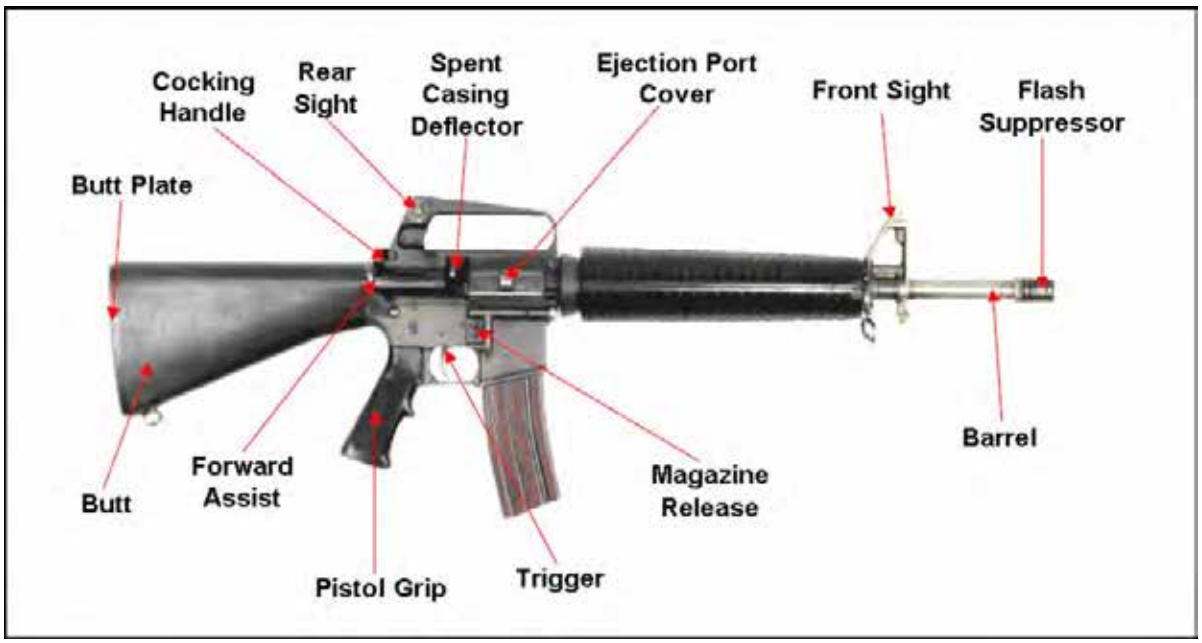
Lower Receiver Group

The lower receiver group is comprised of the following:

- **Lower Receiver**
  - **Trigger.** Also referred to as the action, the trigger is used to fire the rifle. The finger shall never be placed on the trigger unless firing.
  - **Trigger guard.** A safety measure to prevent accidental firing that makes access to the trigger more difficult.
  - **Pistol grip.** The firing hand will hold the pistol grip. The pistol grip provides stability when using the rifle.
  - **Fire control selector.** A three-position fire control selector lever is located on the left side. The three positions are 'S' (safe), 'R' (repetition) and 'AUTO' (automatic). The selector lever cannot be placed on 'S' until the rifle is cocked.
  - **Bolt catch.** A bolt catch, located on the left side, enables the bolt to be held open or released from the open position.
  - **Magazine.** The magazine holds rounds to be fired. When the magazine is not fitted on the rifle, the area is referred to as the magazine housing or magazine opening.

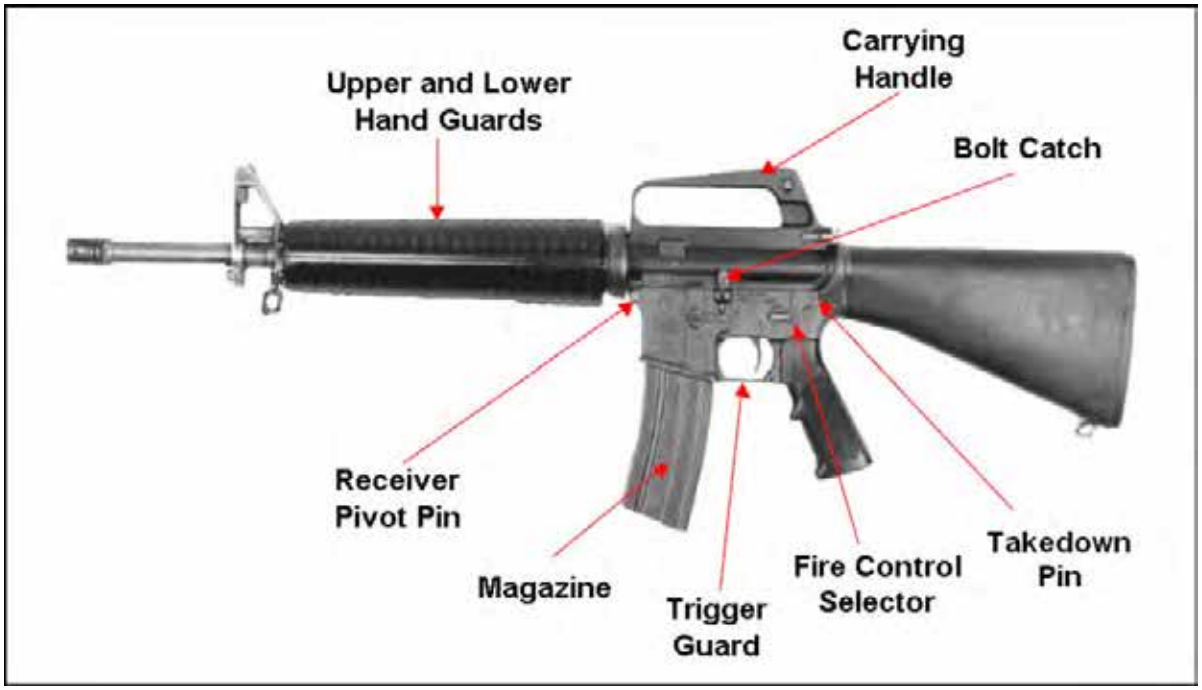
- **Magazine release.** A magazine release button allows for the magazine to be removed from the rifle when activated. It is located on the right side.

- **Butt and butt plate.** The butt is made of glass fibre reinforced nylon and incorporates a storage compartment for a cleaning kit. Access to this compartment is gained through the butt plate. The butt is available in two lengths—normal and short.



Note. Created by Director Cadets 3, 2008, Ottawa, ON: Department of National Defence.

Figure 1 Right Side of the C7 Rifle



Note. Created by Director Cadets 3, 2008, Ottawa, ON: Department of National Defence.

Figure 2 Left Side of the C7 Rifle

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. What are the two receiver groups on the C7 rifle?

Q2. What parts are located in the upper receiver?

Q3. What parts are located in the lower receiver?

ANTICIPATED ANSWERS:

A1. Upper and lower receiver groups.

A2. Carrying handle, rear sight, ejection port, ejection port cover, spent casing deflector, forward assist and front and rear sights.

A3. Trigger, pistol grip, magazine opening, fire control selector, bolt catch and magazine release.

Teaching Point 3 **Explain the characteristics of the C7 rifle.**

Time: 5 min Method: Interactive Lecture

CHARACTERISTICS OF THE C7 RIFLE

Calibre. 5.56 mm.

Weight. The rifle weighs 3.34 kg (7.36 pounds). When fully loaded it weighs 3.89 kg (8.58 pounds).

Length. The complete rifle is 1 m in length.

Modes of fire. It can be fired in repetition or automatic.

Operation. It is gas operated, air cooled and magazine fed.

Effective range. It is effective up to 400 m.

Sights. There are front and rear sights. The rear sight has small and large apertures. The large aperture is used for firing at distances less than 300 m. The small aperture is used for distances greater than 300 m.

Magazine capacity. One magazine can hold up to 30 rounds.

CONFIRMATION OF TEACHING POINT 3

QUESTIONS:

Q1. What is the calibre of the C7 rifle?

Q2. How long is the C7 rifle?

Q3. How many rounds can one magazine hold?

ANTICIPATED ANSWERS:

A1. 5.56 mm.

A2. 1 m.

A3. 30 rounds.

Teaching Point 4 **Explain, demonstrate and have the cadet practice completing an individual safety check.**

Time: 15 min Method: Demonstration and Performance

For this skill TP it is recommended that instruction take the following format:

1. Explain and demonstrate the actions to take to complete a safety check.
2. Explain and demonstrate each step required to complete the skill. Monitor the cadets as they imitate each step.
3. Monitor the cadets' performance as they practice the complete skill.

Note: Assistant instructors may be used to monitor the cadets' performance.

Stress the importance of regularly completing safety checks on the C7 rifle.

Each cadet must complete a safety check during this TP.

INDIVIDUAL SAFETY CHECK

Safety checks shall be completed in the following circumstances:

- when picking up or being handed a rifle;
- before and after instruction;
- before stripping a rifle;
- during issue and return to stores;
- before and after range practices; and
- where there is doubt about the safety status of the rifle.

To complete an individual safety check:

When completing a safety check on the rifle with a magazine fitted, remove the magazine before adopting the standing load position.

If completing a safety check in the prone position, skip Step 1.

1. Adopt the standing load position (as illustrated in Figure 3) by:
   (a) holding the rifle on the right (left) side of the body by the pistol grip with the forefinger of the right (left) hand outside the trigger guard;
   (b) grasping the bottom of the hand guard with the left (right) hand;
   (c) placing the left (right) foot one pace in front of the other foot; and
   (d) pointing the rifle up approximately 55 degrees.
2. Pull the cocking handle to the rear.
3. Engage the bolt catch.
4. Tilt the rifle.
5. Inspect the chamber.
6. Ensure the rifle is clear.
7. Pull the cocking handle fully to the rear.
8. Allow the action to go forward under control.
9. Strike the forward assist.
10. Fire the rifle.
11. Close the ejection port cover.
12. Lay down the rifle with the ejection port cover facing up.

Note. Created by Director Cadets 3, 2008, Ottawa, ON: Department of National Defence.

Figure 3 Standing Load Position–Example 1

Note. Created by Director Cadets 3, 2008, Ottawa, ON: Department of National Defence.

Figure 4 Standing Load Position–Example 2

CONFIRMATION OF TEACHING POINT 4

QUESTIONS:

Q1. When must safety checks be completed?

Q2. After inspecting the chamber and allowing the action to go forward, what is the next step?

Q3. When laying down the rifle, which side will face up?

ANTICIPATED ANSWERS:

A1. Safety checks shall be completed in the following circumstances:

- when picking up or being handed a rifle;
- before and after instruction;
- before stripping a rifle;
- during issue and return to stores;
- before and after range practices; and
- when the safety status of the rifle is in doubt.

A2. Strike the forward assist.

A3. The side with the ejection port cover.

Teaching Point 5 **Have the cadet practice holding the C7 rifle in the prone position.**

Time: 5 min Method: Performance

The cadets have already been instructed on how to adopt the prone position. Emphasis should be placed on holding the C7 rifle.

Information on the prone position is located in A-CR-CCP-701/PG-001, *Green Star Qualification Standard and* Plan, EO M106.03 (Apply Basic Marksmanship Techniques).

HOLDING THE C7 RIFLE IN THE PRONE POSITION

Have each cadet hold the C7 rifle in the prone position.

To hold the C7 rifle in the prone position:

1. Adopt the prone position.
2. Pick up the rifle.
3. Place the butt of the rifle into the right (left) shoulder.
4. Place the left (right) hand on the hand guard.
5. Hold the pistol grip with the right (left) hand.
6. Place the right (left) cheek naturally on the butt.
7. Look through the front and rear sights with the aiming eye.

When holding the rifle in the prone position, the finger shall always be placed outside the trigger guard, unless firing.

Note. Created by Director Cadets 3, 2008, Ottawa, ON: Department of National Defence.

Figure 5 Holding the C7 Rifle in the Prone Position (Right-Side View)

Note. Created by Director Cadets 3, 2008, Ottawa, ON: Department of National Defence.

Figure 6 Holding the C7 Rifle in the Prone Position (Left-Side View)

Note. Created by Director Cadets 3, 2008, Ottawa, ON: Department of National Defence.

Figure 7 Holding the C7 Rifle in the Prone Position

CONFIRMATION OF TEACHING POINT 5

The cadets' participation in holding the C7 rifle in the prone position will serve as the confirmation of this TP.

Teaching Point 6 **Explain and demonstrate aiming the C7 rifle by looking through the front and rear sights.**

Time: 5 min Method: Demonstration

During TP 8 the cadets will look through the sights and ensure that they are set properly.

AIMING THE C7 RIFLE

There are two sights on the C7 rifle (front and rear). The rear sight has two apertures (small and large) which simply flip from one to the other.

When firing the C7 rifle, the target will be at a distance of 100 m. Therefore, the large aperture should be used.

When lining up the sights, it is important that both the front and rear sights can be seen down range.

Note. From Weapons: The Rifle 5.56 mm and the Carbine 5.56 mm C8 (Vol. 18) (p. 57), by Canadian Forces, 1987, Ottawa, ON: Department of National Defence. Copyright 1994 by Department of National Defence.

Figure 8 Correct Aim Picture

CONFIRMATION OF TEACHING POINT 6

QUESTIONS:

Q1. How many sights does the C7 rifle have?

Q2. How many apertures does the rear sight have?

Q3. Which aperture should be used when firing at a distance of 100 m?

ANTICIPATED ANSWERS:

A1. Two—front and rear.

A2. Two—large and small.

A3. The large aperture.

Teaching Point 7 **Explain, demonstrate and have the cadet practice the actions when given the command LOAD.**

Time: 10 min Method: Demonstration and Performance

For this skill TP it is recommended that instruction take the following format:

1. Explain and demonstrate the actions to take when given the command LOAD.
2. Explain and demonstrate each step required to complete the skill. Monitor the cadets as they imitate each step.
3. Monitor the cadets' performance as they practice the complete skill.

Note: Assistant instructors may be used to monitor the cadets' performance.

Ensure the cadets are aware of the differences between live and dummy rounds. Dummy rounds will be used throughout C7 rifle training.

LOAD

On the command LOAD, the cadet shall do the following:

1. Pick up a magazine.
2. Check to see that the rounds are positioned correctly.

When looking to see if rounds are positioned correctly, simply ensure that they are straight and that the back of each round that is visible is straight against the back of the magazine. When rounds are not positioned correctly, they cause frequent stoppages.

3. Push the magazine firmly into the magazine housing.
4. Check that the magazine is secure by pulling downwards.
5. Return the hand to hold the rifle.

CONFIRMATION OF TEACHING POINT 7

The cadets' participation in practicing actions when given the command LOAD will serve as the confirmation of this TP.

Teaching Point 8 **Explain, demonstrate and have the cadet practice the actions when given the command READY or RANGE.**

Time: 5 min Method: Demonstration and Performance

For this skill TP it is recommended that instruction take the following format:

1. Explain and demonstrate the actions to take when given the command READY or RANGE.
2. Explain and demonstrate each step required to complete the skill. Monitor the cadets as they imitate each step.
3. Monitor the cadets' performance as they practice the complete skill.

Note: Assistant instructors may be used to monitor the cadets' performance.

READY OR RANGE

On the command READY or RANGE, the cadet shall do the following:

1. Check the front and rear sights to ensure they are set correctly.
2. Cock the rifle.

When cocking the rifle, ensure the cadets pull the cocking handle all the way back and then let it go. Not doing so is referred to as "riding the cocking handle" since it is rode back into its position. Riding the cocking handle may cause stoppages.

3. Strike the forward assist.
4. Close the ejection port cover.
5. Ensure the fire control selector is on 'S' (safe).
6. Return the hand to hold the rifle.

CONFIRMATION OF TEACHING POINT 8

The cadets' participation in practicing actions when given the command READY or RANGE will serve as the confirmation of this TP.

Teaching Point 9 **Explain, demonstrate and have the cadet practice the actions when given the command FIRE.**

Time: 5 min Method: Demonstration and Performance

For this skill TP it is recommended that instruction take the following format:

1. Explain and demonstrate the actions to take when given the command FIRE.
2. Explain and demonstrate each step required to complete the skill. Monitor the cadets as they imitate each step.
3. Monitor the cadets' performance as they practice the complete skill.

Note: Assistant instructors may be used to monitor the cadets' performance.

FIRE

On the command FIRE, the cadet shall do the following:

1. Set the fire control selector to 'R' (repetition).

IAW CATO 14-41, *Use of C7/8 Within the* CCO, Annex A, Appendix 3, cadets are NOT to fire on automatic.

2. Fire all rounds in the magazine.
3. Change magazines as required.

When all rounds have been fired, the bolt will remain at the rear of the rifle. To change a magazine:

1. Remove the old magazine using the magazine release.
2. Pick up a new magazine.
3. Check to see that the rounds are positioned correctly.
4. Push the magazine firmly into the magazine housing.
5. Check that the magazine is secure by pulling downwards.
6. Disengage the bolt catch.
7. Strike the forward assist.
8. Continue firing.

Ensure the cadets are aware that when on the range they may rest the rifle after they have finished firing and then wait for further commands.

CONFIRMATION OF TEACHING POINT 9

The cadets' participation in practicing actions when given the command FIRE will serve as the confirmation of this TP.

Teaching Point 10 **Explain, demonstrate and have the cadet practice the actions when given the command UNLOAD.**

Time: 10 min Method: Demonstration and Performance

For this skill TP it is recommended that instruction take the following format:

1. Explain and demonstrate the actions to take when given the command UNLOAD.
2. Explain and demonstrate each step required to complete the skill. Monitor the cadets as they imitate each step.
3. Monitor the cadets' performance as they practice the complete skill.

Note: Assistant instructors may be used to monitor the cadets' performance.

UNLOAD

On the command UNLOAD, the cadet shall do the following:

1. Set the fire control selector to 'S' (safe).
2. Remove the magazine.

3. Cock the rifle twice.
4. Pull the cocking handle to the rear.
5. Engage the bolt catch.
6. Tilt the rifle to the left.
7. Wait to be cleared by the Range Safety Officer (RSO).
8. Receive the command CLEAR from the RSO.
9. Disengage the bolt catch.
10. Strike the forward assist.
11. Set the fire control selector to 'R' (repetition).
12. Fire the rifle.
13. Close the ejection port cover.
14. Lay down the rifle.

Some RSOs may use PREPARE FOR INSPECTION as a separate command after UNLOAD.

CONFIRMATION OF TEACHING POINT 10

The cadets' participation in practicing actions when given the command UNLOAD will serve as the confirmation of this TP.

Teaching Point 11 **Explain, demonstrate and have the cadet practice the actions when given the command CEASE FIRE.**

Time: 5 min Method: Demonstration and Performance

For this skill TP it is recommended that instruction take the following format:

1. Explain and demonstrate the actions to take when given the command CEASE FIRE. .
2. Explain and demonstrate each step required to complete the skill. Monitor the cadets as they imitate each step.
3. Monitor the cadets' performance as they practice the complete skill.

Note: Assistant instructors may be used to monitor the cadets' performance.

CEASE FIRE

On the command CEASE FIRE, the cadet shall do the following:

1. Set the fire control selector to 'S' (safe).
2. Wait for a further command.

CONFIRMATION OF TEACHING POINT 11

The cadets' participation in practicing actions when given the command CEASE FIRE will serve as the confirmation of this TP.

Teaching Point 12 **Explain, demonstrate and have the cadet practice immediate actions.**

Time: 15 min Method: Demonstration and Performance

For this skill TP it is recommended that instruction take the following format:

1. Explain and demonstrate the first immediate action.
2. Explain and demonstrate each step required to complete the skill. Monitor the cadets as they imitate each step.
3. Monitor the cadets' performance as they practice the complete skill.
4. Repeat Steps 1–3 for the next two immediate actions.

Note: Assistant instructors may be used to monitor the cadets' performance.

IMMEDIATE ACTIONS

Immediate actions are stoppages that occur when the rifle suddenly does not fire anymore. The actions to take are completely dependent on the position of the bolt. The first step to take when the rifle stops firing is to cant the rifle and look through the ejection port. The bolt will either be:

- at the rear,
- fully forward, or
- partially forward.

When the rifle stops firing the first step is to cant the rifle and examine the bolt position.

Bolt is at the Rear

When the rifle stops firing and the bolt is positioned at the rear, most likely the magazine is empty.

When the bolt is at the rear, the cadet shall do the following:

1. Check for an empty magazine and change, as required.
2. Disengage the bolt catch.
3. Strike the forward assist.
4. Continue firing.

Bolt is Fully Forward

When the rifle stops firing and the bolt is positioned fully forward, most likely the bolt did not pick up a round. This could be caused by an improperly seated magazine.

When the bolt is fully forward, the cadet shall do the following:

1. Ensure the magazine is seated properly and locked in place.
2. Cock the rifle while watching for a round or empty casing to eject.
3. Where a round ejects:
   (a) strike the forward assist; and
   (b) continue firing.
4. Where a round does not eject:
   (a) attempt to continue firing; and
   (b) if required, request assistance.

Bolt is Partially Forward

When the rifle stops firing and the bolt is positioned partially forward, most likely there is an obstruction.

When the bolt is partially forward, the cadet shall do the following:

1. Cock the rifle.
2. Engage the bolt catch.
3. Examine the chamber of the rifle.
4. Remove the magazine if a live round or empty casing is in the chamber.
5. Clear the obstruction.
6. Replace the magazine.
7. Disengage the bolt catch.
8. Strike the forward assist.
9. Continue firing.

When in doubt, raise your hand and ask for assistance.

CONFIRMATION OF TEACHING POINT 12

The cadets' participation in practicing immediate actions will serve as the confirmation of this TP.

Teaching Point 13 **Have the cadet participate in a mock range activity.**

Time: 30 min Method: Practical Activity

Begin the handling test located at Attachment A during this TP. Where extra time is needed, conduct it at the beginning of TP 17.

Each cadet must successfully complete the handling test in order to fire the C7 rifle.

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets practice performing firing drills and executing range commands.

RESOURCES

- C7 rifles (one per firing point),
- Magazines (minimum two per firing point),
- 5.56-mm dummy rounds (10 per cadet),
- Hearing protectors (one per firing point),
- Shooting mats (one per firing point), and
- C7 handling test located at Attachment A (one per cadet).

ACTIVITY LAYOUT

1. Find a safe area in which eight cadets with rifles can be pointed "down range."
2. Place eight shooting mats on the mock firing point.
3. Lay one rifle on each shooting mat.
4. Lay one pair of hearing protectors and one magazine with five dummy rounds on each shooting mat.

ACTIVITY INSTRUCTIONS

1. Divide the cadets into relays of a maximum of eight.
2. Lead the first relay of cadets through a mock range activity using the following range commands:
   (a) COVER OFF BEHIND THE FIRING POINT.
   (b) ADOPT THE PRONE POSITION.
   (c) PLACE HEARING PROTECTORS ON.
   (d) PICK UP THE RIFLE.
   (e) LOAD.
   (f) RANGE OR READY.

(g) FIRE.

Though there are no range commands for immediate actions, have the cadets complete the actions for them.

One way to do this is:

- Give the command CEASE FIRE.
- Ask the cadets to engage the bolt catch.
- Tell the cadets that they were firing down range and suddenly the rifle stopped.
- Have the cadets complete the immediate action.

(h) Unload.

(i) Prepare for inspection.

(j) Lay down the rifle.

(k) Take off hearing protectors.

(l) Stand up.

(m) Retire from the firing point.

3. Repeat Step 2 until there are no more relays.

4. Complete the handling test, located at Attachment A, as the cadets complete the activity.

SAFETY

- Rifles shall always be pointed "down range".
- The cadets are to follow range rules and regulations throughout the activity.

CONFIRMATION OF TEACHING POINT 13

The cadets' participation in the activity will serve as the confirmation of this TP.

Teaching Point 14 **Explain and demonstrate field stripping the C7 rifle.**

Time: 5 min Method: Demonstration

There are two degrees to which the C7 rifle can be stripped—detailed and field. During this training, the cadets will only be required to field strip the rifle.

Explain and demonstrate the process for field stripping a C7 rifle. Ensure all cadets can see the demonstration.

FIELD STRIPPING THE C7 RIFLE

In order to clean the rifle, it must be field stripped. To field strip the C7 rifle:

1. Carry out an individual safety check (without operating the trigger).
2. Ensure the fire control selector is set to 'S' (safe).
3. Unlock the upper receiver by pushing / pulling the takedown pin.
4. Pull the cocking handle partially to the rear.
5. Remove the bolt.
6. Push the cocking handle fully forward.
7. Lay down the rifle.
8. Remove the bolt from the bolt carrier.
9. Lay down the bolt and bolt carrier.

CONFIRMATION OF TEACHING POINT 14

The cadets' participation in field stripping the C7 rifle will serve as the confirmation of this TP.

Teaching Point 15 **Explain and demonstrate cleaning the C7 rifle after a range practice.**

Time: 5 min Method: Demonstration

The cleaning kit should contain the following items:

- a case,
- a four-piece rod,
- a swab holder,
- a bore brush,
- a chamber brush,
- a bolt key brush,
- a container of cleaner, lubricant, preservative (CLP),
- pipe cleaners, and
- swabs (38 mm by 50 mm).

There are three types of cleaning—regular, before firing and after firing. The cadets will be required to clean the rifle after firing on the range.

Explain and demonstrate the process for cleaning a C7 rifle. Ensure all cadets can see the demonstration.

CLEANING THE C7 RIFLE

In order for the rifle to remain functional, regular maintenance of the rifle must be carried out regularly.

CHAMBER

Clean with the chamber brush fitted to the cleaning rod.

Flash Suppressor

Clean using the bore cleaning brush.

BARREL

1. Insert the four-piece rod (about two turns short of being tight) with a swab moistened in CLP into the barrel (a portion should stick out through the muzzle).
2. Replace the swab holder with the bore brush and insert it into the barrel.
3. Repeat several times (rods may have to be loosened).
4. Pull a dry swab through and then pull a swab lightly lubricated with CLP through.

Bolt and Carrier

1. Clean the interior of the bolt key with the bolt key brush then dry using a pipe cleaner.
2. Using a CLP lubricated swab, clean all the parts of the bolt.
3. Lubricate the bolt and bolt carrier.
4. Dry the bolt key and place one drop of CLP inside the tube.

Upper Receiver

1. Clean the external surface with a lubricated CLP swab and a cleaning brush and wipe dry.
2. Clean the exterior of the gas tube that protrudes into the upper receiver using two rod pieces and a bore brush.
3. Use a pipe cleaner to clean as far into the gas tube as possible.
4. Clean the inner surfaces.
5. Lightly lubricate the inside of the upper receiver, outer surface of the barrel, front sight and the surface under the hand guard.
6. Push and pull the front sight and place two or three drops of CLP around the area, working it in.

Lower Receiver

1. Clean the external surface with a lubricated CLP swab and a cleaning brush and wipe dry.
2. Clean the interior, paying special attention to the magazine housing and trigger group.
3. Apply CLP generously to the trigger group, takedown pin and pivot pin.

Butt and Hand Guards

1. Wipe clean the external surfaces.
2. Do not oil the nylon surfaces.

When cleaning before firing, inspect the rifle to determine if it requires cleaning. In most cases, wiping exposed surfaces will be sufficient. If it is necessary to clean the rifle, it should be done the same as regular cleaning except that the bore, face of the bolt and the chamber must be free of lubricant.

CONFIRMATION OF TEACHING POINT 15

The cadets' participation in cleaning the C7 rifle will serve as the confirmation of this TP.

Teaching Point 16 **Explain and demonstrate assembling the C7 rifle.**

Time: 5 min Method: Demonstration

Explain and demonstrate the process for assembling a C7 rifle. Ensure all cadets can see the demonstration.

ASSEMBLING THE C7 RIFLE

To assemble the C7 rifle:

1. Replace the bolt in the bolt carrier.
2. Pull the cocking handle partially to the rear.
3. Place the bolt in the rifle.
4. Push the cocking handle fully forward.
5. Ensure the fire control selector is set to 'S' (safe).
6. Lock the upper receiver with the takedown pin.
7. Complete the function test by:
   - (a) cocking the rifle;
   - (b) attempting to fire with the fire control selector at 'S' (safe);
   - (c) setting the fire control selector to 'R' (repetition);
   - (d) firing the action;
   - (e) cocking the action while holding in on the trigger;
   - (f) releasing the trigger (after hearing the hammer fall);
   - (g) firing the action;
   - (h) setting the fire control selector to 'AUTO' (automatic);
   - (i) firing the action;
   - (j) cocking the action while holding in on the trigger;

(k) releasing the trigger (after hearing the hammer fall);

(l) returning the fire control selector to 'R' (repetition); and

(m) closing the ejection port cover.

CONFIRMATION OF TEACHING POINT 16

The cadets' participation in assembling the C7 rifle will serve as the confirmation of this TP.

Teaching Point 17 **Have the cadet fire 25 rounds with the C7 rifle.**

Time: 170 min Method: Practical Activity

All familiarization firing must be lead by a Large Bore RSO (RSO [LB]). Consult and adhere to the policies outlined in CATO 14-41, *Use of C7/8 Within the CCO*, Appendix 3, Annex A.

All range activities shall be conducted IAW the Range Standing Orders specific to the area being used.

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets fire 25 rounds using the C7 rifle.

RESOURCES

- C7 rifle (one per firing point),
- 5.56-mm ammunition (25 rounds per cadet),
- Magazines (minimum of three per cadet),
- Marksmanship target (one per firing point),
- Target frame (one per firing point),
- Hearing protectors (one per firing point),
- Shooting mats (one per firing point),
- First aid kit (one),
- Stretcher (one),
- Cell phone / radio (one),
- Folding tables (three),
- Empty sandbags (five),
- Green and red flags (two sets),
- Target patches (5 rolls),

- Where butts are being used:
  - helmets (one per person),
  - pointers (one per person),
  - communication device (two—one for the RSO and one for the butt party);
- Range standing orders (one),
- Cleaning kits (one per four cadets),
- C7 handling test located at Attachment A, if required (one per cadet), and
- Pen / pencil (five).

ACTIVITY LAYOUT

Set up the firing points, targets and butts (if applicable).

ACTIVITY INSTRUCTIONS

1. Brief the cadets on the range activity.

If the cadets are expected to signal in the butts, a briefing shall take place before beginning the activity.

2. Have each cadet complete the C7 rifle handling test, where required.
3. Divide the cadets into relays.
4. Lead the first relay of cadets through the range activity using range commands.

Ensure the cadets are given the opportunity to view their targets at least once throughout the familiarization fire. They may then make adjustments, if desired, to try to improve.

5. Repeat Step 4 until there are no more relays.
6. Have the cadets field strip, clean and assemble the C7 rifle, in groups of four.

SAFETY

- Rifles shall always be pointed down range.
- The cadets are to follow all range rules and regulations throughout the activity.

CONFIRMATION OF TEACHING POINT 17

The cadets' participation in the activity will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in firing the C7 rifle will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

It is important for cadets to participate in Canadian Forces (CF) familiarization activities. Firing the C7 rifle is one of the many CF familiarization activities in which cadets can develop a connection to and knowledge about the CF.

INSTRUCTOR NOTES / REMARKS

Each cadet must successfully complete the C7 Rifle Handling Test (located at Attachment A) prior to firing the rifle.

The cleaning kit contains the following:

- a case,
- a four-piece rod,
- a swab holder,
- a bore brush,
- a chamber brush,
- a bolt key brush,
- a container of cleaner, lubricant, preservative (CLP),
- pipe cleaners, and
- swabs (38-mm by 50-mm).

All familiarization firing must be led by a Range Safety Officer (Large Bore - C7). Consult and adhere to the policies outlined in CATO 14-41 *Use of C7/8 Within the CCO*, Appendix 3, Annex A.

The firing shall be familiarization and shall include an inspection of targets at least once throughout the 25 rounds to allow the cadets to make adjustments if inclined to do so.

Where butts are being used, time shall be spent instructing the cadets on their operation.

Assistant instructors are required for this lesson.

REFERENCES

A2-062 B-GL-317-018/PT-001 Canadian Forces. (1987). *Weapons: The rifle 5.56 mm C7 and the carbine 5.56 mm C8* (Vol. 18). Ottawa, ON: Department of National Defence.

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C7 RIFLE HANDLING TEST

Cadet Name: _____

Flight: _____

SAFETY PRECAUTIONS

	ACTION TO BE CARRIED OUT BY THE CADET	ACTION COMPLETED	
1.	Adopt the standing load position (if required).	**Yes**	**No**
2.	Pull the cocking handle to the rear and engage the bolt catch.	**Yes**	**No**
3.	Tilt the rifle and inspect the chamber.	**Yes**	**No**
4.	Ensure the rifle is clear.	**Yes**	**No**
5.	Pull the cocking handle fully to the rear.	**Yes**	**No**
6.	Allow the action to go forward under control and strike the forward assist.	**Yes**	**No**
7.	Fire the rifle.	**Yes**	**No**
8.	Close the ejection port cover.	**Yes**	**No**
9.	Lay down the rifle with the ejection port cover facing up.	**Yes**	**No**

LOAD

	ACTION TO BE CARRIED OUT BY THE CADET	ACTION COMPLETED	
1.	Pick up a magazine.	**Yes**	**No**
2.	Check to see if the rounds are positioned correctly.	**Yes**	**No**
3.	Push the magazine firmly into the magazine housing.	**Yes**	**No**
4.	Check that the magazine is secure by pulling downwards.	**Yes**	**No**
5.	Return the hand to hold the rifle.	**Yes**	**No**

READY OR RANGE

	ACTION TO BE CARRIED OUT BY THE CADET	ACTION COMPLETED	
1.	Check the front and rear sights to ensure they are set correctly.	**Yes**	**No**
2.	Cock the rifle.	**Yes**	**No**
3.	Strike the forward assist.	**Yes**	**No**
4.	Close the ejection port cover.	**Yes**	**No**
5.	Ensure the fire control selector is set to 'S' (safe).	**Yes**	**No**
6.	Return the hand to hold the rifle.	**Yes**	**No**

IMMEDIATE ACTION–BOLT AT REAR

"The rifle is firing alright and then suddenly stops."

The cadet shall cant the rifle and examine the bolt position.

"The bolt is fully to the rear."

	ACTION TO BE CARRIED OUT BY THE CADET	ACTION COMPLETED	
1.	Check for an empty magazine and change.	**Yes**	**No**
2.	Disengage the bolt catch.	**Yes**	**No**
3.	Strike the forward assist and continue firing.	**Yes**	**No**

IMMEDIATE ACTION–BOLT FULLY FORWARD

"The rifle is firing alright and then suddenly stops."

The cadet shall cant the rifle and examine the bolt position.

"The bolt is fully forward."

	ACTION TO BE CARRIED OUT BY THE CADET	ACTION COMPLETED	
1.	Ensure the magazine is seated properly and locked in place.	**Yes**	**No**
2.	Cock the rifle and watch for a round or empty casing to eject.	**Yes**	**No**
3.	Strike the forward assist and continue firing.	**Yes**	**No**

IMMEDIATE ACTION–BOLT PARTIALLY FORWARD

"The rifle is firing alright and then suddenly stops."

The cadet shall cant the rifle and examine the bolt position.

"The bolt is partially forward and there is an obstruction."

	ACTION TO BE CARRIED OUT BY THE CADET	ACTION COMPLETED	
1.	Cock the rifle and engage the bolt catch.	**Yes**	**No**
2.	Examine the chamber.	**Yes**	**No**
3.	Remove the magazine if a live round or empty casing is in the chamber.	**Yes**	**No**
4.	Clear the obstruction.	**Yes**	**No**
5.	Replace the magazine.	**Yes**	**No**
6.	Disengage the bolt catch.	**Yes**	**No**
7.	Strike the forward assist and continue firing.	**Yes**	**No**

UNLOAD

	ACTION TO BE CARRIED OUT BY THE CADET	ACTION COMPLETED	
1.	Set the fire control selector to 'S' (safe).	**Yes**	**No**
2.	Remove the magazine.	**Yes**	**No**
3.	Cock the rifle twice.	**Yes**	**No**
4.	Pull the cocking handle to the rear and engage the bolt catch.	**Yes**	**No**
5.	Tilt the rifle to the left and wait to be cleared by the RSO.	**Yes**	**No**
6.	Disengage the bolt catch.	**Yes**	**No**
7.	Strike the forward assist.	**Yes**	**No**
8.	Set the fire control selector to 'R' (repetition).	**Yes**	**No**
9.	Fire the rifle.	**Yes**	**No**
10.	Close the ejection port cover.	**Yes**	**No**
11.	Lay down the rifle.	**Yes**	**No**

Comments:

RSO (LB) Signature: _____

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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

CANADIAN ARMED FORCES (CAF) FAMILIARIZATION

SECTION 4

EO MX20.01D – PARTICIPATE IN A MESS DINNER

Total Time: One session = 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

This IG supports EO MX20.01D (Participate in a Mess Dinner) located in A-CR-CCP-801/PG-001, *Royal Canadian Air Cadets Proficiency Level One Qualification Standard and Plan*, Chapter 4.

One week prior to the mess dinner, photocopy and distribute the appropriate elemental Cadet Mess Dinner pamphlet, located at Annexes A–C, for each cadet.

One week prior to the mess dinner, photocopy and distribute the Role of the President of the Mess Committee (PMC) handout, located at Annex D, to the cadet filling the role of PMC.

One week prior to the mess dinner, photocopy and distribute the Role of the Vice-President of the Mess Committee (VPMC) handout, located at Annex E, to the cadets filling the role of VPMC.

Refer to the Organize a Mess Dinner Aide-Memoire located at Annex F to guide the preparation of the mess dinner.

Brief the cadets on the expected dress for the mess dinner.

PRE-LESSON ASSIGNMENT

Have the cadets read the applicable Cadet Mess Dinner pamphlet in preparation for the mess dinner.

APPROACH

A practical activity was chosen for this lesson as it is an interactive way to allow cadets to experience a mess dinner in a safe, controlled environment. This activity is an interactive way to build on the cadets' knowledge of the CAF.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this session the cadets shall have participated in a mess dinner.

IMPORTANCE

The mess dinner is a ceremonial occasion when military personnel dine together formally and is one of the most important traditions of the CAF. Historically, military organizations have taken on a life and routine based upon discipline, order, and traditions that differ from civilian life. This boosts morale and develops esprit de corps.

ACTIVITY

The protocols and procedures for a Mess Dinner must be adapted to fit the regulations of the Cadet Program. While the tradition in the CAF calls for the serving of alcohol, IAW CATO 13-23, *Drug and Alcohol Policy*, cadets will not be served alcohol. Grape juice may be substituted for port during a cadet mess dinner.

1. Conduct a mess dinner, to include:
   (a) pre-dinner gathering,
   (b) mess calls,
   (c) arrival of the head table,
   (d) dinner,
   (e) passing of the port,
   (f) loyal toast,
   (g) marches,
   (h) speeches, and
   (i) departure of the head table.
2. Have the cadets sign a guest book reflecting on their experience.

CONCLUSION

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Participating in a mess dinner has allowed you to experience CAF customs, traditions, and rituals. Mess dinners are happy occasions that allow all members, regardless of rank, to meet on an occasion where good manners are expected.

INSTRUCTOR NOTES / REMARKS

There are numerous leadership opportunities for cadets when conducting a mess dinner:

- Phase Five / Master Cadet / Proficiency Level Five cadets may plan, prepare and conduct the mess dinner as a leadership project IAW PO 503 (Lead Cadet Activities); and
- Phase Three / Silver Star / Proficiency Level Three, Phase Four / Gold Star / Proficiency Level Four, and Phase Five / Master Cadet / Proficiency Levels Five cadets may complete leadership assignments

such as acting as the Mess President and the Mess Vice-Presidents IAW POs 303 (Perform the Role of a Team Leader), 403 (Act as a Team Leader), and 503 (Lead Cadet Activities).

The organization of the mess dinner shall be based on human and material resources available to the corps / squadron.

REFERENCES

A-CR-050-801/PH-001 Directorate of Cadets 6. (2009). *Training plan DP1 Cadet Instructors Cadre: Basic Officer Training Course*. Ottawa, ON: Department of National Defence.

A-AD-200-000/AG-000 Director Honours and Recognition. (1999). *The honours, flags and heritage structure of Canadian Forces*. Ottawa, ON: Department of National Defence.

A-AD-262-000/AG-000 Director of Physical Education, Recreation and Amenities. (1984). *Mess administration*. Ottawa, ON: Department of National Defence.

CFACM 1-900 Air Command. (2007). *Air command mess dinner procedures*. Ottawa, ON: Department of National Defence.

HMCS Queen Regina's Naval Reserve Division. (2009). *Chief Petty Officers & Petty Officers mess dinner naval customs*. Retrieved April 28, 2009, from http://www.hmcsqueen.ca/cpomessdinner.pdf.

Love, D.W. (1990). *Manual of Canadian naval etiquette*. Victoria, BC: VENTURE, The Naval Officer Training Centre.

ReadyAyeReady (2009). *Naval Toasts of the Day – Customs and Traditions: Naval toasts of the day*. Retrieved April 1, 2009 from http://www.readyayeready.com/tradition/naval-toasts-of-theday.htm

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Rules of Order

The rap of the gavel for grace signals the official start of dinner. Between then and the toast of the day, the following rules of order are in force:

No one may come in and sit down at the table, leave the table, read (except the menu and musical program), or send or receive messages.

Whenever the PMC or VPMC taps the table, there must be silence until they have finished speaking.

Requests are made via the VPMC. When a diner is coming to the table late, or is returning after leaving, the PMC's permission must be given.

There are no ranks or titles in the mess. All members present address each other as: Mister, Miss, or Missus. Only the PMC and VPMC will be addressed by title.

No member shall engage in conversation with the Head Table or the opposite table. Members shall only converse with those across, beside, and diagonal from themselves.

No diner may begin a course before the PMC, use foul language, discuss political or other controversial subjects, talk about work, speak in a foreign language (except when foreign guests are present) or tell rude or insulting jokes.

Members shall not clap. Instead diners shall rap the table lightly to express their opinion and solicitations.

Members shall not propose a toast (this includes "cheers" or similar remarks or raising a glass in greeting).

Mess Dinner Program

Before Dinner Gathering

Mess Call

Arrival of the Head Table

Dinner Course

Passing the Port

Toasts

Marches

~ Break ~

Coffee / Dessert

Speeches

Departure of the Head Table

Sea Cadet Mess Dinner

The mess dinner is a ceremonial occasion when military personnel dine together formally and is one of the most important traditions of the Canadian Armed Forces (CAF). In addition to educating cadets about an important CAF tradition, the mess dinner is also relevant because the basic rules of conduct observed are those of polite society.

Before Dinner Gathering

Cadets and guests are invited to arrive a half hour before the set time for dinner. During this period, members consult the seating plan and meet the guest of honour. During the gathering, all members pay their respects to the guest of honour providing this can be done without undue interruption to conversation with senior guests.

Introductions

All guests should be introduced to as many of the other members present as feasible. When introducing oneself it is customary to say, "Mr. Bloggins, I would like to introduce myself. I am _____". If you don't know to whom you are speaking, it is customary to say, "Please let me introduce myself. My name is _____".

Mess Calls

A bugler sounds a call at 15 minutes prior to dinner. This alerts guests to prepare to move to the dining room and to use the washroom before the start of the mess dinner. In the absence of a bugler, the mess call may be verbal.

Seating Plans

A Mess Dinner seating plan is formally arranged and the plan is drawn up and displayed. Individual places are marked with a name card. Members must sit in their assigned seat; shifting of places is not permitted.

Marching In

Five minutes prior to the meal time the senior steward enters the anteroom and reports to the PMC, "Dinner is served, Sir/Ma'am". Members move to their assigned seat and stand behind their chair. When all members are in place, the PMC and guest of honour make their way into the dining room. If a band is present, they may play "*The Roast Beef of Olde England*". No one may take their seats before the PMC.

Grace

When all diners are seated the PMC raps the table for silence with a gavel. The PMC requests a member of the mess to say grace. If a Chaplin is present, they would give the grace.

Passing the Port

In a naval mess, the decanters should be slid to the left and never leave the table. Passing the port along the table was implemented for practical reasons, as lifting a heavy decanter off a table in a moving ship might mean the table coming up quickly under the decanter and potentially spilling the port.

Loyal Toast

The PMC calls upon the VPMC to toast the Queen of Canada. For example, they may say, "Mr. Vice, The Queen of Canada", or "Monsieur le vice-president, La Reine du Canada". The VPMC announces, in the other official language, "Ladies and gentlemen, The Queen of Canada" or, "Mesdames et messieurs, La Reine du Canada". Diners announce individually "The Queen / La Reine" and take the Loyal Toast. In the navy, the Loyal Toast is given seated.

Naval members **never** clink glasses during any toast or greeting. This custom comes from the old belief that "a glass that rings tolls the death of a sailor". Instead, a sailor forwards the back of their hand with the glass in it.

Toast of the Day

Following the loyal toast the President will call upon a member to give the toast of the day.

Monday -	Our Ships	Friday -	Our Nation
Tuesday -	Our Sailors	Saturday -	Our Families
Wednesday -	Ourselves	Sunday -	Absent Friends
Thursday -	Our Navy		

Marches

Following the toasts, "*Heart of Oak*" is played. If any other elements are present, the appropriate march is played. A member only stands at attention for their own march.

Speeches

After the toasts and marches have been completed, the PMC may open the floor to speeches by special guests.

Departing the Dining Room

Upon completion of all mess functions, the PMC shall conclude the mess dinner with a rap of the gavel. All members will stand for the departure of the head table.

Dinner Etiquette

Keep elbows close to the sides at all times and never place them on the table.

Silverware or glasses must not be played with.

Silverware is laid out in the order in which it is to be used; the knives to the right of the plate and the forks to the left.

Bread must be broken with the fingers.

Never speak with food in the mouth or make gestures while utensils are in hands.

Never ask for anything that is not offered on the table such as butter, vinegar, or ketchup.

Tea or coffee should be sipped and the cup is replaced to the saucer between sips.

President of the Mess Committee (PMC)

The PMC is in absolute charge, regardless of rank or seniority. The PMC greets the guest of honour; escorts the guest of honour into the dining room, asks for grace to be said, levies fines against misbehaving members, begins passing the port, gives the loyal toast, dismisses for breaks, introduces the guest of honour; and escorts the guest of honour out of the dining room.

Vice-President of the Mess Committee (VPMC)

The Vice-President assists the President in maintaining order during the Mess Dinner. They direct members to the dining room, pass on messages to the President from members, call the President's attention to any misbehaviour from other tables, begin passing the port, and assist in the Loyal Toast.

Rules of Order

The rap of the gavel for grace signals the official start of dinner. Between then and the loyal toast, the following rules of order are in force:

No one may come in and sit down at the table, leave the table, read (except the menu and musical program), or send or receive messages.

Whenever the PMC or VPMC taps the table, there must be silence until they have finished speaking.

Requests are made via the VPMC. When a diner is coming to the table late, or is returning after leaving, the PMC's permission must be given.

There are no ranks or titles in the mess. All members present address each other as: Mister, Miss, or Missus. Only the PMC and VPMC will be addressed by title.

No member shall engage in conversation with the Head Table or the opposite table. Members shall only converse with those across, beside, and diagonal from themselves.

No diner may begin a course before the PMC, use foul language, discuss political or other controversial subjects, talk about work, speak in a foreign language (except when foreign guests are present) or tell rude or insulting jokes.

Members shall not clap. Instead diners shall rap the table lightly to express their opinion and solicitations.

Members shall not propose a toast (this includes "cheers" or similar remarks or raising a glass in greeting).

Mess Dinner Program

Before Dinner Gathering

Mess Call

Arrival of the Head Table

Dinner Course

Passing the Port

Toasts

Marches

~ *Break* ~

Coffee / Dessert

Speeches

Departure of the Head Table

Army Cadet Mess Dinner

The mess dinner is a ceremonial occasion when military personnel dine together formally and is one of the most important traditions of the Canadian Armed Forces (CAF). In addition to educating cadets about an important CAF tradition, the mess dinner is also relevant because the basic rules of conduct observed are those of polite society.

Before Dinner Gathering

Cadets and guests are invited to arrive half hour before the set time for dinner. During this period, members consult the seating plan and meet the guest of honour. During the gathering, all members pay their respects to the guest of honour providing this can be done without undue interruption to conversation with senior guests.

Introductions

All guests should be introduced to as many of the other members present as feasible. When introducing oneself it is customary to say, "Mr. Bloggins, I would like to introduce myself. I am _____". If you don't know to whom you are speaking, it is customary to say, "Please let me introduce myself. My name is _____".

Mess Calls

A bugler or piper sounds a call at 15 minutes prior to dinner. This alerts guests to prepare to move to the dining room and to visit the washroom before the start of the mess dinner. In the absence of a bugler or piper, the mess call may be verbal.

Seating Plans

A Mess Dinner seating plan is formally arranged and the plan is drawn up and displayed. Individual places are marked with a name card. Members must sit in their assigned seat; shifting of places is not permitted.

Marching In

Five minutes prior to the meal time the senior steward enters the anteroom and reports to the PMC, "Dinner is served, Sir/Ma'am". Members move to their assigned seat and stand behind their chair. When all members are in place, the PMC and guest of honour make their way into the dining room. If a band is present, they may play "*The Roast Beef of Olde England*". No one may take their seats before the PMC.

Grace

When all diners are seated the PMC raps the table for silence with a gavel. The PMC requests a member of the mess to say grace. If a Chaplin is present, they would give the grace.

Passing the Port

In an army mess, the decanters should be moved to the left and placed soundly on the table by each member. The port should not be placed so soundly as to disturb other items on the table, to cause spillage of the port, or to cause damage.

Loyal Toast

The PMC calls upon the VPMC to toast the Queen of Canada. For example, they may say, "Mr. Vice, The Queen of Canada", or "Monsieur le vice-president, La Reine du Canada". The VPMC announces, in the other official language, "Ladies and gentlemen, The Queen of Canada" or, "Mesdames et messieurs, La Reine du Canada". Diners announce individually "The Queen / La Reine" and take the Loyal Toast. The loyal toast is given while standing.

Marches

Following the toasts, the regimental march past is played. If any other elements are present, the appropriate march is played. A member only stands at attention for their own march.

Speeches

After the toasts and marches have been completed, the PMC may open the floor to speeches by special guests.

Departing the Dining Room

Upon completion of all mess functions, the PMC shall conclude the mess dinner with a rap of the gavel. All members will stand for the departure of the head table.

Dinner Etiquette

Keep elbows close to the sides at all times and never place them on the table.

Silverware or glasses must not be played with.

Silverware is laid out in the order in which it is to be used; the knives to the right of the plate and the forks to the left.

Bread must be broken with the fingers.

Never speak with food in the mouth or make gestures while utensils are in hands.

Never ask for anything that is not offered on the table such as butter, vinegar, or ketchup.

Tea or coffee should be sipped and the cup is replaced to the saucer between sips.

President of the Mess Committee (PMC)

The PMC is in absolute charge, regardless of rank or seniority. The PMC greets the guest of honour; escorts the guest of honour into the dining room, asks for grace to be said, levies fines against misbehaving members, begins passing the port, gives the loyal toast, dismisses for breaks, introduces the guest of honour; and escorts the guest of honour out of the dining room.

Vice-President of the Mess Committee (VPMC)

The Vice-President assists the President in maintaining order during the Mess Dinner. They direct members to the dining room, pass on messages to the President from members, call the President's attention to any misbehaviour from other tables, begin passing the port, and assist in the Loyal Toast.

Rules of Order

The rap of the gavel for grace signals the official start of dinner. Between then and the toast of the day, the following rules of order are in force:

No one may come in and sit down at the table, leave the table, read (except the menu and musical program), or send or receive messages.

Whenever the President or Vice-President taps the table, there must be silence until they have finished speaking.

Request are made via the Vice-President. When a diner is coming to the table late, or is returning after leaving, the President's permission must be given.

There are no ranks or titles in the mess. All members present address each other as: Mister, Miss, or Missus. Only the President and Vice-President will be addressed by title.

No member shall engage in conversation with the Head Table or the opposite table. Members shall only converse with those across, beside, and diagonal from themselves.

No diner may begin a course before the President, use foul language, discuss political or other controversial subjects, talk about work, speak in a foreign language (except when foreign guests are present) or tell rude or insulting jokes.

Members shall not clap. Instead diners shall rap the table lightly to express their opinion and solicitations.

Members shall not propose a toast (this includes "cheers" or similar remarks or raising a glass in greeting).

Mess Dinner Program

Before Dinner Gathering

Mess Call

Arrival of the Head Table

Dinner Course

Passing the Port

Toasts

Marches

~ Break ~

Coffee / Dessert

Speeches

Departure of the Head Table

Air Cadet Mess Dinner

The mess dinner is a ceremonial occasion when military personnel dine together formally and is one of the most important traditions of the Canadian Forces (CAF). In addition to educating cadets about an important CAF tradition, the mess dinner is also relevant because the basic rules of conduct observed are those of polite society.

Before Dinner Gathering

Cadets and guests are invited a half hour before the set time for dinner. During this period, members consult the seating plan and meet the guest of honour. During the gathering, all members pay their respects to the guest of honour providing this can be done without undue interruption to conversation with senior guests.

Introductions

All guests should be introduced by their escorts to as many of the other members present as feasible. When introducing oneself it is customary to say, "Mr. Bloggins, I would like to introduce myself. I am _____". If you don't know to whom you are speaking, it is customary to say, "Please let me introduce myself. My name is _____".

Mess Calls

A bugler or piper sounds a call at 15 minutes prior to dinner. This alerts guests to prepare to move to the dining room and to use the washroom before the start of the mess dinner. In the absence of a bugler or piper, the mess call may be verbal.

Seating Plans

A Mess Dinner seating plan is formally arranged and the plan is drawn up and displayed. Individual places are marked with a name card. Members must sit in their assigned seat; shifting of places is not permitted.

Marching In

Five minutes prior to the meal time the senior steward enters the anteroom and reports to the PMC, "Dinner is served, Sir/Ma'am". Members move to their assigned seat and stand behind their chair. When all members are in place, the PMC and guest of honour make their way into the dining room. If a band is present, they may play "*The Roast Beef of Olde England*". No one may take their seats before the PMC.

Grace

When all diners are seated the PMC raps the table for silence with a gavel. The PMC requests a member of the mess to say grace. If a Chaplin is present, they would give the grace.

Passing the Port

In an air mess, the decanters should be moved to the left, never being placed on the table. The only time the decanter should be placed on the table is when the decanter is emptied, needing to be refilled or replaced, or when it arrives back to the PMC / VPMC.

Loyal Toast

The PMC calls upon the VPMC to toast the Queen of Canada. For example, they may say, "Mr. Vice, The Queen of Canada", or "Monsieur le vice-president, La Reine du Canada". The Vice-President announces, in the other official language, "Ladies and gentlemen, The Queen of Canada" or, "Mesdames et messieurs, La Reine du Canada". Diners announce individually "The Queen / La Reine" and take the Loyal Toast. The loyal toast is given while standing.

Marches

Following the toasts, "*Royal Canadian Air Force*" is played. If any other elements are present, the band will play the appropriate march. A member only stands at attention for their own march.

Speeches

After the toasts and marches have been completed, the PMC may open the floor to speeches by special guests.

Departing the Dining Room

Upon completion of all mess functions, the PMC shall conclude the mess dinner with a rap of the gavel. All members will stand for the departure of the head table.

Dinner Etiquette

Keep elbows close to the sides at all times and never place them on the table.

Silverware or glasses must not be played with.

Silverware is laid out in the order in which it is to be used; the knives to the right of the plate and the forks to the left.

Bread must be broken with the fingers.

Never speak with food in the mouth or make gestures while utensils are in hands.

Never ask for anything that is not offered on the table such as butter, vinegar, or ketchup.

Tea or coffee should be sipped and the cup is replaced to the saucer between sips.

President of the Mess Committee (PMC)

The PMC is in absolute charge, regardless of rank or seniority. The PMC greets the guest of honour; escorts the guest of honour into the dining room, asks for grace to be said, levies fines against misbehaving members, begins passing the port, gives the loyal toast;, dismisses for breaks, introduces the guest of honour; and escorts the guest of honour out of the dining room.

Vice-President of the Mess Committee (VPMC)

The VPMC assists the PMC in maintaining order during the Mess Dinner. They direct members to the dining room, pass on messages to the PMC from members, call the PMC's attention to any misbehaviour from other tables, begin passing the port, and assist in the Loyal Toast.

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ROLE OF THE PRESIDENT OF THE MESS COMMITTEE (PMC)

Greeting the Guest of Honour

The PMC shall meet the guest of honour in the foyer of the mess, escort them into the before-dinner gathering and introduce them to the attendees and guests.

Escorting the Official Host or Guest of Honour

A bugler / piper, when available, shall make the appropriate calls to announce dinner. Following the second call, the PMC shall escort the guest of honour to the head table. In the absence of a bugler / piper, the mess call may be verbal.

Grace

Once the chief steward has advised the Vice-President of the Mess Committee (VPMC) that everyone is present, the PMC shall rap the gavel and ask the chaplain, or a previously designated member (often the most junior member present), to say grace.

Passing the Port

The PMC will indicate that the port may be passed by pouring a small amount of port into a glass, tasting it, and passing the decanter to the left.

Saying the Loyal Toast

The PMC calls upon the VPMC to toast the Queen of Canada. For example, they may say, “Mr. Vice, The Queen of Canada”, or “Monsieur le vice-president, La Reine du Canada”. The Vice-President announces, in the other official language, “Ladies and gentlemen, The Queen of Canada” or, “Mesdames et messieurs, La Reine du Canada”. Diners announce individually “The Queen / La Reine” and take the Loyal Toast.

Dismissing for Breaks

The PMC may decide that a short break is needed if lengthy after-dinner speeches and presentations are scheduled. The break may be given before or after the passing of the port. The PMC shall announce that the head table members will leave the dining room first for the break and give a duration for the break. At the end of the break, the PMC shall rap the gavel for attention.

Introducing the Guest of Honour

The PMC shall introduce the guest of honour and other head table guests at an appropriate time during the dinner. All speeches are given after the toasts after which the PMC will make any announcements appropriate to the occasion.

Misbehaviour and Fines

When misbehaviour or transgressions of the rules of order in the mess occur, the PMC may:

1. warn the diner;
2. order an apology;
3. order a performance;
4. order a fine;
5. order the person to leave the mess; or
6. order any other fine deemed acceptable.

A member coming late to dinner may have their excuse accepted, but be refused permission to dine. The member may also be fined.

The following guidelines apply to fines:

- Fines imposed on a guest must be paid by their host.
- Fines are paid after the toasts.
- A diner may call the PMC's attention to a misdemeanour, but would be wise to ask permission to repeat, or demonstrate the infractions of the rules as to avoid a fine.

When dinner is finished and the tables cleared the senior steward reports to the President, "Table cleared, Sir / Ma'am".

Departing the Dining Room

When all speeches have concluded, the PMC indicates the end of the dinner and leads the head table out of the dining room.

ROLE OF THE VICE-PRESIDENT OF THE MESS COMMITTEE (VPMC)

As VPMC of the mess dinner you will assist the President of the Mess Committee (PMC) in maintaining order and, depending upon your corps / squadron, will:

Maintain Order

The VPMC can assist the PMC by controlling the behaviour of the table leg for which they are responsible and calling attention to inappropriate behaviour from other legs. The VPMC can also suggest appropriate fines for inappropriate behaviour.

Directing the Attendees to the Dining Room

The VPMC shall ensure that all personnel move quickly into the dining room and take position as soon as all personnel have entered the dining room. The chief steward shall discretely advise the VPMC that everyone is present.

Pass on Messages to the President from Members

If a diner wishes to address the PMC, they should make their wish known to a VPMC who then raps the gavel for silence, stands, faces the PMC and asks permission for the member to address the PMC.

Call to the PMC's Attention any Misbehaviour from other Tables

It is the duty of the VPMC to assist the PMC in maintaining order and discipline. As such, the VPMC needs to be aware of the conduct of all members of the mess, not just the members of which they are responsible. If the VPMC notices any behaviour that they feel is against the order and etiquette expected, they should bring it to the attention of the PMC.

Begin Passing the Port

If there are multiple decanters of port, the VPMC may control the passing of the port to the members of which they are responsible. The VPMC passes the port to the left and stoppers the decanter once it has made its way around the table. The VPMC pour their port last.

Give the Loyal Toast

The PMC calls upon the VPMC to toast the Queen of Canada. For example, they may say, “Mr. Vice, The Queen of Canada”, or “Monsieur le vice-president, La Reine du Canada”. The Vice-President announces, in the other official language, “Ladies and gentlemen, The Queen of Canada” or, “Mesdames et messieurs, La Reine du Canada”.

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ORGANIZE A MESS DINNER AIDE-MEMOIRE

DRESS. The mess dinner is traditionally a formal dinner. As such, members attending the mess dinner are dressed in formal attire. Members of the military would wear the Number 2 order of dress, called mess dress, and this is true for cadets as well. Check the applicable dress CATO for further clarification.

OFFICIAL HOST. The Official Host of the Mess Dinner shall normally be the Commanding Officer of the cadet corps / squadron or representative.

GUEST OF HONOUR. The Guest of Honour, if there is one, shall be escorted to the mess by the President of the Mess Committee (PMC). In the absence of a Guest of Honour, the Official Host may be used.

PMC GREETING. The PMC shall meet the Official Host and the senior guest in the foyer of the mess and shall escort them to the before-dinner gathering where they shall present them to the mess membership.

MESS CALL. A signal (bugler, piper, recorded music, verbal cue) shall call the assembly to dinner. The first call occurs 15 minutes prior to the start of dinner. The second call occurs 5 minutes prior to the start of dinner. Following the second call, the PMC shall escort the Official Host / Guest of Honour to the head table. The Vice-President of the Mess Committee (VPMC) shall ensure that all personnel move quickly into the dining room and shall take their position as soon as all personnel have entered the dining room. Once assembled personnel have taken their position behind their respective seats, the VPMC informs the PMC that everyone is present. At that point the PMC shall rap his/her gavel and ask the previously designated member (quite often the most junior member present), to say grace. At the completion of grace, all shall be seated.

INTRODUCTION BY PMC. At the beginning of the dinner after everyone is seated the PMC shall introduce the head table.

DINNER ETIQUETTE. The mess dinner is a time to appreciate the fellowship and conversation of fellow personnel and guests, to enjoy good food and to enjoy relaxed formality in an elegant setting. Diners should not display immature or offensive behaviour.

FINES. If members behave in an immature or offensive manner they may be fined. If not taken to an extreme this can be an entertaining part of a mess dinner. Fines are imposed for members who break, bend, or knowingly conceal a breech of mess rules by another member.

Fines levied against an individual may vary:

- dismissal from the mess;
- apology;
- performance;
- warning; or
- any other fine deemed acceptable by the President.

BREAK. On occasions where lengthy after-dinner formalities such as speeches and presentations are scheduled, the PMC may decide that a short break is needed which, at their discretion, may occur before or after the passing of the Port depending on the number and length of speeches and the number of diners in attendance. At the end of the break, the PMC shall rap the gavel for attention.

PASSING THE PORT. After the last course has been served and the tables have been cleared or after the break, decanters shall be placed on the tables. The Mess Manager or person acting as Chief Steward shall indicate to the PMC that the Port is ready to be passed. At that point the stoppers shall be removed, and the PMC will indicate that the Port may be passed by pouring a small amount of Port into their glass, tasting it, and passing the decanter to the left. The passing of the port shall be done in accordance with elemental tradition. Once Port has been poured into the glass, it shall not be touched until it is time for the Loyal Toast.

ALCOHOLIC BEVERAGES. As per regulation, alcoholic beverages shall not be served at the mess dinner. Grape juice shall be used to uphold the tradition of passing the Port. All references to Port in this document refer to Grape Juice.

LOYAL TOAST. When the Mess Manager, or person acting as Chief Steward, has indicated to the PMC that all have been served Port, the PMC shall rap the gavel for attention, all conversation shall cease, the PMC shall rise, and shall announce to the Vice-PMC, either, "Mr. Vice, The Queen of Canada", or "Monsieur le vice président, La Reine du Canada". The Vice-PMC will then rise and announce in the other official language, "(ladies and) gentlemen, The Queen of Canada" or, "(Mesdames et) messieurs, La Reine du Canada", as appropriate. At that point all personnel and guests shall rise and shall pick up their glass of Port and hold it at waist level announcing individually, in French or English, "The Queen"/"La Reine", and take the Loyal Toast. Glasses shall be lowered to the table, and the assembly shall be seated. It is important to note that it is naval tradition to remain seated for the loyal toast.

DEPARTING THE DINING ROOM. When all speeches have been concluded and the Official Host has indicated to the PMC that it is time to depart the dining room, all in attendance shall rise and remain standing until the Official Host, Senior Guest, PMC, and head table guests have moved from the dining room.

SEATING ARRANGEMENT. The tables of the mess dinner can be arranged in many ways. They may be arranged as a long table or a head table with several legs. The seating of the PMC and VPMC may also vary. Below are some examples of seating arrangements.

When placing members at tables, it is important to have a mix of ranks at each table. Whenever possible, genders should be mixed. Tables should be filled from the head table towards the end of the leg and there should never be empty place settings. If a member is unable to attend, their place setting should be removed and the remaining members should spread to fill in the empty space.

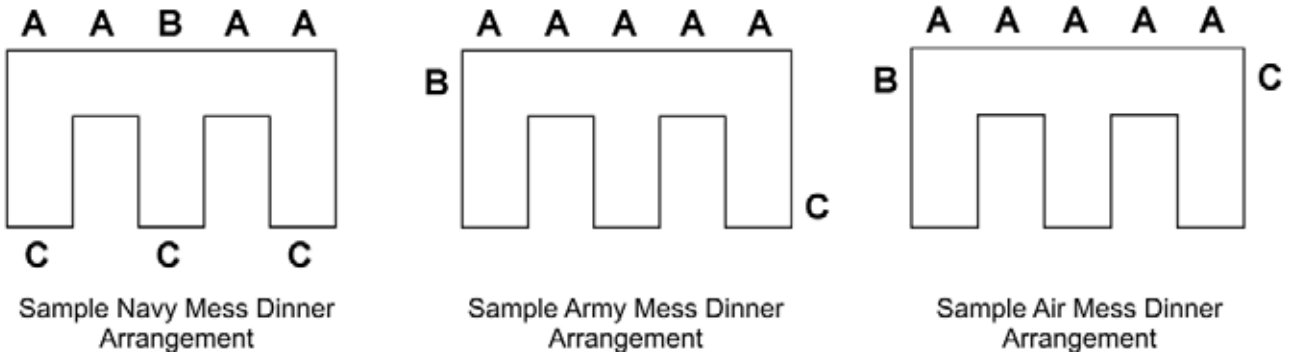

Figure F-1 Sample Elemental Dinner Arrangements

Symbol	Meaning
A	Invited Guests
B	President of the Mess Committee
C	Vice President of the Mess Committee

PLACE SETTINGS. Traditionally, mess dinners are a formal occasion with formal place settings. A variety of utensils may be used. Diners should use utensils starting with the utensils on the outside. Utensils are changed with each course of the meal.

A variety of glasses may also be used. Each glass has a specific purpose. As there will be no alcohol served during the dinner, it is acceptable to only use one glass.

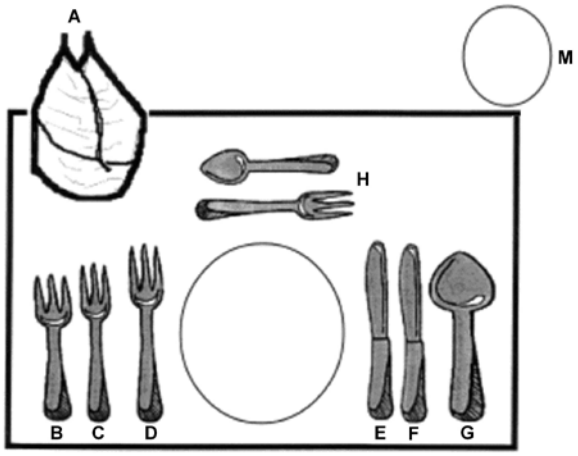

Figure F-2 Table Setting

Napkin and Dinner Roll (Item A)

The napkin and dinner roll will be placed on the table at the place setting prior to diners taking their seats.

Salad Fork (Item B)

The first course is either a mixed green or fruit salad. Eat the salad with the salad fork found on the extreme left of the dinner plate. No knife is to be used with the salad. If the salad cannot be picked up with the fork it must be left on the plate. Do not push food onto the fork with fingers.

While eating the appetizer, the fork should be laid at a 45-degree angle from the centre of the plate to indicate to the steward the meal is not completed. When the course is completed, the fork is placed at a six o'clock on the plate to indicate to the steward the meal is complete.

Soup Spoon (Item G)

Eat the soup with the soup spoon found on the extreme right of the dinner plate. Soup is always taken from the side of the spoon. The motion of the spoon should be from the front to the back of the bowl. Never tip the bowl to get the last drop or blow on the soup to cool it.

While eating the soup, the spoon should be laid at a 45-degree angle from the centre of the bowl to indicate to the steward the meal is not completed. When the course is completed the spoon is placed at a six o'clock in the bowl to indicate to the steward the meal is complete.

Fish Fork and Knife (Items C and F)

Use the fish knife found on the extreme right and the middle fork to eat the fish course. Place the knife in the right hand and the fork in the left. A left-handed person may reverse the cutlery. While eating the fish, the fork and knife should be laid at a 45-degree angle from one another from the centre of the plate to indicate to the steward the meal is not completed. When the course is completed the fork and knife are placed together at a 45-degree angle from the centre of the plate to indicate to the steward the meal is complete.

Dinner Fork and Knife (Items D and E)

Use the last set of cutlery on either side of the plate to eat the main course. The cutlery is held in the same way as the fish course. Never pick up the meat with the hands. Only eat what can be cut with the knife and fork.

While eating the main course, the fork and knife should be laid at a 45-degree angle to one another from the centre of the plate to indicate to the steward the meal is not completed. When the course is completed the fork and knife are placed together at a 45-degree to indicate to the steward the meal is complete.

Dessert Service (Item H)

The last course is dessert. There are two pieces of cutlery laid out for dessert found at the top of the place setting. It is only necessary to use one. The dessert is the end of the meal, but not the end of the dinner. While eating the desert, the spoon or fork should be laid at a 45-degree angle to indicate to the steward the meal is not completed. When the course is completed the spoon or fork is placed at six o'clock on the plate to indicate to the steward the meal is complete.

Water Glass (Item M)

Water will be served to all members prior to the start of the dinner.

COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

CANADIAN ARMED FORCES (CAF) FAMILIARIZATION

SECTION 5

EO MX20.01E – ATTEND A CAF PRESENTATION

Total Time:	One session (3 Periods) = 90 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO. REFER TO THE LESSON SPECIFICATION LOCATED IN A-CR-CCP-801/PG-001, *ROYAL CANADIAN AIR CADETS PROFICIENCY LEVEL ONE QUALIFICATION STANDARD AND PLAN*.

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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

CANADIAN ARMED FORCES (CAF) FAMILIARIZATION

SECTION 6

EO MX20.01F – ATTEND A CAF COMMEMORATIVE CEREMONY

Total Time:	One session (3 periods) = 90 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO. REFER TO THE LESSON SPECIFICATION LOCATED IN A-CR-CCP-801/PG-001, *ROYAL CANADIAN AIR CADETS PROFICIENCY LEVEL ONE QUALIFICATION STANDARD AND PLAN*.

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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

CANADIAN ARMED FORCES (CAF) FAMILIARIZATION

SECTION 7

EO MX20.01G – PARTICIPATE IN CAF FAMILIARIZATION VIDEO ACTIVITIES

Total Time:	One session (3 periods) = 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

This IG supports EO MX20.01G (Participate in CAF Familiarization Video Activities) located in A-CR-CCP-801/PG-001, *Royal Canadian Air Cadets Proficiency Level One Qualification Standard and Plan*, Chapter 4.

Instructors may choose their own CAF Familiarization video and create their own fun and interactive activities, or choose a video from the following list:

- *A War Of Their Own – The Canadians in Sicily and Italy – Part 1* (60 minutes),
- *A War Of Their Own – The Canadians in Sicily and Italy – Part 2* (60 minutes),
- *Operation Apollo – The Canadian Navy in the War Against Terrorism, 2001-2003* (30 minutes),
- *The Boys of Kelvin High – Canadians in Bomber Command – Part 1* (60 minutes),
- *The Boys of Kelvin High – Canadians in Bomber Command – Part 2* (60 minutes),
- *The Van Doos in Afghanistan* (45 minutes), and
- *The International Fleet Reviews of The Canadian Navy Centennial 2010* (22 minutes).

Photocopy the applicable video question page, located at Annex A, for each cadet or prepare your own. Answer pages are located at Annex B.

Gather the required resources:

- video equipment (eg, television, DVD player, tablet, laptop, speakers),
- video, and
- any other resources required as per the selected activity.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An in-class activity was chosen for this lesson as it is a fun and interactive way to build on the cadets' knowledge of the CAF.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this session the cadets shall have watched a CAF Familiarization video.

IMPORTANCE

It is important for cadets to watch a CAF video as a part of stimulating an interest in the sea, land and air activities of the CAF.

ACTIVITY

1. Conduct an introductory activity to ascertain the cadets' knowledge of the topic of the video they will be watching. Check the suggested activities instructor box below for activities. Introductory activities should cover the following:

   (a) the significance of the video(s) being watched, or

   (b) the role of the CAF in the video.

2. Distribute the applicable video question page located at Annex A and provide any additional details to the cadets.

3. Have the cadets watch the video.

4. Conduct a debriefing and have the cadets reflect on what they saw and how it affected their perceptions of the CAF. Check the suggested follow-up activities box below for activities.

SUGGESTED INTRODUCTORY ACTIVITIES

Brainstorm. As a large group or in smaller groups, have the cadets list what they know about the video topic (eg, WW II Bombers). If the video topic is not well-known, prepare questions that may help stimulate the cadets' thinking (eg, What was the role of Bomber Command? Where were the bombers located? How many crew were in a bomber?). If conducted as a large group, write down key words in a thought web as the cadets brainstorm.

Think – Pair – Share. Have the cadets individually think about and list what they know about the video topic (eg, Operation Apollo). Have the cadets share what they know about the video topic with a partner. Invite the cadets to share what they learned from their partner with the larger group.

KWL Chart. Have the cadets complete a chart with three columns:

- what they **K**now about the video topic (eg, the International Fleet Review),
- what they **W**ant to know about the video topic, and
- what they have **L**earned about the video topic (to be completed after watching the video as part of the follow-up activity).

SUGGESTED FOLLOW-UP ACTIVITIES

Highlights. Have the cadets individually list the three most interesting or surprising things they learned from watching the video. Have the cadets share and discuss these highlights with a partner or in small groups. If time permits, invite cadets to share highlights with the larger group.

Cadets' Questions. Have the cadets write a question they have after watching the video. In other words, what more would they like to learn about this topic? Answer the cadets' questions or challenge them to find out the answer to their own question prior to the next session.

Activity Leader's Questions. Have the cadets respond to thought-provoking questions about the video topic. For example, if the video topic is Operation Apollo, questions could include: How did the Canadian Government's resolution to not become involved in the offensive operations in Iraq affect the Canadian ships in the Persian Gulf. Do you agree with the Government's decision? Why?

CONCLUSION

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

It is important for cadets to have an understanding of the sea, land and air activities of the CAF.

INSTRUCTOR NOTES / REMARKS

There are potential leadership opportunities for cadets when conducting CAF Familiarization video activities:

- Phase Five / Master Cadet / Proficiency Level Five cadets may plan, prepare and conduct the session as a leadership project IAW PO 503 (Lead Cadet Activities); and
- Phase Three / Silver Star / Proficiency Level Three, Phase Four / Gold Star / Proficiency Level Four, and Phase Five / Master Cadet / Proficiency Levels Five cadets may complete leadership assignments IAW POs 303 (Perform the Role of a Team Leader), 403 (Act as a Team Leader), and 503 (Lead Cadet Activities), such as leading a CAF Familiarization video activity.

REFERENCES

DVD Video Chadderton, H. C. (Producer) (2000). *A war of their own: The Canadians in Sicily and Italy*. Ontario: The War Amps of Canada.

DVD Video Gimblett, R. H. (Author) (2004). *Operation Apollo: The Canadian navy in the war against terrorism – 2001-2003*. Canada: Magic Light Publishing.

DVD Video H. Chadderton, H. C. (Producer) (2005). *The boys of Kelvin High: Canadians in bomber command*. Ontario: The War Amps of Canada.

DVD Video Guilmain, C. (Director) (2012). *The van doos in Afghanistan*. National Film Board of Canada.

DVD Video (2010). *The international fleet reviews of The Canadian navy centennial 2010*. Canada: Department of National Defence.

The Boys of Kelvin High
The End of the Beginning
Questions - Part 1

Run Time: 57 min 30 sec

Outline: A remarkable story of those who flew in mighty bombers night after night. Against great adversity, they pressed on in a relentless drive to defeat Hitler`s Nazi regime. *The End of the Beginning* follows the airmen through training, crewing up, the Battle of the Ruhr and the Dambusters Raid.

Answer the following questions while watching the movie. Questions are drawn directly from the movie and include the time stamps where the answer can be found.

1. 8:00 – A Lancaster Crew that "goes for the chop?" has been

   _____ _____.

2. 14:00 – From the list below, circle five of the jobs that recruits may have been chosen for at Number 1 Air Training School in 1940:

Pilot	Navigator	Mechanic	Stewart
Bomb Aimer	Wireless Operator	Gunner	

3. 20:25 – Canadian's accounted for _____% of British Bomber Crews.

4. 29:10 – The head mechanic was often called _____.

5. 33:35 – What is the traditional meal that flight crews eat before departing on a mission?

   _____ and _____.

6. 40:00 – Pathfinders bomber crews were:

   _____

   _____

   _____

7. 49:45 – The Squadron in Bomber Command who raided German hydro-electric dams in May 1943 were called the _____.

The Boys of Kelvin High
Press on Regardless
Questions - Part 2

Run Time: 57 min 30 sec

Outline: A remarkable story of those who flew in mighty bombers night after night. Against great adversity, they pressed on in a relentless drive to defeat Hitler's Nazi regime. *Press on Regardless* continues to explore the experiences and dangers faced by the air crews in raids such as Peenemunde and the Battle of Berlin.

Answer the following questions while watching the movie. Questions are drawn directly from the movie and include the time stamps where the answer can be found.

1. 08:50 – An accurate radar pulse system named "Oboe" was used primarily in the

   _____ aircraft.

2. 10:00 – Metal or aluminum foil strips dropped from an aircraft are called

   _____.

3. 12:20 – Bomber crews were greatly concerned by German "flack" guns which

   could often hit targets as high as _____ feet in the air.

4. 17:00 – In March 1943, British Intelligence became aware of a secret German long

   range pilotless _____ called V1 and V2.

5. 27:55 – More than 50% of those who flew with _____ were killed, wounded or taken prisoner.

6. 28:05 – The average life expectancy of an aircraft crew was about _____ sorties.

A War of Their Own
Questions - Part 1

Run Time: 60 min

Outline: The story showing how the Canadians in Sicily and Italy faced tremendous odds never before experienced by the Canadian Army and developed innovative techniques to fight in an inhospitable terrain against an experienced enemy force during almost two years of steady fighting.

Answer the following questions while watching the movie. Questions are drawn directly from the movie and include the time stamps where the answer can be found.

1. 06:00 – Why was awarding Corporal Huron Brant a medal significant?

   First battle in Sicily — Aboriginal Status

   German Background — Entrance into Rome

2. 16:00 – CAF Engineers' creativity was commended by international militaries for learning how to _____ landmines.

3. 21:00 – Where did multiple trades and branches (army, navy, air force) of the CAF work together for a decisive victory?

   Victoria — Maples

   Bell Island — Messina

4. 24:00 – What famous battle tactic did Canadian Colonel Cy Neroutsos receive credit for, which replaced the British system of the 'Creeping Barrage'?

5. 50:00 – Name the strategy created by Canadians, during the battle of Ortona, which protected CAF members from being exposed to danger on the streets?

A War of Their Own
Questions - Part 2

Run Time: 60 min

Outline: A story paying tribute to the 1st and 5th Canadian Divisions and the 1st Canadian Armoured Brigade which formed the spearhead into the heart of Europe and held down 20 German divisions that otherwise would have been able to defend Northern Italy. The Canadians in Italy, in a questionable jest, were called the D-Day Dodgers.

Answer the following questions while watching the movie. Questions are drawn directly from the movie and include the time stamps where the answer can be found.

1. 04:00 – What was the name of the secret commando unit breaking across the mountainous Hitler Line toward Rome?

   First Special Service Force Airborne

   Joint Task Force 2 Canadian Special Operations Regiment

2. 13:00 – Circle the regiments which were involved in breaking the Gustav Line?

   Toronto 48th Highlanders 3 Rivers Regiment

   Royal Canadian Regiment Royal 22nd Van Doos

3. 20:00 – The Canadian _____ Sisters played an important role for women wishing to contribute to supporting the combat troops.

4. 30:00 – Troops fighting in the Italian campaign became known as D-Day dodgers. In which country did they not fight?

5. 44:00 – Which CAF trooper, from the Seaforth Highlanders, earned the Victoria Cross during the battle of Savio for destroying 2 tanks and repelling the accompanying infantry?

The Van Doos in Afghanistan
Questions

Run Time: 45 min

Outline: In this documentary, we hear directly from soldiers serving in the Royal 22e Régiment. Members of the regiment were filmed in the field in March 2011, during their deployment to Afghanistan. They speak with ease and a rare candour about themselves and their work, whether out on patrol or performing their duties at the base. The films images and interviews bring home the complexity of the issues on the ground and shed light on the little understood experiences of the men and women who served in Afghanistan.

Answer the following questions while watching the movie. Questions are drawn directly from the movie and include the time stamps where the answer can be found.

1. 01:00 – In which Afghan district did the Van Doos conduct their operations?

   Kandahar Kabul Panjwai Helmand

2. 12:00 – The CAF often carried out tasks to provide _____ project security.

3. 20:00 – What trade was the injured CAF member who delegated commands to carry out the required task?

   Infantry Medic

   Logistics Sailor

4. 28:00 – What is the motto that the Van Doos use to describe their approach in Afganistan?

   _____ _____ _____

5. 34:00 – What was Private Stephane Perreault's civilian occupation before enlisting in the CAF?

The International Fleet Reviews of the Canadian Navy Centennial Questions

Run Time: 22 min

Outline: In this documentary, the Royal Canadian Navy looked at their first century as a national institution, commemorating and celebrating 100 years of naval service, while committing themselves anew to the second century upon which they have just embarked.

Answer the following questions while watching the movie. Questions are drawn directly from the movie and include the time stamps where the answer can be found.

1. 3:45 – The 18 ships of the Pacific Fleet were reviewed by Her Excellency the _____ _____ of Canada, Michaëlle Jean.

2. 5:40 – HMCS _____ carried the Governor General during the Pacific Fleet Review.

3. 8:50 – The review culminated with an Air Force display by 413 Squadron, who are commonly known as The _____.

4. 10:40 – Her Majesty Queen Elizabeth II, of _____ arrived during the afternoon of June the 29th.

5. 12:40 – During the Atlantic Fleet Review, the saluting guns were fired by crews from HMCS Halifax and local _____ _____.

6. 14:40 – Nearly _____ Canadian and allied ships attended the Fleet Review in Halifax.

7. 20:50 – The Royal Canadian Navy presented a sovereign sword to Her Majesty The Queen. The sword will remain in _____ to be carried by the officer in charge of the colour guard when ever The Queen's colour is paraded.

Operation Apollo
Questions

Run Time: 45 min

Outline: In this documentary, we hear directly from soldiers serving in the Royal 22e Régiment. Members of the regiment were filmed in the field in March 2011, during their deployment to Afghanistan. They speak with ease and a rare candour about themselves and their work, whether out on patrol or performing their duties at the base. The films images and interviews bring home the complexity of the issues on the ground and shed light on the little understood experiences of the men and women who served in Afghanistan.

Answer the following questions while watching the movie. Questions are drawn directly from the movie and include the time stamps where the answer can be found.

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   Kandahar Kabul Panjwai Helmand

2. 12:00 – The CAF often carried out tasks to provide _____ project security.

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   Infantry Medic

   Logistics Sailor

4. 28:00 – What is the motto that the Van Doos use to describe their approach in Afganistan?

   _____ _____ _____

5. 34:00 – What was Private Stephane Perreault's civilian occupation before enlisting in the CAF?

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The Boys of Kelvin High
The End of the Beginning
Answers - Part 1

Run Time: 57min 30 sec

Outline: A remarkable story of those who flew in mighty bombers night after night. Against great adversity, they pressed on in a relentless drive to defeat Hitler`s Nazi regime. *The End of the Beginning* follows the airmen through training, crewing up, the Battle of the Ruhr and the Dambusters Raid.

Answer the following questions while watching the movie. Questions are drawn directly from the movie and include the time stamps where the answer can be found.

1. 8:00 – A Lancaster Crew that "goes for the chop?" has been

   SHOT **DOWN**.

2. 14:00 – From the list below, select a few of the jobs that recruits may have been chosen for at Number 1 Air Training School in 1940:

   Pilot **Navigator** Mechanic Stewart

   Bomb Aimer **Wireless Operator** **Gunner**

3. 20:25 – Canadian's Accounted for **25** % of British Bomber Crews.

4. 29:10 – The head mechanic was otten called: **CHIEFIE**.

5. 33:35 – What is the traditional meal that flight crews eat before departing on a mission? **BACON** and **EGGS**.

6. 40:00 – Pathfinders bomber crews were:

   Promoted by one rank **Highly skilled in navigation**

   On their second tour **Wore a gold wing on the left pocket**

7. 49:45 – The Squadron in Bomber Command who raided German hydro-electric dams in May 1943 were called the **DAMBUSTERS**.

The Boys of Kelvin High
Press on Regardless
Answers - Part 2

Run Time: 57min 30 sec

Outline: A remarkable story of those who flew in mighty bombers night after night. Against great adversity, they pressed on in a relentless drive to defeat Hitler`s Nazi regime. *Press on Regardless* continues to explore the experiences and dangers faced by the air crews in raids such as Peenemunde and the Battle of Berlin.

Answer the following questions while watching the movie. Questions are drawn directly from the movie and include the time stamps where the answer can be found.

1. 08:50 – An accurate radar pulse system named "Oboe" was used primarily in the

   MOSQUITO aircraft.

2. 10:00 – Metal or aluminum foil strips dropped from an aircraft are called

   WINDOW.

3. 12:20 – Bomber crews were greatly concerned by German "flack" guns which

   could often reach as high as **10 000 – 11 000** feet in the air.

4. 17:00 – In March 1943, British Intelligence became aware of a secret German long

   range pilotless **BOMB OR ROCKET** called V1 and V2.

5. 27:55 – More than 50 % of those who flew with **BOMBER COMMAND** were killed, wounded or taken prisoner.

6. 28:05 – The average life expectancy of an aircraft crew was about **14** sorties.

War of Their Own
Answers - Part 1

Run Time: 60 min

Outline: The story showing how the Canadians in Sicily and Italy faced tremendous odds never before experienced by the Canadian Army and developed innovative techniques to fight in an inhospitable terrain against an experienced enemy force during almost two years of steady fighting.

Answer the following questions while watching the movie. Questions are drawn directly from the movie and include the time stamps where the answer can be found.

1. 06:00 – Why was the awarding of Cpl Huron Brant a medal significant?

First battle in Sicily	**Aboriginal Status**
German Background	Entrance into Rome

2. 16:00 – CAF Engineers' creativity was commended by international militaries for learning how to **DEFUSE** landmines.

3. 21:00 – Where did multiple trades and branches (army, navy, air force) of the CAF work together for a decisive victory?

Victoria	Maples
Bell Island	**Messina**

4. 24:00 – What famous battle tactic did Canadian Colonel Cy Neroutsos receive credit for, which replaced the British system of the 'Creeping Barrage'?

   JOCK COLUMN

5. 50:00 – Name the strategy created by Canadians, during the battle of Ortona, which protected CAF members from being exposed to danger on the streets?

   MOUSE HOLING

A War of Their Own
Answers - Part 2

Run Time: 60 min

Outline: A story paying tribute to the 1st and 5th Canadian Divisions and the 1st Canadian Armoured Brigade which formed the spearhead into the heart of Europe and held down 20 German divisions that otherwise would have been able to defend Northern Italy. The Canadians in Italy, in a questionable jest, were called the D-Day Dodgers.

Answer the following questions while watching the movie. Questions are drawn directly from the movie. Each question includes the time stamp where the answer can be found.

1. 04:00 – What was the name of the secret commando unit breaking across the mountainous Hitler Line toward Rome?

   First Special Service Force Airborne

   Joint Task Force 2 Canadian Special Operations Regiment

2. 13:00 – Circle the regiments which were involved in breaking the Gustav Line?

   Toronto 48th Highlanders **3 Rivers Regiment**

   Royal Canadian Regiment **Royal 22nd/ Van Doos**

3. 20:00 – The Canadian **NURSING** Sisters played an important role for women wishing to contribute to supporting the combat troops.

4. 30:00 – Troops fighting in the Italian campaign became known as D-Day dodgers. In which country did they not fight?

   FRANCE

5. 44:00 – Which CAF trooper, from the Seaforth Highlanders, earned the Victoria Cross during the battle of Savio for destroying 2 tanks and repelling the accompanying infantry?

   PRIVATE EARNEST "SMOKEY" SMITH

The Van Doos in Afghanistan
Answers

Run Time: 45 min

Outline: In this documentary, we hear directly from soldiers serving in the Royal 22e Règiment. Members of the regiment were filmed in the field in March 2011, during their deployment to Afghanistan. They speak with ease and a rare candour about themselves and their work, whether out on patrol or performing their duties at the base. The films images and interviews bring home the complexity of the issues on the ground and shed light on the little understood experiences of the men and women who served in Afghanistan.

Answer the following questions while watching the movie. Questions are drawn directly from the movie and include the time stamps where the answer can be found.

1. 01:00 – In which Afghan district did the Van Doos conduct their operations?

   Kandahar Kabul **Panjwai** Helmand

2. 12:00 – The CAF often carried out tasks to provide **CONSTRUCTION** project security.

3. 20:00 – What trade was the injured CAF member who delegated commands to carry out the required task?

   Infantry **Medic**

   Logistics Sailor

4. 28:00 – What is the motto that the Van Doos use to describe their approach in Afganistan?

   FIGHT **CONVINCE** **BUILD**

5. 34:00 – What was Private Stephane Perreault's civilian occupation before enlisting in the CAF?

   COMPUTER MACHINIST

The International Fleet Reviews of the Canadian Navy Centennial
Answers

Run Time: 22 min

Outline: In this documentary, the Royal Canadian Navy looked at their first century as a national institution, commemorating and celebrating 100 years of naval service, while committing themselves anew to the second century upon which they have just embarked.

Answer the following questions while watching the movie. Questions are drawn directly from the movie and include the time stamps where the answer can be found.

1. 3:45 – The 18 ships of the Pacific Fleet were reviewed by Her Excellency the

   GOVERNOR **GENERAL** of Canada, Michaëlle Jean.

2. 5:40 – HMCS **ALGONQUIN** carried the Governor General during the Pacific Fleet Review.

3. 8:50 – The review culminated with an Air Force display put on by 413 Squadron, who are commonly known as The **SNOWBIRDS**.

4. 10:40 – Her Majesty Queen Elizabeth II, of **CANADA** arrived during the afternoon of June the 29th.

5. 12:40 – During the Atlantic Fleet Review, the saluting guns were fired by crews from HMCS Halifax and local **SEA** **CADETS**.

6. 14:40 – Nearly **30** Canadian and allied ships attended the Fleet Review in Halifax.

7. 20:50 – The Royal Canadian Navy presented a sovereign sword to Her Majesty The Queen. The sword will remain in **CANADA** to be carried by the officer in charge of the colour guard when ever The Queen's colour is paraded.

Operation Apollo
Answers

Run Time: 30 min

Outline: Operation Apollo explains Canada's naval contribution to the international campaign against terrorism in the aftermath to the September 11, 2001 terrorist attacks in the U.S. This short documentary shows how the Canadian Navy mobilized, with one ship at first, growing to six ships and 1.500 navy personal at the height of the operation. While deployed, ships participated in force-protection operations, fleet-support operations, leadership interdiction operations, and maritime interdiction operations. Canadian Naval Boarding personnel hailed more than 10,000 ships and conducted more than 260 boardings - almost 60 percent of the entire coalition fleet's boardings.

Answer the following questions while watching the movie. Questions are drawn directly from the movie and include the time stamps where the answer can be found.

1. 1:20 – Vice-Admiral **RON BUCK**, the head of the Canadian Navy, issued orders to assemble a Canadian Task Group soon after the September 11, 2001 attacks.

2. 5:05 – Small wooden hull ships, called **DUOES**, are difficult to detect with radar and are thought be packed with explosives.

3. 10:35 – HMCS Algonquin captured two al-Qaeda terrorists who were traveling in the following type of boat:

   hutch **go fasts** destroyer

4. 17:42 – HMCS **IROQUOIS** had to return back to Halifax because its **HELICOPTER** was damaged.

5. 21:10 – There is no doubt in Commodore Girard's mind that the Straight of Hormuz was **SAFER** for the Canadian Fleet being there.

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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

CANADIAN ARMED FORCES (CAF) FAMILIARIZATION

SECTION 8

EO MX20.01H – PARTICIPATE IN CAF FAMILIARIZATION LEARNING STATIONS

Total Time: One session (3 periods) = 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

This IG supports EO MX20.01H (Participate in CAF Familiarization Learning Stations) located in A-CR-CCP-801/PG-001, *Royal Canadian Air Cadets Proficiency Level One Qualification Standard and Plan*, Chapter 4.

Select learning stations as per chart.

Topic		Learning Station	Self-Directed	Instructor Led	15 min	30 min	60 min
CAF History	Annex A	CAF History – Timeline		X		X	
	Annex B	CAF History – Canada Remembers		X		X	
	Annex C	CAF History – Reflection Activity		X	X		
	Annex D	Battle of the Atlantic – Battleship Game	X			X	
	Annex E	Battle of Vimy Ridge – Battletank Game	X			X	
	Annex F	Battle of Britain – Battleplane Game	X			X	
	Annex G	Battle of the Atlantic		X		X	
	Annex H	Battle of Vimy Ridge		X		X	
	Annex I	Battle of Britain		X		X	
	Annex J	British Commonwealth Air Training Plan		X		X	
Roles of the CAF	Annex K	Roles of the CAF		X		X	
	Annex L	Roles of the CAF – Defending Canada		X		X	
	Annex M	Roles of the CAF – Defending North America	X	X	X		
	Annex N	Roles of the CAF – Contributing to International Peace and Security	X	X	X		

Topic		Learning Station	Self-Directed	Instructor Led	15 min	30 min	60 min
Current CAF	Annex O	CAF Six Core Missions		X			X
	Annex P	Current CAF		X			X
	Annex Q	DART and DTAL	X	X		X	
CAF Careers	Annex R	CAF Careers	X	X	X		
	Annex S	Life in the Royal Canadian Navy, Royal Canadian Air Force or Canadian Army		X	X		
Contact a Deployed CAF Member	Annex T	Contact a Deployed CAF Member	X	X		X	

Plan and prepare activities as per Annexes A–T.

In addition to the suggested activities at Annexes A–T, activity leaders may choose to create their own interactive, challenging and fun activities.

Gather the required resources for the selected activities, as well as a stopwatch. Some learning stations require assistant instructors.

PRE-LESSON ASSIGNMENT

Nil.

INTRODUCTION

APPROACH

Learning stations were chosen for this lesson as they are a fun and interactive way to build on the cadets' knowledge of the CAF.

REVIEW

Nil.

OBJECTIVES

By the end of this session the cadets shall have gained a better understanding of the CAF through topics covered in the selected learning stations.

IMPORTANCE

It is important for cadets to participate in CAF familiarization learning stations to develop an understanding of the CAF and its history, role, and contributions within Canada and the international community. These learning stations also tie directly to the aim of the Cadet Program to stimulate the interest of youth in the sea, land and air activities of the CAF.

ACTIVITY

1. Divide the cadets into groups.
2. Arrange a system of rotation for groups to move through the stations. Explain the procedure for moving from one station to the next, the time allotted for each station and the signal to switch.

3. Assign each group to their first learning station.

4. Supervise and provide guidance where necessary.

CONCLUSION

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

The learning stations develop an understanding of the CAF, its history, role, and contributions within Canada and the international community. By participating in these learning stations, you have become more aware of the sea, land and air activities of the CAF.

INSTRUCTOR NOTES / REMARKS

There are a number of resources available to make learning about the CAF interesting and interactive. Some of these include:

- Over The Top - an interactive adventure game that allows participants to experience life in the trenches during the First World War.
  http://www.warmuseum.ca/cwm/games/overtop/index_e.shtml
- Armoured Warrior - an interactive game that is based on the experiences of the First Canadian Army in combat in the Second World War.
  http://www.civilization.ca/cwm/games/armwar/history.shtml
- Canadian Military History Gateway - an online service providing access to websites and digitized resources about Canada's military history.
  http://www.cmhg.gc.ca/flash/index-eng.asp?t=1
- Juno Beach Centre, Teacher Resources - a list of resources available from a variety of sources including activities, videos, audios, websites etc.
  http://www.junobeach.org/centre/english/education/plans.html
- Canadian Armed Forces Imagery Gallery and the Canadian Forces Combat Camera - Combat camera is a direct link from the front line to the front page and the image gallery has photos from operations since 1990.
  http://www.combatcamera.forces.gc.ca/site/combat-camera-eng.asp

There are numerous potential leadership opportunities for cadets when conducting these learning stations:

- Phase Five / Master Cadet / Proficiency Level Five cadets may plan, prepare and conduct the learning stations activity as a leadership project IAW PO 503 (Lead Cadet Activities); and
- Phase Three / Silver Star / Proficiency Level Three, Phase Four / Gold Star / Proficiency Level Four, and Phase Five / Master Cadet / Proficiency Levels Five cadets may complete leadership assignments IAW POs 303 (Perform the Role of a Team Leader), 403 (Act as a Team Leader), and 503 (Lead Cadet Activities), such as leading a CAF familiarization learning station.

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CANADIAN ARMED FORCES (CAF) HISTORY

OBJECTIVE: This activity is designed to familiarize the cadets with aspects of the history of the CAF.

TIME: 30 min

TRAINING LEVEL: 1–2

PRE-ACTIVITY INSTRUCTIONS:

1. Assign an instructor to this activity.
2. Photocopy the Second Boer War, World War I, World War II and the Korean War sheets located at Appendix 2 and Statements for the History of the CAF Timeline located at Appendix 3.
3. Cut out the statements.
4. Gather the required resources:
   (a) Whiteboard or flipchart,
   (b) Markers, and
   (c) Sticky tack or tape.
5. Draw the timeline as shown at Appendix 1 on a whiteboard or flipchart.

ACTIVITY INSTRUCTIONS:

1. Have the cadets list what they know about CAF history on a whiteboard or flipchart. Prepare questions that may help stimulate the cadets' thinking (eg, In what wars has Canada participated? How many World Wars have there been?).
2. Have the cadets place the Second Boer War, World War I, World War II and Korean War sheets on the correct dates on the timeline. The answer key is located at Appendix 4.
3. Give a statement to each cadet.
4. Have the cadets place their statement with the correct event and element. The answer key is located at Appendix 5.
5. Have each cadet indicate one fact they learned about the history of the CAF.

For more information about the Second Boer War, World War I, World War II and the Korean War, visit the Veterans Affairs website : http://www.veterans.gc.ca/eng/ > YOUTH & EDUCATORS > CANADIAN MILITARY HISTORY.

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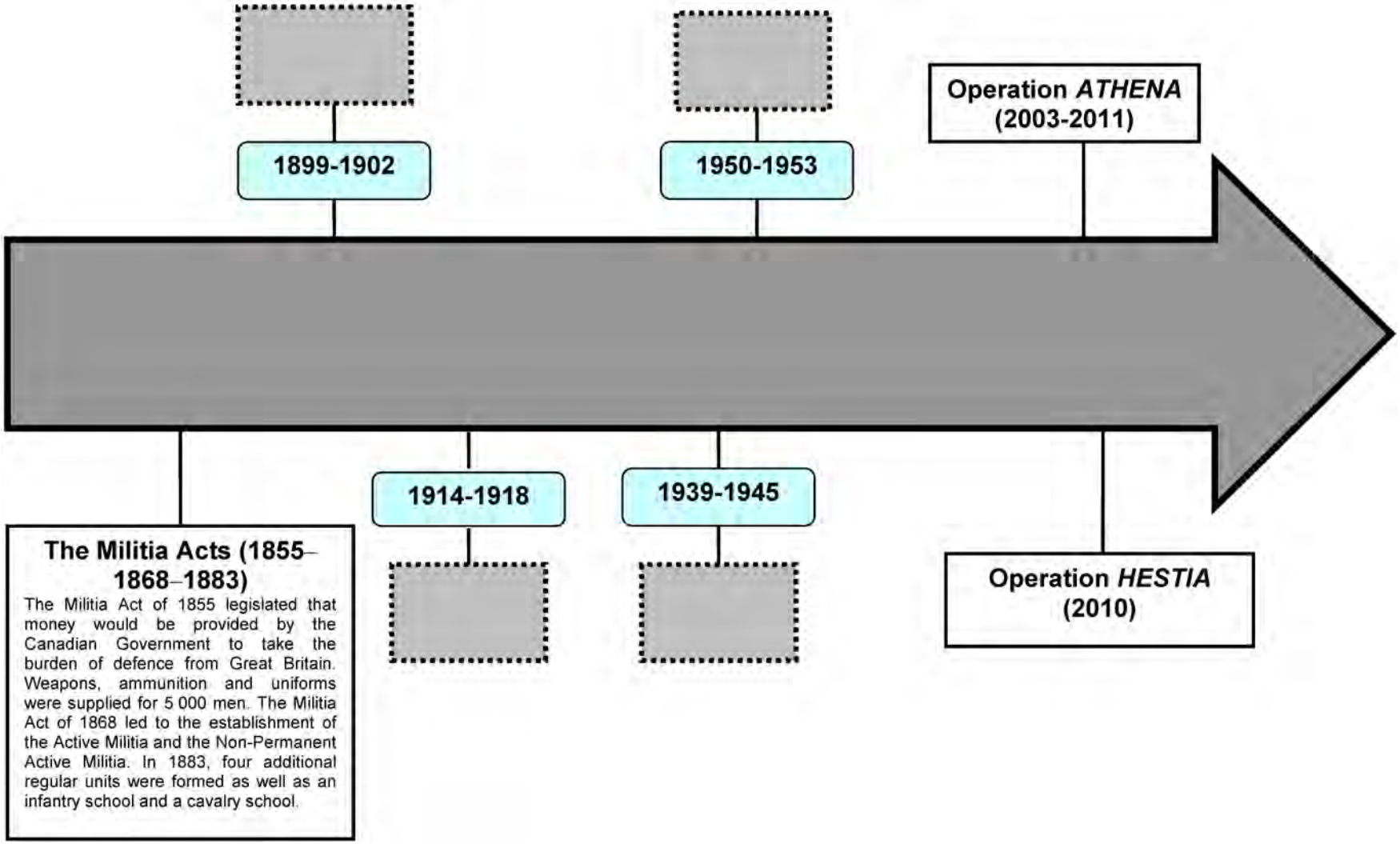
HISTORY OF THE CAF TIMELINE



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Second Boer War

Canada's first overseas participation in a war. Of the 7 500 Canadians who served, 242 died. There were more casualities due to disease than military action. The Royal Canadian Regiment (RCR) received its first battle honour at Paarderburg, South Africa.

World War I

During World War I, the Federal Government decided to conscript young men. Of the 600 000 men who enlisted in World War I, 60 000 died and 172 000 were wounded.

World War II

The Dutch Royal family sought refuge in Canada while the Netherlands was occupied by Germany. Princess Juliana of the Netherlands, the heir to the throne, gave birth to her third child, Princess Margriet at the Ottawa Civic Hospital. To ensure Dutch citizenship, the Canadian Parliament passed a special law declaring the hospital room 'extraterritorial'. The day after the new princess was born, the Dutch flag was flown on the Peace Tower, the only time a foreign flag has ever flown atop Canada's Parliament Buildings.

The First Canadian Army was responsible for liberating much of the Netherlands from German occupation. To thank Canadians, the people of the Netherlands sent 100 000 hand-picked tulip bulbs to Canada, which were planted on Parliament Hill and along Queen Elizabeth Drive. The year after, Princess Juliana sent a gift of 20 000 tulip bulbs. Every year, Ottawa receives 10 000 tulip bulbs from the Dutch Royal family and plants them as a symbol of peace, freedom and international friendship.

Korean War

During the Korean War, Canada's contribution was larger than most United Nations (UN) countries, in proportion to its population. More than 22 000 Canadians served of which 300 died and 1 200 were wounded.

STATEMENTS FOR THE HISTORY OF THE CAF TIMELINE

At this time, the Royal Canadian Navy (RCN) was not yet established.
At this time, the Royal Canadian Air Force (RCAF) was not yet established.
Responding to an imperial plea, Prime Minister Wilfrid Laurier sent a Canadian contingent of about 1 000 Royal Canadian Regiment (RCR) soldiers overseas.
The Royal Canadian Navy played a minor role in the fighting at sea and was ineffective against the German threat, especially when U-boat activity started.
At the beginning of this war, Canada had neither pilots nor aircraft. At the end of this war, over 800 decorations were awarded to Canadian airmen. Three airmen, Major WA Bishop, Major R Collishaw and Major WG Baker, received the Victoria Cross (VC).
The Germans introduced and widely used poison gas during this war.
The Battle of the Atlantic happened during this war. This battle is commemorated every year on the first Sunday in May.
During this war, crews painted art on the noses of planes. It was a source of pride, inspiration, esprit de corps and good luck for the crew. At the time, Air Cadets received preliminary instruction and many of them served with distinction in operational squadrons.
Canadian soldiers participated in the Dieppe Raid. Over 900 Canadians were killed and almost 2 000 were captured. Canada was the only army to achieve its objective on D-Day during this war.
During this conflict, the Royal Canadian Navy was the first branch of the Canadian Armed Forces to provide aid.
During this combat, pilots officially destroyed at least nine hostile aircraft and damaged eight. They also destroyed several locomotives, railroad cars, and trucks.
During this conflict the 2nd Battalion of the Princess Patricia's Canadian Light Infantry (PPCLI) was awarded the United States Presidential Unit Citation and the Republic of Korea Presidential Unit Citation for their defence of the Kapyong Valley.

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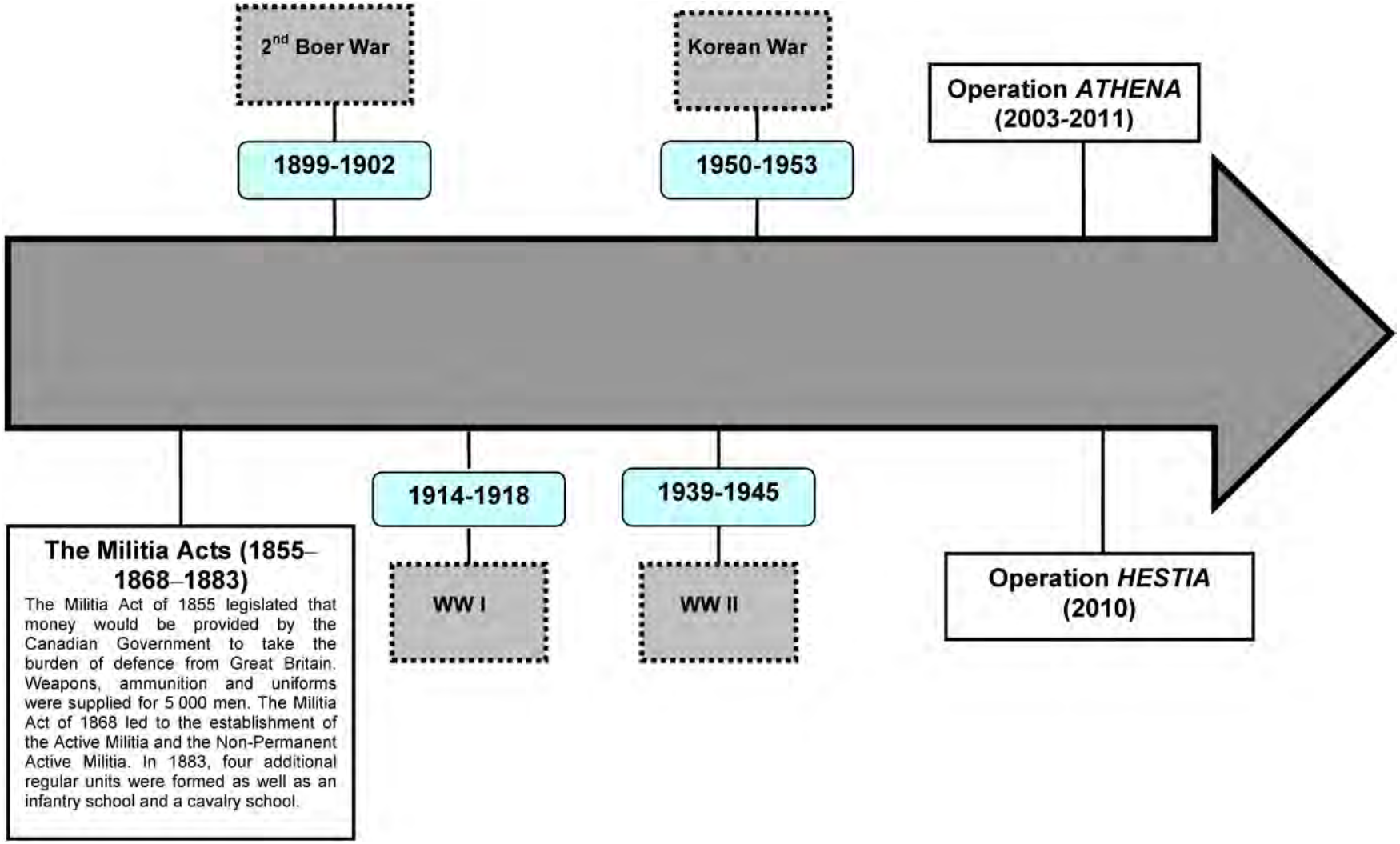
HISTORY OF THE CAF TIMELINE – ANSWER KEY



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STATEMENTS FOR THE HISTORY OF THE CANADIAN FORCES TIMELINE – ANSWER KEY

At this time, the Royal Canadian Navy (RCN) was not yet established.	2nd Boer War Navy
At this time, the Royal Canadian Air Force (RCAF) was not yet established.	2nd Boer War Air
Responding to an imperial plea, Prime Minister Wilfrid Laurier sent a Canadian contingent of about 1 000 Royal Canadian Regiment (RCR) soldiers overseas.	2nd Boer War Army
The Royal Canadian Navy played a minor role in the fighting at sea and was ineffective against the German threat, especially when U-boat activity started.	WW I Navy
At the beginning of this war, Canada had neither pilots nor aircraft. At the end of this war, over 800 decorations were awarded to Canadian airmen. Three airmen, Major WA Bishop, Major R Collishaw and Major WG Baker, received the Victoria Cross (VC).	WW I Air
The Germans introduced and widely used poison gas during this war.	WW I Army
The Battle of the Atlantic happened during this war. This battle is commemorated every year on the first Sunday in May.	WW II Navy
During this war, crews painted art on the noses of planes. It was a source of pride, inspiration, esprit de corps and good luck for the crew. At the time, Air Cadets received preliminary instruction and many of them served with distinction in operational squadrons.	WW II Air
Canadian soldiers participated in the Dieppe Raid. Over 900 Canadians were killed and almost 2 000 were captured. Canada had the only army to achieve its objective on D-Day during this war.	WW II Army
During this conflict, the RCN was the first branch of the CAF to provide aid.	Korean War Navy
During this war, pilots destroyed nine hostile aircraft, and damaged eight. They also destroyed several locomotives, railroad cars, and trucks.	Korean War Air
During this conflict the 2nd Battalion of the Princess Patricia's Canadian Light Infantry (PPCLI) was awarded the United States Presidential Unit Citation and the Republic of Korea Presidential Unit Citation for their defence of the Kapyong Valley.	Korean War Army

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CANADIAN ARMED FORCES (CAF) HISTORY

OBJECTIVE: This activity is designed to familiarize the cadets with aspects of the history of the CAF.

TIME: 30 min

TRAINING LEVEL: 1–4

PRE-ACTIVITY INSTRUCTIONS:

1. Assign an instructor to this activity.
2. Print the *Canada Remembers Times* (2011) at http://www.veterans.gc.ca > ENGLISH > YOUTH & EDUCATORS > CANADA REMEMBERS TIMES NEWSPAPER > PAST EDITION > 2011 > PDF VERSION (http://www.veterans.gc.ca/public/pages/activities/youthcorner/crtimes/pdf/crtimes_2011.pdf) for each cadet.
3. Photocopy the Questions handout located at Appendix 1 and Key Word Sheet located at Appendix 2 for each cadet.
4. Gather the required resources:
   (a) Pens / pencils,
   (b) Highlighters, and
   (c) Whiteboard or flipchart.

Another version of the *Canada Remembers Times* may be selected. Create a key word sheet and questions.

ACTIVITY INSTRUCTIONS:

1. Have the cadets list what they know about CAF History, honours, awards and major engagements / operations. Prepare questions that may help stimulate the cadets' thinking (eg, In what wars has Canada participated? How many World Wars have there been? In what North Atlantic Treaty Organization (NATO) or United Nations (UN) peacekeeping operations has Canada been involved?).
2. Provide each cadet with the *Canada Remembers Times* (2011), the Questions handout, the Key Word Sheet, pen and highlighter.
3. Have the cadets read the *Canada Remembers Times* (2011) and write the answers to the questions on the Key Word Sheet. The Key Word Sheet—Answer Key is located at Appendix 3.

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CANADA REMEMBERS TIMES (2011)

QUESTIONS

1. Which decoration did Lorne Green receive?
2. Who started as an Air Cadet and became the first woman to be part of the famous Snowbirds Precision Flying Team?
3. What is celebrated every year on July 1st?
4. What was the name of the Canadian hospital ship that was torpedoed off the coast of Ireland by a German submarine?
5. Which terrorist group hijacked four American airliners, attacking the World Trade Center and the Pentagon on September 11, 2001?
6. What was the nickname for Hill 355?
7. Who was the journalist that was killed by a roadside bomb south of Kandahar City in 2009?
8. Who died in 1950 and was posthumously awarded the Canadian Forces Medallion for Distinguished Service in 2010?
9. During World War II, Canadian reduced their consumption of food and goods. Meat, eggs, sugar, chocolate and _____ were a luxury.
10. Which was one of the bloodiest chapters of World War I?
11. Which building was dedicated to Canadians who died during World War I?
12. Where was ‘Agent 50’ born?
13. Who became the first widower to receive the Memorial Cross?
14. Who was known as ‘Ronnie the Bren Gun Girl’ during World War II?
15. During the Korean War, where did Léo Major lead a platoon that successfully repelled a massive enemy attack?
16. What kind of clearance were CAF members doing in Cambodia?
17. What did René Levesque do for the U.S. Army during World War II?
18. What were German submarines called during World War II?
19. Who was the first Canadian to be awarded the Royal Red Cross Medal?
20. In which war did Canadians serve between 1899 and 1902?
21. The Memorial Cup is awarded each year in which sport?

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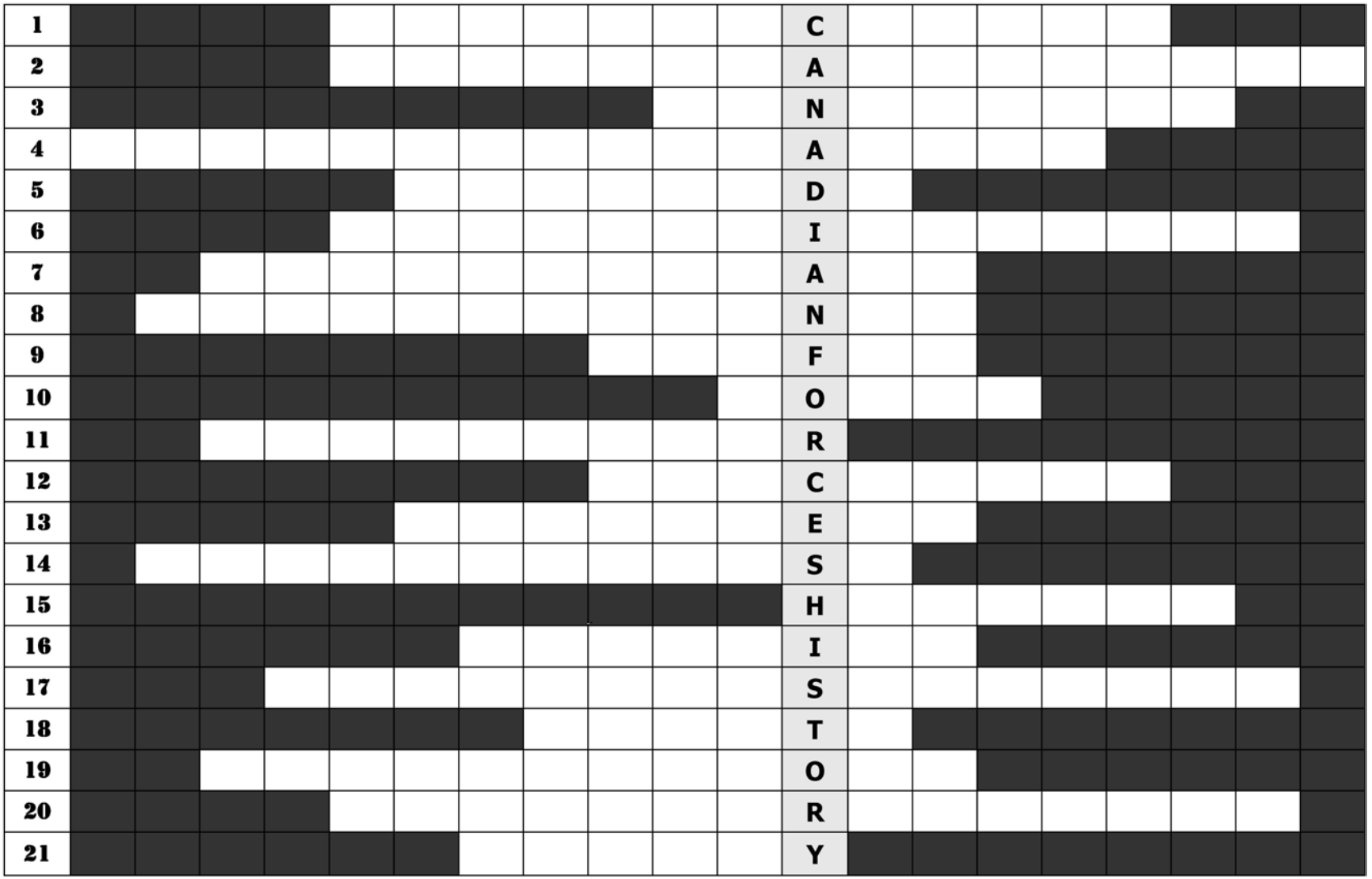
KEY WORD SHEET



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KEY WORD SHEET – ANSWER KEY

1					O	r	d	e	r	o	f	**C**	a	n	a	d	a			
2					M	a	r	y	s	e	C	**A**	r	m	i	c	h	a	e	l
3										C	a	**N**	a	d	a	D	a	y		
4	L	l	a	n	d	o	v	e	r	y	C	**A**	s	t	l	e				
5						a	l	-	Q	a	e	**D**	a							
6					L	i	t	t	l	e	G	**I**	b	r	a	l	t	a	r	
7			M	i	c	h	e	l	l	e	L	**A**	n	g						
8		J	e	r	e	m	i	a	h	J	o	**N**	e	s						
9									C	o	f	**F**	e	e						
10											S	**O**	m	m	e					
11			P	e	a	c	e	T	o	w	e	**R**								
12									V	a	n	**C**	o	u	v	e	r			
13						J	a	s	o	n	B	**E**	a	n						
14		V	e	r	o	n	i	c	a	F	o	**S**	t							
15												**H**	i	l	l	3	5	5		
16							L	a	n	d	m	**I**	n	e						
17				W	a	r	c	o	r	r	e	**S**	p	o	n	d	e	n	t	
18								U	b	o	a	**T**	s							
19			G	e	o	r	g	i	n	a	P	**O**	p	e						
20					S	o	u	t	h	A	f	**R**	i	c	a	n	W	a	r	
21							H	o	c	k	e	**Y**								

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CANADIAN ARMED FORCES (CAF) HISTORY

OBJECTIVE: This activity is designed to familiarize the cadets with aspects of the history of the CAF.

TIME: 15 min

LEVEL: 1–2

PRE-ACTIVITY INSTRUCTIONS:

1. Assign an instructor to this learning station.
2. Gather the required resources:
   (a) copies of the images located at Appendices 1–3,
   (b) paper, and
   (c) pens / pencils.

Images other than those provided may be used.

ACTIVITY INSTRUCTIONS:

1. Distribute the World War One image located at Appendix 1 to the cadets.
2. Have the cadets look at the image and reflect on it in silence for approximately 30 seconds.
3. Have the cadets respond to two or more of the following questions in writing individually:
   (a) What are your initial thoughts about this image?
   (b) What mood does this image convey?
   (c) What do you know about this war?
   (d) What does this image tell you about this war?
   (e) Imagine you are the photographer—what else is going on around you?
4. Have the cadets share their responses to the questions with a partner.
5. Repeat Steps 1–4 for the images at Appendices 2 and 3.

For more information about the Second Boer War, World War I, World War II and the Korean War, visit the Veterans Affairs website: http://www.veterans.gc.ca/eng/ > YOUTH & EDUCATORS > CANADIAN MILITARY HISTORY.

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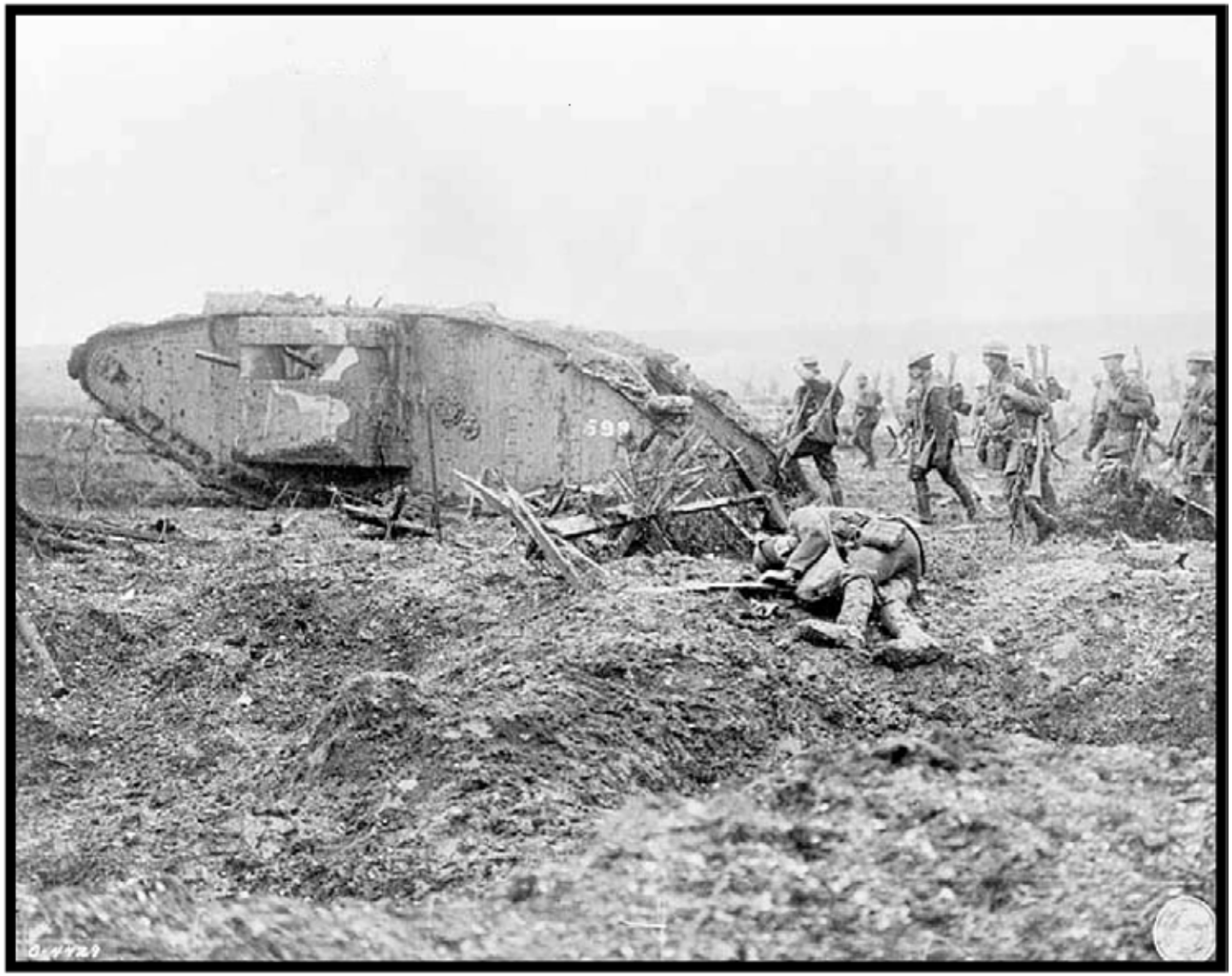
Canadian Army advancing behind a British tank during the Battle of Vimy Ridge in 1917. The battle took place in France during World War I.



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Buffalo amphibious vehicles taking Canadians across the Scheldt in Zeeland, Belgium during World War II.

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Canadians waiting for orders to move against the communist forces during the Korean War in 1951.

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BATTLE OF THE ATLANTIC

OBJECTIVE: The aim of this learning station is to familiarize the cadets with the Battle of the Atlantic.

TIME: 30 min

TRAINING LEVEL: 1–2

PRE-ACTIVITY INSTRUCTIONS:

1. This activity may be assigned an instructor or be self-directed by the cadets.
2. Photocopy the Battleship Board Game, located at Appendix 1, for each cadet.
3. Post the Battleship Rules, located at Appendix 2, at each station.
4. Photocopy Battleship Questions A, located at Appendix 3, for half the group and Battleship Questions B, located at Appendix 4, for the other half of the group.
5. Photocopy the Battle of the Atlantic handout, located at Appendix 5, for each cadet.
6. Gather the required resources:
   (a) Pencils / Pens, and
   (b) Highlighters.

ACTIVITY INSTRUCTIONS:

1. Divide the cadets into pairs.
2. Distribute the Battle of the Atlantic handout to each cadet.
3. Distribute the Battleship Questions A to one cadet and the Battleship Questions B to the other cadet.
4. Have the cadets read the Battleship Rules and play.

For more information about the Battle of the Atlantic, visit the Veterans Affairs website : http://www.veterans.gc.ca/eng/ > YOUTH & EDUCATORS > CANADIAN MILITARY HISTORY > SECOND WORLD WAR > THE BATTLE OF THE ATLANTIC.

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BATTLESHIP BOARD GAME

Battle of the Atlantic

	ENEMY ATTACKS												YOUR ATTACKS										
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Battleship Rules

1 Review the Battle of the Atlantic handout to make sure you are able to answer the questions.

2 You need two grids to play: Enemy Attacks and Your Attacks. On the Enemy Attacks grid, arrange your boats and record the enemy shots. On the Your Attacks grid, record your own shots.

3 Before the game starts, arrange your ships on the Enemy Attacks grid with a highlighter. Make sure each ship occupies the specified number of squares on the grid, as per the table below. They can be arranged horizontally or vertically, and only one ship can occupy a given square.

Type of ship	Size
Aircraft carrier	5 squares
Battleship	4 squares
Submarine	3 squares
Destroyer	3 squares
Patrol boat	2 squares

4 Once the ships have been positioned, the game can begin! For each turn, announce which square you are attacking and mark it on the Your Attack grid with a pen or a pencil. The squares are identified by a letter and a number. For example: ‘I attack D3!’

5 Your partner announces whether or not the square is occupied by a ship and marks it on the Enemy Attacks grid.

6 Your partner picks a square and you tell them whether or not the square is occupied by a ship and mark it on the Enemy Attacks grid.

7 When all the squares for a ship have been filled, the cadet whose ship has been ‘hit’ will ask the other player the question associated with the specific ship. If correct, the cadet is awarded the ‘hit’. The game continues until all the squares for the ships have been filled.

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Battleship Questions A

Type of ship	Questions & Answers
Aircraft carrier (5 squares)	**How many vessels did the Royal Canadian Navy (RCN) begin the war with?** 13 vessels
Battleship (4 squares)	**How many seconds did it take for a U-boat to dive?** 30 seconds
Submarine (3 squares)	**How many members of the RCN died during the Battle of the Atlantic?** Approximately 2 000
Destroyer (3 squares)	**In the month of June 1941, how many tons of Allied cargo was lost to U-boats?** Over 500 000 tons
Patrol boat (2 squares)	**During which war did the Battle of the Atlantic take place?** World War II

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Battleship Questions B

Type of ship	Questions & Answers
Aircraft carrier (5 squares)	**At the end of the war, how many fighting ships did the Royal Canadian Navy (RCN) have?** 373 fighting ships
Battleship (4 squares)	**How many months were U-boats capable of remaining away from port?** Three months at least
Submarine (3 squares)	**How many vessels of the RCN were sunk during the Battle of the Atlantic?** 24 vessels
Destroyer (3 squares)	**How many U-boats did Canadian aircraft and ships sink?** 50 U-boats
Patrol boat (2 squares)	**How long did the Battle of the Atlantic last?** More than 6 years

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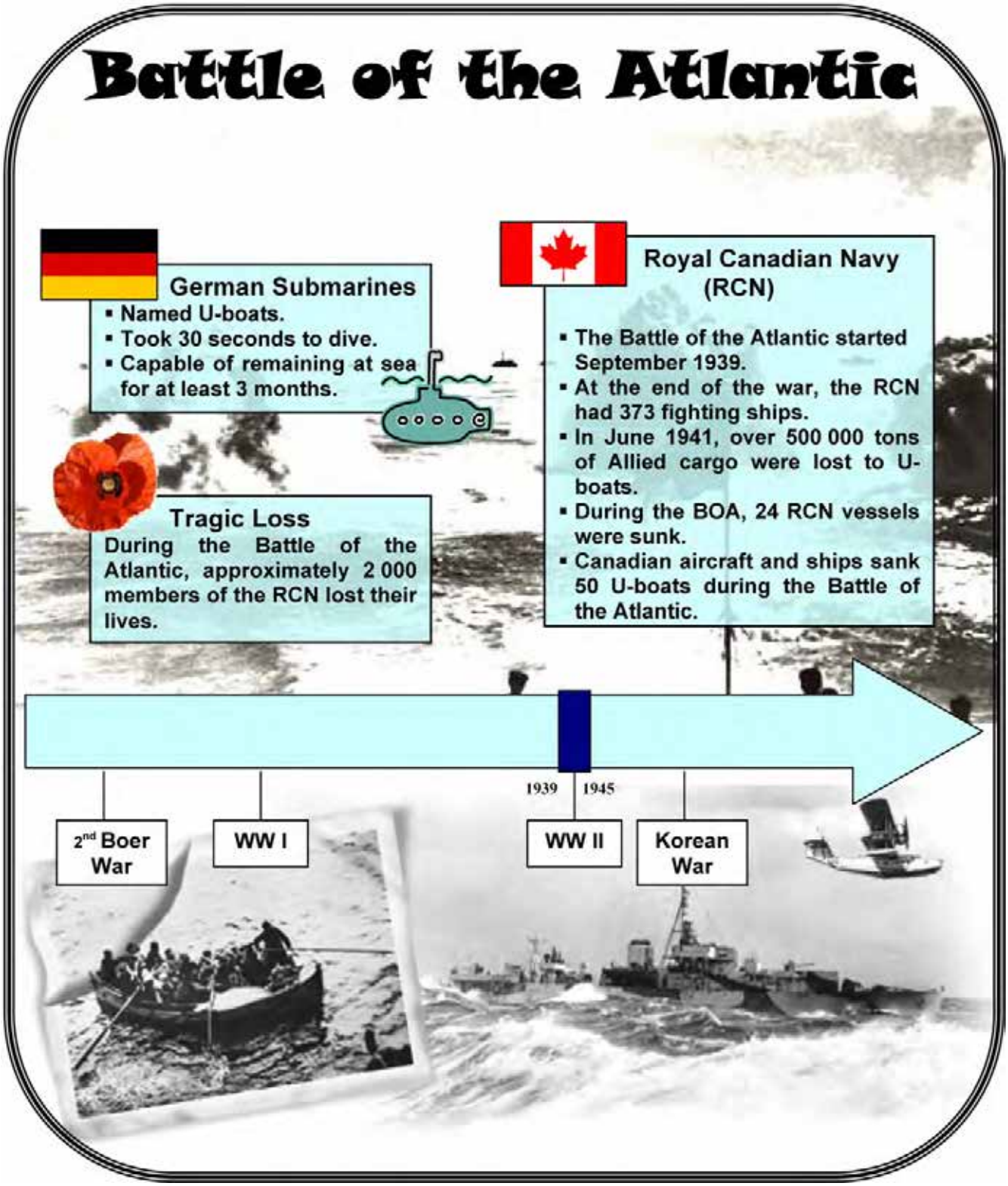
Battle of the Atlantic
German Submarines
▪ Named U-boats.
▪ Took 30 seconds to dive.
▪ Capable of remaining at sea for at least 3 months.
Tragic Loss
During the Battle of the Atlantic, approximately 2 000 members of the RCN lost their lives.
Royal Canadian Navy (RCN)
▪ The Battle of the Atlantic started September 1939.
▪ At the end of the war, the RCN had 373 fighting ships.
▪ In June 1941, over 500 000 tons of Allied cargo were lost to U-boats.
▪ During the BOA, 24 RCN vessels were sunk.
▪ Canadian aircraft and ships sank 50 U-boats during the Battle of the Atlantic.
1939
1945
2nd Boer War
WW I
WW II
Korean War

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BATTLE OF VIMY RIDGE

OBJECTIVE: The aim of this learning station is to familiarize the cadets with the Battle of Vimy Ridge.

TIME: 30 min

TRAINING LEVEL: 1–2

PRE-ACTIVITY INSTRUCTIONS:

1. This activity may be assigned an instructor or be self-directed by the cadets.
2. Photocopy the Battletank Board Game, located at Appendix 1, for each cadet.
3. Post the Battletank Rules, located at Appendix 2, at each station.
4. Photocopy Battletank Questions A, located at Appendix 3, for half the group and Battletank Questions B, located at Appendix 4, for the other half of the group.
5. Photocopy the Battle of Vimy Ridge handout, located at Appendix 5, for each cadet.
6. Gather the required resources:
   (a) Pencils / Pens, and
   (b) Highlighters.

ACTIVITY INSTRUCTIONS:

1. Divide the cadets into pairs.
2. Distribute the Battle of Vimy Ridge handout to each cadet.
3. Distribute the Battletank Questions A to one cadet and the Battletank Questions B to the other cadet.
4. Have the cadets read the Battletank Rules and play.

For more information about the Battle of Vimy Ridge, visit the Veterans Affairs website: http://www.veterans.gc.ca/eng/ > YOUTH & EDUCATORS > CANDIAN MILITARY HISTORY > FIRST WORLD WAR > THE BATTLE OF VIMY RIDGE.

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BATTLETANK BOARD GAME

Battle of Vimy Ridge

	ENEMY ATTACKS										
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	YOUR ATTACKS										
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	A	B	C	D	E	F	G	H	I	J	K

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Battletank Rules

1 Review the poster to make sure you are able to answer the questions.

2 You need two grids to play: Enemy Attacks and Your Attacks. On the Enemy Attacks grid, arrange your vehicles and record the enemy shots. On the Your Attacks grid, record your own shots.

3 Before the game starts, arrange your vehicles on the Enemy Attacks grid with a highlighter. Make sure each vehicle occupies the specified number of squares on the grid, as per the table below. They can be arranged horizontally or vertically, and only one vehicle can occupy a given square.

Type of vehicle	Size
Tank	5 squares
Light Armoured Vehicle (LAV)	4 squares
Heavy Logistic Vehicle Weight (HLVW)	3 squares
Medium Logistic Vehicle Weight (MLVW)	3 squares
G Wagen	2 squares

4 Once the vehicles have been positioned, the game can begin! For each turn, announce which square you are attacking and mark it on the Your Attacks grid with a pen or a pencil. The squares are identified by a letter and a number. For example: ‘I attack D3!’

5 Your partner announces whether or not the square is occupied by a vehicle and marks it on the Enemy Attacks grid.

6 Your partner picks a square and you tell them whether or not the square is occupied by a vehicle and mark it on the Enemy Attacks grid.

7 When all the squares for a vehicle have been filled, the cadet whose vehicle has been ‘hit’ will ask the other player the question associated with the specific vehicle. If correct, the cadet is awarded the ‘hit’. The game continues until all the squares for the vehicles have been filled.

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Battletank Questions A

Type of vehicle	Questions & Answers
Tank (5 squares)	**After the Battle of Vimy Ridge, what treaty did Canada sign to mark the end of the war?** Treaty of Versailles
LAV (4 squares)	**How long did the Battle of Vimy Ridge last?** 3 days
HLVW (3 squares)	**How many Canadians lost their lives during the Battle of Vimy Ridge?** 3 600 Canadians
MLVW (3 squares)	**Who had tried and failed to take Vimy in 1915?** The French
G Wagen (2 squares)	**During which war did the Battle of Vimy Ridge take place?** World War I

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Battletank Questions B

Type of vehicle	Questions & Answers
Tank (5 squares)	**What is the name of the Memorial that sits on top of Hill 145?** The Canadian National Vimy Memorial
LAV (4 squares)	**How long did it take for the allies to prepare for the Battle of Vimy Ridge?** All winter
HLBW (3 squares)	**How many Canadians fought during the Battle of Vimy Ridge?** 100 000 Canadians
MLVW (3 squares)	**Vimy Ridge was one of the most important elements of the defence system of which country?** Germany
G Wagen (2 squares)	**In which country is Vimy Ridge located?** France

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Battle of Vimy Ridge

German Defence

Vimy Ridge was very important to the German defence system.

Canadian Army

- 100 000 Canadians fought during the Battle of Vimy Ridge.
- The battle lasted 3 days but it took all winter to prepare.
- Canada signed the Treaty of Versailles in 1918 to mark the end of the war.

Tragic loss

During the Battle of Vimy Ridge, approximately 3 600 members of the Canadian Army lost their lives.

French Army

In 1915, the French tried and failed to take Vimy Ridge.

1914 1918

2nd Boer War | WW I | WW II | Korean War

Map of Vimy Ridge

The Canadian National Vimy Memorial

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BATTLE OF BRITAIN

OBJECTIVE: The aim of this learning station is to familiarize the cadets with the Battle of Britain.

TIME: 30 min

TRAINING LEVEL: 1–2

PRE-ACTIVITY INSTRUCTIONS:

1. This activity may be assigned an instructor or be self-directed by the cadets.
2. Photocopy the Battleplane Board Game, located at Appendix 1, for each cadet.
3. Post the Battleplane Rules, located at Appendix 2, at each learning station.
4. Photocopy Battleplane Questions A, located at Appendix 3, for half the group and Battleplane Questions B, located at Appendix 4, for the other half of the group.
5. Photocopy the Battle of Britain handout, located at Appendix 5, for each cadet.
6. Gather the required resources:
   (a) Pencil / Pen, and
   (b) Highlighter.

ACTIVITY INSTRUCTIONS:

1. Divide the cadets into pairs.
2. Distribute the Battle of Britain handout to each cadet.
3. Distribute the Battleplane Questions A to one cadet and the Battletank Questions B to the other cadet.
4. Have the cadets read the Battleplane Rules and play.

For more information about the Battle of Britain, visit the Veterans Affairs website : http://www.veterans.gc.ca/eng/ > YOUTH & EDUCATORS > CANADIAN MILITARY HISTORY > SECOND WORLD WAR > CANADA AND THE SECOND WORLD WAR > THE BATTLE OF BRITAIN.

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BATTLEPLANE BOARD GAME

Battle of Britain

	ENEMY ATTACKS												YOUR ATTACKS										
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	A	B	C	D	E	F	G	H	I	J	K		A	B	C	D	E	F	G	H	I	J	K

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Battleplane Rules

1 Review the poster to make sure you are able to answer the questions.

2 You need two grids to play: Enemy Attacks and Your Attacks. On the Enemy Attacks grid, arrange your planes and record the enemy shots. On the Your Attacks grid, record your own shots.

3 Before the game starts, arrange your planes on the Enemy Attacks grid with a highlighter. Make sure each plane occupies the specified number of squares on the grid, as per the table below. They can be arranged horizontally or vertically, and only one plane can occupy a given square.

Type of plane	Size
B17 Flying Fortress	5 squares
AVRO Lancaster	4 squares
Hawker Hurricane	3 squares
Mustang	3 squares
Spitfire	2 squares

4 Once the planes have been positioned, the game can begin! For each turn, announce which square you are attacking and mark it on the Your Attacks grid with a pen or a pencil. The squares are identified by a letter and a number. For example: ‘I attack D3!’

5 Your partner announces whether or not the square is occupied by a plane and marks it on the Enemy Attacks grid.

6 Your partner picks a square and you tell them whether or not the square is occupied by a plane and mark it on the Enemy Attacks grid.

7 When all the squares for a plane have been filled, the cadet whose plane has been ‘hit’ will ask the other player the question associated with the specific plane. If correct, the cadet is awarded the ‘hit’. Game continues until all the squares for the planes have been filled.

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Battleplane Questions A

Type of plane	Questions & Answers
B17 Flying Fortress (5 squares)	**What kind of tactic did the German's use to try to gain air superiority over the Royal Air Force (RAF)?** Blitzkrieg tactics
AVRO Lancaster (4 squares)	**At the beginning of the Battle of Britain, what was the German Air Force attacking?** They were attacking the radar stations and bombing the airfields
Hawker Hurricane (3 squares)	**Who won the Battle of Britain?** Allied Forces
Mustang (3 squares)	**Who was the battle between?** Allied Forces and Axis Powers
Spitfire (2 squares)	**During which war did the Battle of Britain take place?** World War II

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Battleplane Questions B

Type of plane	Questions & Answers
B17 Flying Fortress (5 squares)	**During the war that included the Battle of Britain, Canada agreed to provide facilities and training for airmen from the Commonwealth. What was the name of this deal?** The British Commonwealth Air Training Plan
AVRO Lancaster (4 squares)	**Toward the end of the Battle of Britain, what was the German Air Force attacking?** They were attacking major cities
Hawker Hurricane (3 squares)	**How many Canadian pilots lost their lives in this battle?** 23 Canadian pilots
Mustang (3 squares)	**What was the name of the German Air Force?** Luftwaffe
Spitfire (2 squares)	**Who wanted to invade Britain?** The Germans

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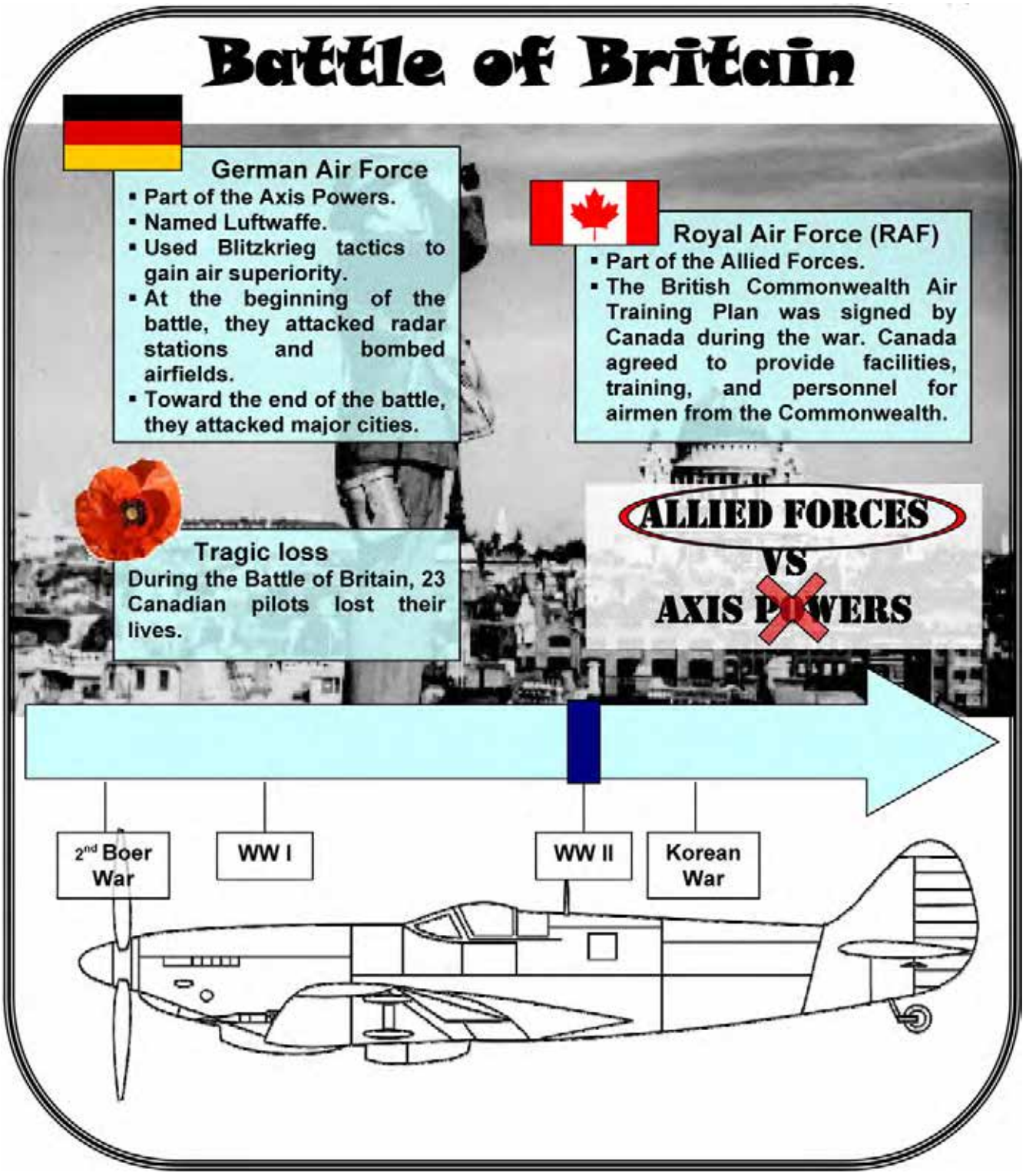
Battle of Britain
German Air Force
▪ Part of the Axis Powers.
▪ Named Luftwaffe.
▪ Used Blitzkrieg tactics to gain air superiority.
▪ At the beginning of the battle, they attacked radar stations and bombed airfields.
▪ Toward the end of the battle, they attacked major cities.
Royal Air Force (RAF)
▪ Part of the Allied Forces.
▪ The British Commonwealth Air Training Plan was signed by Canada during the war. Canada agreed to provide facilities, training, and personnel for airmen from the Commonwealth.
Tragic loss
During the Battle of Britain, 23 Canadian pilots lost their lives.
ALLIED FORCES
VS
AXIS POWERS
2nd Boer War
WW I
WW II
Korean War

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BATTLE OF THE ATLANTIC

OBJECTIVE: The aim of this learning station is to familiarize the cadets with the Battle of the Atlantic.

TIME: 30 min

TRAINING LEVEL: 3-4

PRE-ACTIVITY INSTRUCTIONS:

1. Assign an instructor to this activity.
2. Photocopy the Canada Remembers the Battle of the Atlantic handout, located at Appendix 1, for each cadet.
3. Gather the required resources: 2 noisemakers (eg, bell, bicycle horn, kazoo).

ACTIVITY INSTRUCTIONS:

This activity is designed to be presented in a “game show” format. If possible, have a small prize available to the winning team.

1. Divide the cadets into two teams.
2. Distribute and as a group read the Canada Remembers the Battle of the Atlantic handout.
3. Read a question to the teams and give them an opportunity to answer.
4. If the team answers correctly, award them 5 points. If the team answers incorrectly, give the other team the opportunity to answer the question.
5. Continue until all the questions have been answered or time runs out.

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CANADA REMEMBERS THE BATTLE OF THE ATLANTIC

Introduction

The Battle of the Atlantic was the longest continuous battle of the Second World War and one in which Canada played a central role. The battle began on the opening day of the war in September 1939 and ended almost six years later with Germany's surrender in May 1945.

The Battle of the Atlantic

The Battle of the Atlantic was the struggle between the Allied and German forces for control of the Atlantic Ocean. The Allies needed to keep the vital flow of men and supplies going between North America and Europe, where they could be used in the fighting, while the Germans wanted to cut these supply lines. To do this, German submarines, called U-boats, and other warships prowled the Atlantic Ocean sinking Allied transport ships.

The Battle of the Atlantic brought the war to Canada's doorstep, with U-boats torpedoing ships within sight of Canada's East Coast and even in the St. Lawrence River. Canada's Merchant Navy, along with the Royal Canadian Navy (RCN) and the Royal Canadian Air Force (RCAF), played a key role in the Allied efforts. East Coast cities soon found themselves involved in the battle, since Allied convoys (groups of ships that crossed the Atlantic together under the protection of naval escorts) were frequently leaving busy ports like Halifax and Sydney, Nova Scotia, and St. John's, Newfoundland, during the war.

Challenges and Successes

Early in the war, German U-boats took a heavy toll on merchant shipping as the Allies struggled to find effective ways to combat the enemy threat. Between 1939 and 1942, the Germans increased the number of U-boats from 30 to 300 and developed effective hunting techniques like using groups of submarines, called wolfpacks, to attack convoys. Their efforts initially paid off, with 454,000 tonnes of shipping being lost to German U-boats in June 1941 alone. Their successes continued as nearly 400 Allied ships were sunk between January and July 1942, while only seven U-boats were lost. The situation was very serious for the Allies, as merchant ships were being sunk faster than they could be replaced, thereby putting the supply link between North America and Europe at great risk.

Technology played an important role in the Battle of the Atlantic. Aircraft were effective in protecting merchant ships, but the Allied planes used earlier in the war did not have enough range to offer air cover for the convoys all the way across the Atlantic. Indeed, the central area of the ocean beyond aircraft range became known as the "Black Pit" as that was where many of the heaviest convoy losses occurred. However, the introduction of new long-range planes helped reduce the hazards of this dangerous portion of the run.

Both sides kept trying to get the upper hand in technology and tactics during the Battle of the Atlantic. Germany developed torpedoes that were attracted to the noise made by a ship's propellers. Allied scientists responded by inventing a noise-making device that was towed behind a ship to divert the torpedoes. New radar and sonar (ASDIC) technologies helped the Allies find the U-boats and new weapons, like the "Hedgehog" bombs, helped sink the submarines more effectively. The Germans also developed technological advancements like snorkel tubes that allowed U-boats to run their diesel engines while travelling underwater and on-board radar that increased their submarines' capabilities. Eventually, the improved equipment and tactics of the Allies finally

helped turn the tide of the battle in their favour, with the U-boat fleet suffering heavy losses during the later phases of the war.

The growth of Canada's navy was remarkable. At the beginning of the Second World War, the RCN had only six ocean-going ships and 3 500 personnel. By the end of the war, Canada had one of the largest navies in the world with 434 commissioned vessels and 95,000 men and women in uniform. Canada's industry also played an important role in the growth of our military and merchant navies. From 1941 to 1945, Canadian shipyards produced approximately 403 merchant ships, 281 fighting ships, 206 minesweepers, 254 tugs, and 3 302 landing craft.

Sacrifices

Helping the Allies triumph in the Battle of the Atlantic came at a high price. More than 1,600 Merchant Navy personnel from Canada and Newfoundland were killed. Indeed, percentage-wise, their casualty rate was higher than those of any of Canada's fighting services during the Second World War—one out of every seven Merchant Navy sailors who served was killed or wounded.

The RCN and RCAF also paid a high toll in the Battle of the Atlantic. Most of the 2,000 RCN officers and men who died during the war were killed during the Battle of the Atlantic, as were 752 members of the RCAF. There were also civilian casualties. On October 14, 1942, 136 people died when the ferry SS *Caribou* was sunk as it crossed from Nova Scotia to Newfoundland.

Legacy

Allied victory in the Second World War would not have been possible without victory at sea. It would require overcoming great odds, but the courage of the RCN, Merchant Navy and RCAF personnel helped keep the Allied convoys running and the supply lines to Europe open. These brave men and women were some of the more than one million Canadians who served in the cause of peace and freedom during the Second World War.

CANADA REMEMBERS THE BATTLE OF THE ATLANTIC QUESTIONS AND ANSWERS

1. True or False: The Battle of the Atlantic was the longest continuous battle of the Second World War.

   True.

2. True or False: The Battle of the Atlantic brought the war to Canada's doorstep; with U-boats torpedoing ships within sight of Canada's East Coast and even in the St. Lawrence River.

   True.

3. True or False**:** Between January and July 1942, more U-boats were sunk than merchant ships.

   False.

4. What did Germany develop that were attracted to the noise of a ship's propellers?

   Torpedoes.

5. How many members of the Royal Canadian Navy and the Royal Canadian Air Force died during the Battle of the Atlantic?

   2000 RCN and 750 RCAF.

6. In what month and year did the Battle of the Atlantic begin?

   September 1939

7. What were the German submarines referred to as?

   U-boats

8. Which three East Coast cities were busy Allied convoy ports during the Battle of the Atlantic?

   Halifax and Sydney (Nova Scotia) and St. John's (Newfoundland).

9. What was the zone in the central area of the Atlantic Ocean where many of the heaviest Allied convoy losses occurred known as?

   The Black Pit

10. On October 14, 1942, 136 people died when this passenger ship was sunk as it crossed from Nova Scotia to Newfoundland.

    SS Caribou

11. Why was control of the Atlantic Ocean so important during WWII?

    It was where the vital flow of men and supplies between America and Europe was happening.

12. Name the three Canadian organizations that played a key role for the Allies in bringing supplies to Europe.

    Canada's Merchant Navy,
    Royal Canadian Navy (RCN), and
    Royal Canadian Air Force (RCAF).

13. How many Merchant Navy personnel from Canada and Newfoundland died during the Battle of the Atlantic?

    More than 1,600.

BATTLE OF VIMY RIDGE

OBJECTIVE: The aim of this learning station is to familiarize the cadets with the Battle of Vimy Ridge.

TIME: 30 min

TRAINING LEVEL: 1-2

PRE-ACTIVITY INSTRUCTIONS:

- Assign an instructor to this activity.
- Photocopy the World War 1—The Battle of Vimy Ridge handout, located at Appendix 2, for each cadet.
- Gather the required resources: 2 noisemakers (eg, bell, bicycle horn, kazoo).

ACTIVITY INSTRUCTIONS:

This activity is designed to be presented in a “game show” format. If possible, have a small prize available to the winning team.

1. Divide the cadets into two teams.
2. Distribute and have the cadets read the World War 1—The Battle of Vimy Ridge handout.
3. Read a question to the teams and give them an opportunity to answer.
4. If the team answers correctly, read the additional information and award them 5 points. If the team answers incorrectly, give the other team the opportunity to answer the question.
5. Continue until all the questions have been answered or time runs out.

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WORLD WAR I – THE BATTLE OF VIMY RIDGE QUESTIONS AND ANSWERS

1. The Battle of Vimy Ridge took place during which war?
   World War I.

World War I started in July 1914 and ended 11 November 1918.

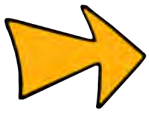
2. Vimy Ridge is located in which country?
   France.

World War I began when Germany invaded France and Belgium.

3. Who were the four divisions of the Canadian Corps attempting to capture Vimy Ridge from?
   German Sixth Army.

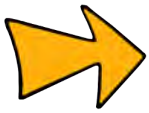
The German Sixth Army was responsible for defending the Vimy Ridge portion of the Western Front.

4. The Battle of Vimy Ridge was the first time the Canadian Expeditionary Force did this together:
   They fought as one force under a Canadian Commander.



Until this point in the war, Canadian divisions had been under British command. For Vimy Ridge all four Canadian Divisions were assembled as one group under Canadian command.

5. Who took command of the Canadian corps in May 1916?
   Sir Julian Byng.



Sir Julian Byng was, at this point in the war, a British Lieutenant-General who took command of the Canadian troops in the Vimy Ridge area in June 1916. After the war, in 1921, Byng was appointed as Governor-General of Canada. He and his wife, Lady Byng were also big hockey fans and in 1925 Lady Byng donated a trophy to be awarded for sportsmanship and gentlemanly conduct. The Lady Byng Memorial Trophy is still awarded yearly.

6. Why did Canadian Corps Officers interview French Officers and attend French Army lectures when planning the attack on Vimy Ridge?
   To learn what tactics worked, and which ones did not, in an effort to minimize casualties and help in the upcoming assault.

To help in developing a plan for the attack on Vimy Ridge, Canadian Corps Officers attended lectures given by the French Army on the Battle of Verdun. This was because the Battle of Verdun had been one of the few Allied successes in 1916. They also interviewed French officers and compared the discrepancies between the beliefs of the senior officers and the actual experiences of the junior officers in an attempt to get a genuine idea of what had happened.

7. What is the term used for an infantry tactic where one group provides suppressing fire on the enemy while the second group moves forward?
Leapfrogging.

The standard practice in World War I was for all the infantry to progress in a rough line toward the enemy positions. This created a situation where soldiers coming under enemy fire would falter and stop the advance. The plan of attack for Vimy Ridge called for the Canadian infantry to leap frog over one another behind a creeping barrage. This allowed the Canadians to maintain the momentum of the advance during the attack.

8. What is a “creeping barrage”?
A tactic in which artillery fire slowly moves forward to provide cover.

During the creeping barrage, the guns of the artillery fire at a line just ahead of the advancing infantry. The artillery slowly moves their fire forward to provide cover for the infantry. At Vimy the Canadians had been extensively trained in what became known as the “Vimy Glide” where the infantry moved at a 100 metre / 3 minute pace to stay directly behind the artillery. The creeping barrage was a tactic which had only been marginally successful up until Vimy Ridge. General Sir Arthur Currie, believing in the use of over-whelming artillery on a narrow front, helped to perfect the use of the creeping barrage.

9. A new tactic employed by Canadians at Vimy Ridge was to train every solider in exactly what do, where to go and what the objective was. Why was this tactic effective?
This tactic gave soldiers the knowledge to be able to take command of a platoon if the platoon leader was killed or wounded, and reach their objective even if separated from their leaders.

10. Why did the Canadians dig tunnels in preparation for the attack?
To plant mines and to move Canadian soldiers as close to the German lines as possible before the actual assault.

The Vimy sector had good soil for tunnelling and led to extensive underground warfare. Both sides engaged in the practice of tunnelling under the enemies trenches and exploding mines. In preparation for Vimy, the mining engineers dug 12 subways up to 1.2km long and laid specialized explosives at the end of them which, when exploded, would create trenches across no-mans-land which the infantry could use to safely reach the German lines.

11. Why did Canadians engage in trench raiding prior to the battle?
To harass the enemy and gather intelligence.

In the period leading up to the Battle of Vimy Ridge, the Canadian Corps engaged in the practice of trench raiding. Trench raiding was small scale attacks on enemy positions usually made at night.

12. On April 2nd, 1917 until the beginning of the offensive on April 9th every gun in the Canadian arsenal bombarded the German lines. Why did the Germans refer to this as the "week of suffering"?
The barrage almost completely destroyed the German trenches and defensive works and kept them at the ready for 18 days. They could not be resupplied.

Phase 1 of the artillery bombardment started on March 20th, 1917 with half of the 983 guns systematically targeting German strong points, trenches and batteries while paying specific attention to clearing barbed wire. The targets and intensity of the barrage was purposely varied to confuse the Germans. On April 2nd, 1917 the artillery shifted to Phase 2 which involved every gun in the Canadian arsenal almost constantly bombarding the enemy positions.

13. What had been achieved by nightfall of the second day of the battle?
The Canadian Corps had captured all but one objective known as the Pimple.

Having captured the three lines of German trenches by the end of the day on April 9th, 1917, the advance commenced the next day with reinforcements from the British. Supported by two sections of tanks and fresh British brigades, by nightfall the Canadian Divisions had captured the entire ridge except the Pimple, which was the highest point of the ridge and was heavily fortified.

14. In 1922, France granted Canada perpetual use of a portion of Vimy Ridge. What did Canada open on this site in 1936?
The Canadian National Vimy Memorial.

The memorial took 11 years to complete and cost $1.5 million dollars to build. It was unveiled by King Edward VIII and is Canada's largest overseas memorial.

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World War I – The Battle of Vimy Ridge

July 1914 – Germany invades France. Vimy Ridge captured in October.

Trench warfare ensues from 1914–1918.

May 1916 – Sir Julian Byng takes command of the Canadian Corps.

Vimy Ridge is an escarpment which is approximately 7 km long and rises 60 metres above the surrounding plains. The slope on the western (Canadian) side rises gradually and is steeper on the eastern side.

General Sir Arthur Currie, Commander, 1st Canadian Division.

In an attempt to break through the German lines, the British launched an offensive in April 1917 near the City of Arras. Vimy Ridge was on the northernmost part of the line and was held by the German Sixth Army.

To prepare for the battle, Canadian Corps Officers interviewed French officers to find out what tactics had worked or had not worked in the previous battles.

Leading up to the battle, Canadians engaged in "trench raiding" to harass the enemy and gather intelligence.

Scale reproduction of the trenches at Vimy Ridge.

The planning for the attack on Vimy Ridge was extensive and included:

- platoons leapfrogging behind a creeping barrage (artillery fire slowly moving forward to provide cover) to maintain the momentum of the advance;
- every soldier being trained in exactly what to do, where to go and what the objective was so they could take command of a platoon if the Platoon Leader was killed;
- using new counter-battery techniques such as flash-spotting and sound-ranging to locate enemy guns; and
- digging tunnels under German lines to plant mines and protect soldiers.

On April 2nd, 1917 until the beginning of the offensive on April 9th every gun in the Canadian arsenal bombarded the German lines. The Germans referred to this period as the "week of suffering" because their trenches and defensive works were almost completely destroyed, it kept them from being resupplied and they were kept at the ready through the whole period.

The battle started at 0530hrs on April 9th, 1917 and by 0730hrs three of four Canadian Divisions had reached their second objective.

Canadian troops following a tank at Vimy Ridge.

3598 Canadians were killed and 7004 wounded. Four Canadians were awarded the Victoria Cross.

By the end of April 9th, 1917 the Canadian Corps had captured three lines of German trenches. The advance continued the next day and by nightfall they had captured all but one objective known as the Pimple.

The site of the Canadian National Vimy Memorial was granted to Canada by France for perpetual use in 1922. The 100-hectare park is partially closed to the public because it is riddled with tunnels, trenches, craters and unexploded munitions.

THE BATTLE OF BRITAIN

OBJECTIVE: The aim of this learning station is to familiarize cadets with the Battle of Britain.

TIME: 30 min

TRAINING LEVEL: 3–4

PRE-ACTIVITY INSTRUCTIONS:

1. Assign an instructor to this activity.
2. Photocopy the Battle of Britain handout, located at Appendix 1, for each cadet.
3. Gather the required resources: 2 noisemakers (eg, bell, bicycle horn, kazoo).

ACTIVITY INSTRUCTIONS:

This activity is designed to be presented in a “game show” format. If possible, have a small prize available to the winning team.

1. Distribute and have the cadets read the Battle of Britain handout. As they read, have the cadets mark an asterix (*) next to the information they feel is most important and a question mark next to the information they would like to learn more about.
2. Divide the cadets into two teams.
3. Distribute and have the cadets read the Battle of Britain handout.
4. Read a question to the teams and give them an opportunity to answer.
5. If the team answers correctly, award them 5 points. If the team answers incorrectly, give the other team the opportunity to answer the question.
6. Continue until all the questions have been answered or time runs out.

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THE BATTLE OF BRITAIN

The Battle of Britain was an intense air battle between the Germans and the British over Great Britain's airspace from July 1940 to May 1941, with the heaviest fighting from July to October 1940.

It is one of the most famous battles of World War Two.

It was the first time the Germans had faced defeat in World War II and the first battle in history to be fought exclusively in the air.

Germany expected to quickly conquer Great Britain by first gaining domination over airspace and then later sending in ground troops across the English Channel (Operation Sealion).

At first they targeted airfields, but soon switched to bombing general strategic targets, hoping to crush British morale.

By far the largest number of defenders were British, but fighter pilots of many other nations flew with them, including Canadians.

On July 11, the second day of the battle, the Canadians suffered their first fighter casualty. Pilot Officer D. A. Hewitt of Saint John, N.B., hurled his 501 Squadron Hurricane at a Dornier bomber and was hit himself. Gushing smoke, his plane plunged into the sea.

The RAF had the edge over the Luftwaffe with its new faster fighters the Spitfire and Hurricane. The design and speed meant that they could out manoeuvre the German fighters.

During the summer of 1940, a few hundred fighter pilots stood in the way of Hitler's massive air attack on England. One hundred Canadians were among them.

"It is certainly an awful sight to behold those ugly black bombers in rank after rank," remembered Canadian pilot Ernest McNab. "Your mouth dries up like cotton wool. You lose all sense of space and time. We fought far above the clouds in a world of our own - a world of freezing cold, of limitless space traced with white plumed trails of wheeling aircraft as they fought. It was like skywriting gone mad."

British Prime Minister Winston Churchill said "The Battle of France is over. I expect the Battle of Britain is about to begin. The whole fury and might of the enemy must very soon be turned on us. Let us therefore be prepared to do our duty so that, if the British Empire lasts for a thousand years, men will say, 'This was their finest hour'." (18 June 1940)

Radar held the key to Britain's victory. German aircraft were detected and tracked by stations near the coast, then plotted in the Fighter Command operators rooms as Hurricanes and Spitfires climbed to intercept.

More than 400 Canadian aircrew and ground crew were involved in the Battle during that fateful summer and autumn in 1940, and of the more than 100 Canadian pilots who participated, 23 died while another 30 perished later in the war.

By the end of the war, 232,632 men and 17,030 women had served in the RCAF, and 17,101 lost their lives.

Other countries participating in the battle were:

Australia
New Zealand
South Africa
Southern Rhodesia
Ireland
United States of America
Poland
Czech Republic
Belgium
France
Israel

On September 15, 1940 Germany launched an all-out aerial attack. Air raid sirens wailed over London. Waves of incoming German aircraft left thousands dead and London in ruins. British, Canadian and other Allied pilots scrambled to their Hurricanes and Spitfires.

"It was a terrific spectacle," McNab recalled. "There were more than a thousand aircraft in the sky just south of London. So many that there was as much danger of colliding with another fellow as there was of being shot down."

British Prime Minister Winston Churchill was in the command bunker deep below the streets of London. "I asked Air Vice Marshall what other reserves have we," he wrote. 'There are none,' he replied. The odds were great; our margins small; the stakes infinite."

But by the end of the day, Germany had lost over 60 aircraft and failed to smash the Allied air defenses. Although British cities would be bombed nightly for the next six months, the threat of invasion was over, the Allies had won the Battle of Britain.

THE BATTLE OF BRITAIN
QUESTIONS AND ANSWERS

1. Who was the first Canadian to die during the Battle of Britain?
   PO D. A. Hewitt

2. What gave the RAF an edge over the Luftwaffe?
   The faster Spitfires and Hurricanes.

3. True or False: The Battle of Britain was the first battle in history to be fought exclusively in the air.
   True.

4. True or False: The Battle of Britain was the first time Germany faced defeat in World War II.
   True.

5. Should all the credit go to British fighter pilots for winning the Battle of Britain?
   No. More than 11 countries participated.

6. How important was technology in helping the RAF win the Battle of Britain?
   Very important because of the planes and RADAR.

7. How many Canadian groundcrew and aircrew were involved in the Battle of Britain?
   More than 400.

8. How many Canadians died during the battle?
   23.

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BRITISH COMMONWEALTH AIR TRAINING PLAN (BCATP)

OBJECTIVE: This activity is designed to familiarize the cadets with the British Commonwealth Air Training Plan.

TIME: 30 min

TRAINING LEVEL: 1–4

PRE-ACTIVITY INSTRUCTIONS:

1. Assign an instructor to this activity.
2. Research local airports and see if any in the area can trace their history back to the plan. If so, share the information with the cadets.
3. Photocopy the Canada Remembers the British Commonwealth Air Training Plan handout, located at Appendix 1, for each cadet.
4. Gather the required resources: 2 noisemakers (eg, bell, bicycle horn, kazoo).

ACTIVITY INSTRUCTIONS:

This activity is designed to be presented in a “game show” format. If possible, have a small prize available to the winning team.

1. Distribute and have the cadets read the Canada Remembers the British Commonwealth Air Training Plan handout. As they read, have the cadets mark an asterix (*) next to the information they feel is most important and a question mark next to the information they would like to learn more about.
2. Divide the cadets into two teams.
3. Read a question to the teams and give them an opportunity to answer.
4. If the team answers correctly, award them 5 points. If the team answers incorrectly, give the other team the opportunity to answer the question.
5. Continue until all the questions have been answered or time runs out.

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INTRODUCTION

When the Second World War broke out in 1939, Canada was an ocean away from the scene of the fighting in Europe. But geographical distance did not mean that Canada would not play an important role in the struggle to restore peace.

One of the first and most important contributions our country would make to the war effort would be the British Commonwealth Air Training Plan (BCATP). Under a deal signed in 1939, Canada agreed to provide facilities and training for airmen from every part of the Commonwealth. Canada was ideally suited for this program because our country was far from most of the active fighting and had lots of wide-open spaces and good flying conditions.

"THE AERODROME OF DEMOCRACY"

The BCATP was an enormous undertaking. In 1939, the Royal Canadian Air Force (RCAF) had only 4,000 personnel, less than a dozen airports of its own and training facilities for only 400 ground crew per year. Now the RCAF was expected to train thousands. It had to recruit instructors, build air bases, acquire aircraft and develop training schools for different specialities. By war's end, there were 151 training schools and every province had BCATP installations. Canada was, in U.S. President Roosevelt's words, "the aerodrome of democracy".

- During the time of its operation, the BCATP employed 3,540 aircraft, 33,000 air force personnel, and 6,000 civilian employees.
- The government built 7,000 hangars, barracks and drill halls for the air bases and training schools.
- Most training schools had three runways, each 100 feet wide and 2,500 feet long. Enough concrete was used in creating the runways for all the BCATP air bases to build a 20-foot wide highway from Ottawa to Vancouver.
- Under the original agreement to establish the BCATP, Britain was to pay $218 million, Canada $313 million, Australia $97 million and New Zealand $21 million. Costs, however, escalated far beyond the 1939 estimates. In the end, Canada paid $1.6 billion of the total cost of $2.2 billion. In terms of today's money, that meant that each taxpayer living in Canada ended up contributing more than $3,000 just to pay for the BCATP.

RIGOROUS TRAINING

Training in the BCATP was challenging and rigorous. Pilots, wireless operators, air gunners, air observers and flight engineers went through months of training at specialized schools.

- The pilot training was the longest and most difficult. From Initial Training School, they went to Elementary Flying Training School, where they got their first chance to fly, followed by Service Flying Training Schools where they were separated into fighter and bomber pilots. From there they went into Advanced Flying and Operational Training Units before going overseas.
- Of the Canadians trained in the BCATP, 25,747 would become pilots; 12,855 navigators; 6,659 air bombers; 12,744 wireless operators; 12,917 air gunners, and 1,913 flight engineers.
- The risks and sacrifices of those serving their country during the Second World War were not limited to

Veterans Affairs Canada Anciens Combattants Canada

Canada

those who were engaged in active fighting. Training could be hazardous, as demonstrated by the 856 trainees who died in crashes during BCATP's five years of operation. As high as these figures may seem, it was to the credit of the plan that, by 1944, only one fatal accident was being recorded for each 22,388 hours of flying time.

EVERYONE PITCHES IN

Civilians played an important role in the BCATP, providing instructors for training schools and community support for airmen who were far away from home.

- Bush and commercial pilots joined as instructors, working side-by-side with military personnel.
- In the beginning, the government entrusted Canadian flying clubs with the organization and operation of the Elementary Flying Training Schools. Many of their members had served in the First World War and provided an immediate source of skilled manpower.
- Civilian instructors in Elementary Flying Training Schools emphasized safety, working under the maxim "There are old pilots and bold pilots; there are no old, bold pilots."
- Some flying clubs paid for the entire cost of a training school using private funds or community donations. In Vancouver, citizens paid for 14 training aircraft out of their own pockets.
- Women's organization ran canteens, sports organizations supplied athletic equipment and service clubs provided items like pianos for barracks halls.
- Many people invited trainees into their own homes for meals as a patriotic gesture and as a part of their personal involvement in the war effort.

AN OUTSTANDING SUCCESS

The BCATP was an outstanding success. By the end of the war, it had graduated 131,533 pilots, observers, flight engineers and other aircrew for the air forces of Canada, Britain, Australia and New Zealand. While over half the BCATP graduates came from the North American continent, the plan trained personnel from all over the world including about 2,000 French, 900 Czechoslovakians, 680 Norwegians, 450 Poles and about the same number of Belgians and Dutch.

- 72,835 graduates joined the Royal Canadian Air Force
- 42,110 graduates joined the Royal Air Force
- 9,606 joined the Royal Australian Air Force
- 7,002 joined the Royal New Zealand Air Force

THE LEGACY

Knowing about our country's military history helps us to understand the Canada in which we live today and how we can build our future together. The British Commonwealth Air Training Plan helped create a legacy in Canada that continues to this day, demonstrating that our future is indeed built on our past. To learn more about Canada's role in the Second World War, please visit the Veterans Affairs Canada Web site at: **www.vac-acc.gc.ca** or call **1-877-604-8469** to obtain information on available publications.

Photo: Canadian Forces PL 807

CANADA REMEMBERS
THE BRITISH COMMONWEALTH AIR TRAINING PLAN (BCATP)
QUESTIONS AND ANSWERS

1. Why was Canada ideally suited for the BCATP?
   It was far from most of the fighting and had lots of wide-open spaces and good flying conditions.

2. How much was the total cost of the plan to Canadians?
   Total cost was 2.2 billion dollars.

3. What type of training was done at the specialized schools?
   Pilot, wireless operator, air gunner, air observers and flight engineer.

4. How many pilots, observers, flight engineers and other aircrew graduated through the BCATP?
   131,533.

5. How do you think communities benefitted from the BCATP?
   Employment for community members, economic benefits, facilities that were built for those attending the schools could be used by the community members following the war.

6. What was the lasting effect of the BCATP?
   New airports or upgrades to existing airports and communities expanding around the new airports.

7. In your own words, why do you think it is important to know about Canada’s military history?

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ROLES OF THE CANADIAN ARMED FORCES (CAF)

OBJECTIVE: The aim of this activity is to familiarize the cadets with the roles of the CAF.

TIME: 30 min

TRAINING LEVELS: 1–4

PRE-ACTIVITY INSTRUCTIONS:

- Assign an instructor to this activity.
- Photocopy the Fact Sheets, located at Appendices 1–3, for each cadet.
- Gather the required resources:
  - Paper, and
  - Markers / pencil crayons.

For the purpose of this activity, there will be two sets of groups formed (as described in the activity instructions):

- expert groups, and
- jigsaw groups.

Refer to Figure 1 for a visual representation of the format for these groups using five cadets per jigsaw group.

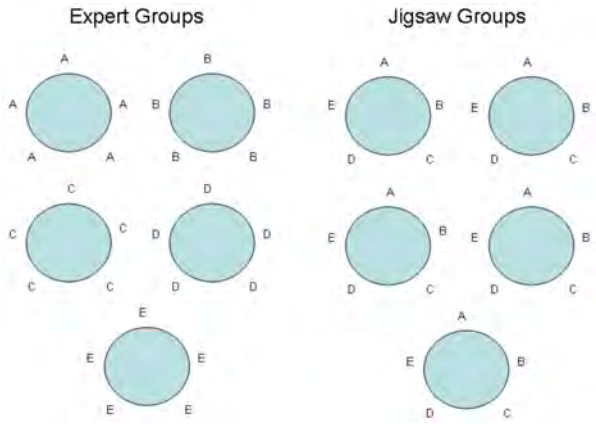

Figure 1 Format of Jigsaw Activity Groups

ACTIVITY INSTRUCTIONS:

1. Explain the following to the cadets:
   (a) They will be participating in a jigsaw activity about roles of the CAF.
   (b) A jigsaw structure allows each cadet, as a member of a team, to become an "expert" in their part of the assignment. They will interpret the information they receive, both on their own and as a contributing member of a team, and present the information as a response.
   (c) They will be divided into three expert teams, and each team will be given a Fact Sheet to review. Cadets will become experts on their Fact Sheet.
   (d) After reviewing their Fact Sheet and preparing a 3–5-minute presentation, cadets will then form jigsaw teams by regrouping with the cadets from the other expert teams so that there is one person from each expert team present in the new jigsaw team.
   (e) They will then take turns presenting their Fact Sheets.
2. Divide the cadets into three equal expert teams (or six equal jigsaw teams if there are many cadets).
3. Distribute paper, markers / pencil crayons, and a different Fact Sheet to each expert team.
4. Have the cadets review and discuss the fact sheets, and prepare a 3–5-minute presentation highlighting 2–3 key points from their fact sheet. Encourage the cadets to use the markers / pencil crayons and paper to create visual aids to support their presentation.
5. Have the cadets form jigsaw teams by placing one member from each expert team into a new group. There should be three members in each jigsaw team. If it is necessary to have two cadets with the same information in the same jigsaw team, they shall co-present the information.
6. Have each cadet give their 3–5-minute presentation to their jigsaw team.
7. Circulate among the groups and assist the cadets as necessary, offering suggestions and advice for improvement.

FACT SHEET - DEFENDING CANADA

The CAF ensures the security of Canadians and helps to exercise Canada's sovereignty.

They work closely with federal government partners to ensure the constant monitoring of Canada's territory and air and maritime approaches, including in the Arctic. The presence of the CAF in the Arctic helps to establish Canada’s sovereignty in that region.

They need to identify threats, and to possess the capacity to address them quickly and effectively.

Delivering excellence at home requires the CAF to:

- Provide surveillance of Canadian territory and air and maritime approaches;
- Maintain search and rescue response capabilities that are able to reach those in distress anywhere in Canada 24 hours a day, 7 days a week; and
- Assist civil authorities in responding to a wide range of threats - from natural disasters to terrorist attacks.

The CAF assists other government departments with:

- over-fishing,
- organized crime,
- drug- and people-smuggling,
- environmental degradation, and
- security for international events, such as the 2010 Vancouver Olympic Games.

Roles of the CAF

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FACT SHEET - DEFENDING NORTH AMERICA

A Strong and Reliable Partner

The CAF works with their US counterparts as a partner in the North American Aerospace Defence Command (NORAD). It was created in 1958, and its primary mission is defending North American aerospace and maritime approaches.

The two forces are dedicated to provide assistance to civilian emergency response agencies in the event of a crisis.

The CAF and US military operate some of the same equipment, participate in joint training exercises and exchange personnel.

Some examples of CAF assisting with the defence of North America include:

OPERATION NOBLE EAGLE. Operation Noble Eagle began with the mobilization of thousands of National Guard and reserve personnel to perform security missions on military installations, airports and other potential targets such as bridges, power plants, and port facilities. The Canadian NORAD Region (CANR) flew Operation Noble Eagle (ONE) air defence protection missions in the Windsor, Ontario / Detroit, Michigan area on 5 February 2006, in support of Super Bowl XL at Ford Field.

OPERATION UNISON. In Operation Unison, the federal government deployed a task force comprising three warships—HMCS ATHABASKAN, HMCS TORONTO and HMCS VILLE DE QUÉBEC—along with the Coast Guard vessel CCGS SIR WILLIAM ALEXANDER, three Sea King helicopters and one BO-105 helicopter after Hurricane Katrina in the United States. The CAF also provided several Griffon helicopters and crews to the New England States at the request of the United States Coast Guard.

Roles of the CAF

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FACT SHEET - CONTRIBUTING TO INTERNATIONAL PEACE AND SECURITY

Providing international leadership is vital for Canada to be a credible player on the world stage. This requires the CAF to have the necessary capabilities to make a meaningful contribution in:

- international operations,
- humanitarian assistance,
- stabilization operations, or
- combat.

Operations will often be conducted in partnership with the United Nations (UN) and the North Atlantic Treaty Organization (NATO). In addition, the CAF will participate, where circumstances dictate, in missions with other members of the international community.

Canada must be prepared to act and provide appropriate resources in support of national interests and international objectives.

Projecting Leadership Abroad: Lessons Learned from the Afghanistan Mission

The CAF have learned many lessons from their mission in Afghanistan. The mission has reinforced the need to:

- **maintain combat-capable units;**
- **provide deployed personnel with the right equipment so they can take part, on their own or with allies, in operations - from countering improvised explosive devices, to contributing to reconstruction efforts; and**
- **work closely and develop a strong working relationship with partners.**

Roles of the CAF

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ROLES OF THE CANADIAN ARMED FORCES (CAF) - DEFENDING CANADA

OBJECTIVE: The aim of this activity is to familiarize the cadets with one of the roles of the CAF—defending Canada.

TIME: 30 min

TRAINING LEVELS: 1–4

PRE-ACTIVITY INSTRUCTIONS:

- Assign an instructor to this activity.
- Display Fact Sheet—Defending Canada, located at Annex K, Appendix 1, in a prominent location at the learning station. The fact sheet may be printed on a larger piece of paper to ensure that it can be read by all the cadets.

ACTIVITY INSTRUCTIONS:

1. Have the cadets read and discuss the fact sheet.
2. Have the cadets develop a skit that demonstrates the CAF's role in defending Canada. The skit should include several aspects of that role. An example of a skit is a news interview with CAF members assisting civilians in a natural disaster.
3. Circulate and assist the cadets as necessary, offering suggestions and advice for improvement.
4. Have the cadets perform their skit.
5. Have the cadets think about one interesting fact they learned about the CAF's role in defending Canada and share their thought with their team.

The cadets may want to perform their skit for other cadets or during the Annual Ceremonial Review.

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ROLES OF THE CANADIAN ARMED FORCES (CAF) - DEFENDING NORTH AMERICA

OBJECTIVE: The aim of this activity is to familiarize the cadets with one of the roles of the CAF—defending North America.

TIME: 15 min

TRAINING LEVELS: 1–4

PRE-ACTIVITY INSTRUCTIONS:

- This learning station may be assigned an instructor or be self-directed by the cadets.
- Photocopy the Fact Sheet—Defending North America, located at Annex K, Appendix 2, and the Defending North America worksheet, located at Appendix 1 to this annex, for each cadet.
- Review the Defending North America worksheet answer key, located at Appendix 2 to this annex.

ACTIVITY INSTRUCTIONS:

1. Have the cadets read the Fact Sheet—Defending North America.
2. Distribute the Defending North America worksheet to each cadet.
3. Divide the cadets into pairs.
4. Have the first cadet ask the second cadet a question on the worksheet. The second cadet will answer the question. The first cadet will make corrections, as required, and praise when complete. Both cadets will copy the answer onto their worksheet.
5. Have the second cadet ask the first cadet a question on the worksheet. The first cadet will answer the question. The second cadet will make corrections, as required, and praise when complete. Both cadets will copy the answer onto their worksheet.
6. Repeat Steps 4 and 5 until the worksheet is complete.

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DEFENDING NORTH AMERICA – A STRONG AND RELIABLE PARTNER

WORKSHEET

A.	Ask your partner the first question. When your partner has answered indicate if they are correct. Correct or praise as appropriate. Copy the answer onto the worksheet.
B.	Have your partner ask you the next question. When you answer, have them indicate if you are correct. Copy the answer onto the worksheet.
C.	Repeat Steps A and B until the worksheet is complete.

1. Who does the CAF work with in defending North America?

2. What is NORAD and what is it responsible for?

3. What was the name of the operation in support of Super Bowl XL?

4. What was the name of the operation that deployed after Hurricane Katrina?

5. How are the CAF and the US forces able to work together?

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DEFENDING NORTH AMERICA – A STRONG AND RELIABLE PARTNER

WORKSHEET

ANSWER KEY

1. Who does the CAF work with in defending North America?
   The Armed Forces of the United States of America.

2. What is NORAD and what is it responsible for?
   North American Aerospace Defense Command (NORAD) is responsible for defending North American airspace and maritime approaches.

3. What was the name of the operation in support of Super Bowl XL?
   Operation Noble Eagle.

4. What was the name of the operation that deployed after Hurricane Katrina?
   Operation Unison.

5. How are the CAF and the US forces able to work together?
   They use some of the same equipment, participate in joint training exercises, and exchange personnel.

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ROLES OF THE CANADIAN ARMED FORCES (CAF) - CONTRIBUTING TO INTERNATIONAL PEACE AND SECURITY

OBJECTIVE: The aim of this activity is to familiarize the cadets with one of the roles of the CAF—defending North America.

TIME: 15 min

TRAINING LEVELS: 1–4

PRE-ACTIVITY INSTRUCTIONS:

- This learning station may be assigned an instructor or be self-directed by the cadets.
- Gather the required resources:
  - Fact Sheet—Contributing to International Peace and Security located at Annex K, Appendix 3,
  - Contributing to International Peace and Security Instruction Sheet located at Appendix 1 to this annex,
  - Blank paper, and
  - Coloured pencils / markers.
- Display the Fact Sheet—Contributing to International Peace and Security, located at Annex K, Appendix 3, in a prominent location at the learning station. The fact sheet may be printed on a larger piece of paper to ensure that it can be read by all cadets.

ACTIVITY INSTRUCTIONS:

Have the cadets read and follow the Contributing to International Peace and Security Instruction Sheet.

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CONTRIBUTING TO INTERNATIONAL PEACE AND SECURITY INSTRUCTION SHEET

1. Review the Fact Sheet—Contributing to International Peace and Security.
2. Create an image that captures key points from the fact sheet. The image should be a visual representation of the CAF's role in contributing to international peace and security.
3. As a team, post your images as a gallery for other cadets to review.

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CURRENT CANADIAN ARMED FORCES (CAF)

OBJECTIVE: The aim of this learning station is to familiarize the cadets with the CAF's six core missions.

TIME: 60 min

TRAINING LEVELS: 1–4

PRE-ACTIVITY INSTRUCTIONS:

- Assign an instructor to this activity.
- Photocopy the Fact Sheets, located at Appendices 1–4, for each cadet.
- Gather the required resources:
  - Paper, and
  - Markers / pencil crayons.

For the purpose of this activity, there will be two sets of groups formed (as described in the activity instructions):

- expert groups, and
- jigsaw groups.

Refer to Figure 1 for a visual representation of the format for these groups when using five cadets per jigsaw group.

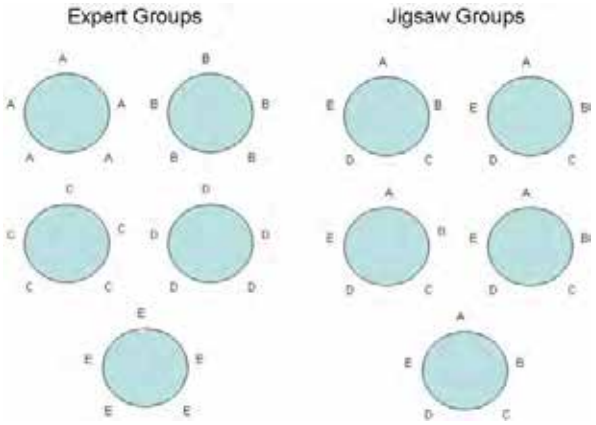

Figure 1 Format of Jigsaw Activity Groups

ACTIVITY INSTRUCTIONS:

1. Explain the following to the cadets:
   (a) They will be participating in a jigsaw activity about the six core missions of the CAF. The missions are:
      (1) defend Canada's Arctic Territories and protect Canadian airspace,
      (2) support international events held in Canada,

(3) respond to a major terrorist attack,

(4) support civilian authorities,

(5) conduct major international operations, and

(6) provide rapid international deployment.

(b) A jigsaw structure allows each cadet, as a member of a team, to become an "expert" in their part of the assignment. They will interpret the information they receive, both on their own and as a contributing member of a team, and present the information as a response.

(c) Although there are six missions, some of been combined so the cadets will be divided into four expert teams, and each team will be given a fact sheet to review. Cadets will become experts on their Fact Sheet.

(d) After reviewing their Fact Sheet and preparing a 3–5 minute presentation, cadets will then form jigsaw teams by regrouping with the cadets from the other expert teams so that there is one person from each expert team present in the new jigsaw team.

(e) They will then take turns presenting their Fact Sheets.

2. Divide the cadets into four equal expert teams.

3. Distribute paper, markers / pencil crayons, and a different Fact Sheet to each expert team.

4. Have the cadets review and discuss the fact sheets, and prepare a 3–5 minute presentation highlighting 2–3 key points from their fact sheet. Encourage the cadets to use the markers / pencil crayons and paper to create visual aids to support their presentation.

5. Have the cadets form jigsaw teams by placing one member from each expert team into a new group. There should be four members in each group. If it is necessary to have two cadets with the same information in the same jigsaw team, they shall co-present the information.

6. Have each cadet give their 3–5 minute presentation to their jigsaw team.

7. Circulate among the groups and assist the cadets as necessary, offering suggestions and advice for improvement.

DEFEND CANADA'S ARCTIC TERRITORIES AND PROTECT CANADIAN AIRSPACE

Canada is an Arctic nation with 40% of our landmass in the territories, 162,000 kilometres of Arctic coastline and 25% of the global Arctic. The Government is firmly exercising our sovereignty over our Arctic lands and waters – sovereignty that is long-standing, well-established and based on historic title, international law and the presence of Inuit and other Aboriginal peoples for thousands of years.

Canadian Forces Station (CFS) Alert is the most northerly, permanently inhabited location in the world, located only 817 kilometres from the geographic North Pole.

Conducted since 2007, Operation NANOOK is a joint Royal Canadian Navy, Canadian Army, Royal Canadian Air Force and Special Forces operation, which works with other federal departments and provincial, territorial, regional and international partners, in order to provide a visible presence in the Arctic and demonstrate Canada's ability to respond to emergency situations in the region.

Joint Task Force North (JTFN) is one of six regional joint task forces located across Canada to conduct continental operations by the CAF. They conduct three major sovereignty operations: *NANOOK*, *NUNAKPUT* and *NUNALIVUT*. These operations, which combine patrols with large-scale security exercises, are conducted as opportunities for the CAF to work closely with municipal, territorial and federal-level mission partners across the Arctic.

North American Aerospace Defense Command (NORAD)

NORAD is a Canada and United States joint organization. It is in charge of the aerospace over North America. Most children in North America have grown up with NORAD since it is this organization that tracks Santa's progress around the world.

NORAD Missions
In close collaboration with homeland defense, security, and law enforcement partners, prevent air attacks against North America, safeguard the sovereign airspaces of the United States and Canada by responding to unknown, unwanted, and unauthorized air activity approaching and operating within these airspaces, and provide aerospace and maritime warning for North America.

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SUPPORT INTERNATIONAL EVENTS HELD IN CANADA / RESPOND TO A MAJOR TERRORIST ATTACK

The RCMP established the V2010 ISU in 2003, uniting law enforcement and the CAF. They were responsible for planning and conducting security operations in support of the 2010 Olympic and Paralympic Winter Games. This included but not limited to: venue security; marine & aviation security; transportation & traffic incident management; physical security; accreditation screening and verification and protective policing.

4500 CAF personnel assisted at the Vancouver Olympics. It was called *Op Podium*.

In 2010, the CAF assisted the RCMP and their law enforcement partners to ensure the safety and security of G-8 and G-20 summit participants and all Canadians. It was one of the largest security events ever held in Canada. CAF personnel were engaged in patrolling, observing and executing security functions in and around the Lester B. Pearson International Airport and the Huntsville area. Canada's Air Force flew surveillance missions, provide early warning detection and air transport in conjunction with their customary NORAD duties. The Royal Canadian Navy provided port security and dive teams while the Canadian Army maintained surveillance, and patrolled and observation posts at the airport and in the Huntsville area.

Operation APOLLO was Canada's military contribution to the international campaign against terrorism from October 2001 to October 2003.

Combined Maritime Forces (CMF) was formed in February 2002 and is responsible for coordinating and leading naval participation in the international campaign against terrorism. In 2008, its mandate expanded to include counter-piracy in response to the rising incidence of attacks on merchant shipping.

CMF has three operational flotillas:

- Canadian Task Force (CTF) -150, responsible for maritime security and counter-terrorism;
- CTF-151, responsible for counter-piracy; and
- CTF-152, responsible for security and cooperation in the Persian Gulf.

A task force is a temporary grouping of units under one commander, formed for the purpose of carrying out a specific operation or mission.

Canada has a Special Operations Forces that send troops anywhere in the world quickly.

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SUPPORT CIVILIAN AUTHORITIES

CAF members help when fires, floods and storms threaten Canadians at home.

Op LOTUS(E) 1-11 was the CAF response to the floods in Montérégie region in Quebec. Severe flooding and heavy rains forced about 1,800 people from their homes. Over 650 CAF personnel were deployed to the region.

Previous flood operations that the CAF helped were:

1996 – Saguenay
1997 – Red River flood in Manitoba
2008 – James Bay, ON (1001 people evacuated)
2008 – Saint John River valley flood

In June 2013, CAF personnel and aircraft were deployed to facilities in Southern Alberta. RCAF aircraft and crews deployed to airfields throughout the province and assisted civilian authorities in search and rescue and evacuation efforts, including the rescuing of 31 people during the initial evacuation

After a 27-cm snowfall more than a metre of snow had been dumped on the city. That prompted Toronto officials to call for military assistance in clearing roads, to the amusement of Canadians across the country.

Through these and other operations, the CAF offer their unique skills and capabilities to aid Canada and its citizens in times of crisis.

The geographic area of the ice storm in 1997 stretched across Ontario, Quebec, New Brunswick and Nova Scotia.

Operation LAMA is the code name for the CAF support to civil authorities for hurricane recovery efforts anywhere in Canada. Under *Op LAMA*, the CAF may provide support to all levels of government – federal, provincial and municipal.

Operation PALACI is the CAF assistance to Parks Canada in preventing large avalanches through Rogers Pass, protecting travellers, and clearing the Trans-Canada Highway 1 and CP rail links between British Columbia and the rest of Canada.

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CONDUCT MAJOR INTERNATIONAL OPERATIONS /

PROVIDE RAPID INTERNATIONAL DEPLOYMENT

When a Canadian task force deploys beyond Canada's borders and territorial waters, it is usually integrated into a multinational mission led by the North Atlantic Treaty Organization (NATO) or the United Nations (U.N.).

The combat role in Afghanistan ended in 2011and now *OP ATTENTION* is Canada's participation in the NATO Training Mission-Afghanistan (NTM-A), which delivers training and professional development support to the national security forces of Afghanistan: the Afghan National Army (ANA), the Afghan Air Force (AAF), and the Afghan National Police (ANP).

Operation ARTEMIS is the ongoing CAF participation in maritime security and counter-terrorism operations in the Arabian Sea region.

Operations typically fit into one or more of the following categories:

Combat operations (eg, *OP APPOLLO*)
Regional security operations **(eg,** *OP ARTEMIS*)
Peace-support **and** stabilization operations (*OP JADE*)
Training and advisory operations (*OP ATTENTION*)
Humanitarian operations (*OP HESTIA*)
Non-combatant evacuation operations (*OP MOBILE*)

Operation HESTIA was the Canadian Armed Forces participation in humanitarian operations conducted in response to the catastrophic earthquake that struck Port-au-Prince, Haiti, on 12 January 2010.

Operation JADE is Canada's contribution to the United Nations Truce Supervision Organization (UNTSO) in the Middle East. The organization contains military observers who are attached to the peacekeeping forces in an area. This includes the Golan Heights, Lebanon, and Sinai

Operation MOBILE was the CAF participation in the international response to the uprising in Libya against the regime of President Moammar Gadhafi.

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CURRENT CANADIAN ARMED FORCES (CAF)

OBJECTIVE: The aim of this activity is to familiarize the cadets with the CAF's six core missions.

TIME: 60 min

TRAINING LEVELS: 3–4

PRE-ACTIVITY INSTRUCTIONS:

- This learning station requires an instructor.
- Photocopy the Fact Sheets, located at Annex O, Appendices 1–4.
- Gather the required resources:
  - CAF Video Storyboard template located at Appendix 1,
  - Pens / pencils,
  - Markers, and
  - Video recording devices, if available.

ACTIVITY INSTRUCTIONS:

1. Explain the following to the cadets:
   (a) They will be divided into four groups and given a Fact Sheet describing one of the core missions of the CAF. If there are not enough cadets for four groups each group can be assigned two Fact Sheets or the number of core mission Fact Sheets can be reduced.
   (b) After reviewing their fact sheet each group they will develop a 30 second commercial promoting one of the CAF core missions and include as many key points from their fact sheet as possible.
   (c) They will be expected to share their commercial as a live performance or electronically with the other cadets.
2. Arrange the cadets into groups and distribute one fact sheet, the CAF video template and pencils to each group.
3. Allow 5 minutes for the groups to review their fact sheet and become familiar with the information.
4. Give the teams 20 min to brainstorm their own concept for a 30 second commercial and create a basic script / stick figure storyboard using the template provided.
5. If resources allow, have the teams record their videos in addition to creating a storyboard. A variety of devices can be used, such as cell phones, digital cameras, or video cameras.
6. Circulate among the groups and assist the cadets as necessary, offering suggestions and advice for improvement.
7. Give each team 2–3 min to explain their concept and present their storyboard / video to the rest of the teams.
8. The corps / squadron Commanding Officer may authorize the videos to be uploaded to corps / squadron websites / Youtube channels or shown at Annual Ceremonial Reviews, Mess Dinners, etc.

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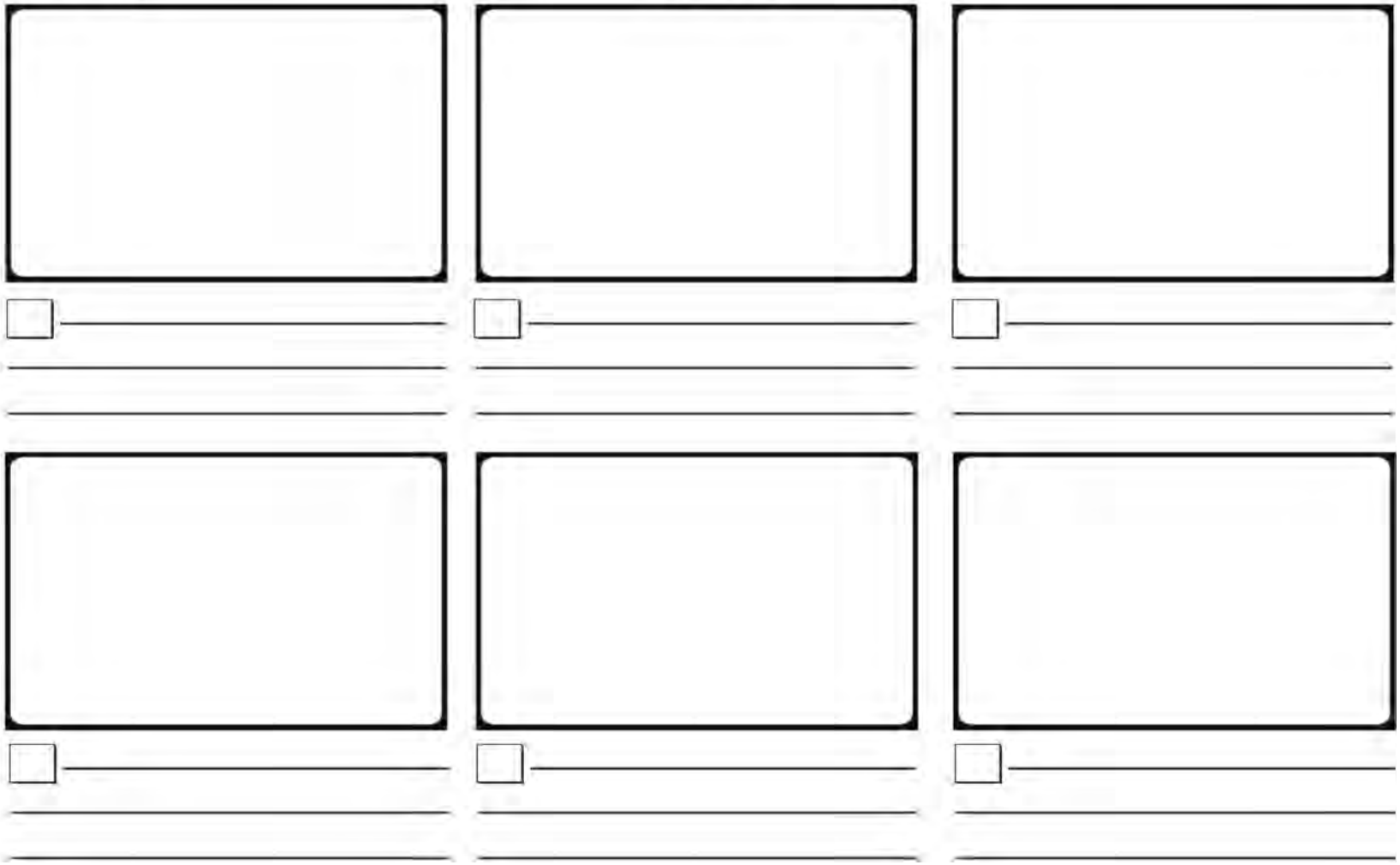
CANADIAN ARMED FORCES VIDEO
STORYBOARD TEMPLATE

Name of Project: _____ Group Members: _____



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CURRENT CANADIAN ARMED FORCES (CAF)

OBJECTIVE: The aim of this learning station is to familiarize the cadets with the CAF's Disaster Assistance Response Team (DART) and Deployed Technical Assistance Laboratory (DTAL).

TIME: 30 min

TRAINING LEVELS: 1–4

PRE-ACTIVITY INSTRUCTIONS:

- Assign an instructor to this activity.
- Photocopy the Providing Assistance Anywhere in the World handout, located at Appendix 1, for each cadet.
- Photocopy the Questions sheet, located at Appendix 2, for each group.
- Photocopy the answer sheet, located at Appendix 3.
- Preview and download the DART video.

ACTIVITY INSTRUCTIONS:

1. Explain the following to the cadets:
   (a) In groups, you will have to answer questions either on DART or DTAL, special units of the CAF that respond to emergencies around the world.
   (b) After answering the questions, you will have to identify 5 facts about your special unit.
   (c) Each group will share their facts with the other group.
2. Divide the cadets into two groups. One group will learn about DART and the other about DTAL.
3. Distribute a Providing Assistance Anywhere in the World handout and question sheet to each group.
4. Have the groups answer their questions.
5. Circulate among the groups and assist the cadets as necessary. Use the answer sheet to verify that the cadets have answered their questions correctly.
6. Have each group share five facts about their special unit to the other group.
7. Show the cadets the DART video.

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PROVIDING ASSISTANCE ANYWHERE IN THE WORLD

Disaster Assistance Response Team (DART)

DART consists of about 200 CAF staff who can quickly fly into disaster areas around the world.

The primary goal is to provide emergency services, such as drinking water and medical treatment until long-term aid arrives but its missions last no longer than 40 days.

The Canadian government makes the decision to send **DART**, after it receives a request from an individual country or the United Nations.

Almost everything **DART** needs — including over 40 vehicles, 340 tonnes of supplies, 11 tonnes of medical supplies — is stored at CFB Trenton, ready to ship within 48 hours.

DART's medical aid station can serve up to 250 outpatients and 10 inpatients a day and its water purification system can produce 50 000 litres of clean drinking water per day as well as chlorinate wells and inspect water supplies.

DART has deployed on: Op CENTRAL (Honduras, 1998); Op TORRENT (Turkey, 1999); Op STRUCTURE (Sri Lanka, 2004); Op PLATEAU (Pakistan, 2005); and Op HESTIA (Haiti, 2010).

Deployed Technical Assistance Laboratory (DTAL)

Through the door of what looks like an ordinary ocean freighter shipping container is a world of high-tech machines and highly trained technicians working to identify terrorists or anyone hoping to harm Canadian soldiers – this is **DTAL,** the Crime Scene Investigators (CSI) of the CAF.

High-tech equipment is illuminated by fluorescent blue lights, and pictures of fingerprints, facial shots and other identifying markers line the walls.

Two fully stocked, highly advanced **DTALs** sit in 11 twenty-foot containers that can be shipped by road, rail, ship and aircraft to anywhere around the world and be operational within 24 hours.

DTAL analyzes items such as cell phones, narcotics and improvised explosive devices (IED) looking for facial, retinal and fingerprint images which the **DTAL** team can check against authorized databases and records of known terrorists and illegal groups.

DTAL belongs to the Canadian Army but all branches of the CAF work in the lab. DTAL supports the entire CAF and other Canadian and international agencies.

When the CAF needs to move people, supplies or equipment anywhere in the world fast it uses the huge **CC-177 Globemaster.** With a wingspan of 174 feet (53.04m), a range of 4 025 miles (6 482 km) and a payload of 86 000 pounds / 43 tonnes (39 000 kg) it is ideally suited for the task.

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QUESTIONS

1. What does the acronym DART mean?

2. What does the acronym DTAL mean?

3. What is the name of the airplane used by the CAF to transport huge amounts of supplies and equipment?

4. Where is the DART equipment housed?

5. Where is DTAL housed?

6. Who decides to send DART on a mission?

7. How long is DART's usual mission?

8. How quickly can DART be deployed?

9. How many outpatients can DART's medical aid team see in a day?

10. How many litres of water can DART produce in a day?

11. What lines the walls of the DTAL?

12. What color lights illuminate the DTAL?

13. What does DTAL do with images it finds on the equipment it analyzes?

14. To which branch of the CAF does DTAL belong?

15. Who does DTAL support?

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ANSWER SHEET

1. What does the acronym DART mean? **Disaster Assistance Response Team**
2. What does the acronym DTAL mean? **Deployed Technical Assistance Laboratory**
3. What is the name of the airplane used by the CAF to transport huge amounts of supplies and equipment?
   C-17 Globemaster
4. Where is the DART equipment housed? **CFB Trenton**
5. Where is DTAL housed?
   Eleven 20 – foot ocean freighter shipping containers
6. Who decides to send DART on a mission? **The Government of Canada**
7. How long is DART's usual mission? **No longer than 40 days**
8. How quickly can DART be deployed? **48 hours**
9. How many outpatients can DART's medical aid team see in a day? **250**
10. How many litres of water can DART produce in a day? **50 000 litres**
11. What lines the walls of the DTAL?
    Pictures of fingerprints, facial shots and other identifying markers
12. What color lights illuminate the DTAL? **Blue fluorescent lights**
13. What does DTAL do with images it finds on the equipment it analyzes?
    Checks them against authorized databases of known terrorists and groups.
14. To which branch of the CAF does DTAL belong? **Canadian Army**
15. Who does DTAL support?
    All branches of the Canadian Armed Forces and other Canadian and international agencies

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CANADIAN ARMED FORCES (CAF) CAREERS

OBJECTIVE: The aim of this activity is to familiarize the cadets with the types of jobs available in the CAF.

TIME: 15 minutes

TRAINING LEVEL: 1–4

PRE-ACTIVITY INSTRUCTIONS:

- This learning station may be assigned an instructor or be self directed by the cadets.
- Photocopy the Matching Challenge Cards, located at Appendix 1.
- Decide which matching activity strategy will be used.
- Cut out the Matching Challenge Cards so that each page produces four cards: two labelled Occupation Pictures and two Occupation Descriptions.

ACTIVITY INSTRUCTIONS:

Have the cadets match the Occupation Pictures with the Occupation Descriptions by participating in one of the following activities.

Keep an original copy of the Card Matching Challenge that has not been cut into cards, to verify that the cadets have made a correct match.

Option A – Simple Match (Large Group). As a large group, place the cards on the table and have the cadets match the Occupation Pictures with the Occupation Descriptions.

Option B – Simple Match (Small Groups)

1. Determine the number of small groups and separate the cards into the same number of groups ensuring the corresponding Occupation Picture and Occupation Description are in the same group.
2. Have the cadets place the cards on a table and match the Occupation Pictures with the Occupation Descriptions.

Option C – Job Fair

1. Separate the cadets into two equal groups. Give the cards containing Occupation Pictures to the cadets in the first group and the cards containing Occupation Descriptions to the cadets in the second group. If there are less than 10 cadets in each group, some cadets may end up with more than one card. Conversely, if there are more than 10 cadets in each group, some cadets may have to work in pairs or groups.
2. Have the cadets in the Occupation Pictures group stand in one spot in the room and call out their occupation (eg, ‘Boatswain’ or ‘I am a Boatswain’).
3. Have the cadets in the Occupation Descriptions group read their card and walk around the room ‘seeking’ the picture of their described occupation.

4. Once the cadets have a match, have them verify their match with their partner then link arms until all cadets match their cards.
5. Have the cadets show their matched cards, reading the occupation name and one or two occupation description points.

Option 4 - Guess Who?

1. Display the Occupation Pictures on the wall around the room.
2. Divide the cadets into pairs and give the first partner the Occupation Description. The first cadet should not show or share the information with their partner.
3. Have the second cadet begin by asking the first partner “Can you guess who am I?”
4. Have the first cadet reply by giving the second cadet clues to help them locate the appropriate card on the wall.
5. Have the second cadet begin by saying “You….” followed by small clues (eg, “You work in the field,” “You dress in green,” “You help people.”)
6. Have the cadets stand with linked arms beside their picture when they are done.

The instructor may create Guess Who? board game set(s), similar to the original Hasbro versions.

MATCHING CHALLENGE CARDS

Combat Engineer

Occupation Description:

- Construct and maintain roads, airfields, heliports, bridges, causeways, rafts, permanent and temporary buildings.
- Provide drinking water by testing, purifying and filtering local supplies and by constructing local distribution systems.
- Detect and dispose of mines and bulk explosives.
- Demolish roads and bridges, and lay minefields to prevent enemy movement.

Ammunition Technician

Occupation Description:

- Manage the storage of ammunition.
- Prepare and ship ammunition.
- Maintain static facilities, field and deployed installations.
- Perform safe disposal procedures on explosive ordnances.
- Conduct improvised explosive devices disposal operations.

Hull Technician

Occupation Description:

- Maintain and repair ship piping systems, pumping and flooding systems, steam heating and de-icing equipment, and the ship's pollution and sanitation systems.
- Perform arc and oxyacetylene welding.
- Perform carpentry and painting to maintain and repair ship fittings.
- Operate and maintain firefighting and damage repair equipment.
- Calculate ship stability and identify potential problems.

Maritime Surface and Sub-surface (MARS) Officer

Occupation Description:

- Act as an Officer of the Watch in Canadian Naval ships.
- Provide expertise in a wide range of activities.
- Direct and conduct strategies, tactics and procedures in the operation of ships, submarines, aircraft, maritime sensors, combat information and weapons systems.
- Provide input into the design, procurement and evaluation of ships or systems.

Infantry Soldier

Occupation Description:

- Operate and maintain a wide range of weapons, including rifle, hand-grenades, light, medium and heavy machine-guns, and anti-tank weapons.
- Use sophisticated equipment for field communications, navigation and night-vision surveillance.
- Engage in unarmed combat.
- Employ camouflage and concealment, patrol, assault, defence, and escape-and-evasion tactics.

Artillery Officer

Occupation Description:

- Operate and manage field guns, rockets, missile systems and target acquisition systems.
- Become an expert with laser range finders, fire control computers, and communication systems.
- Work with Global Positioning Systems (GPS), surveillance equipment and unmanned aerial vehicles.

Boatswain

Occupation Description:

- Operate and maintain shipboard equipment associated with cargo handling, anchors & materiel transfer at sea.
- Operate and navigate small craft.
- Plan, organize and conduct drill and ceremonies.
- Assist and supervise deck crews in maintaining the ship and its equipment including scraping and painting.
- Coordinate watch keeping duties at sea and in harbour.

Electrical Technician

Occupation Description:

- Operate and monitor electrical power-generating and distribution equipment.
- Provide electrical maintenance support for all engineering machinery and auxiliary equipment throughout the ship.
- Operate battery chargers, electrical switchboards and metering devices.
- Assist in testing, tuning, repairing, installing and inspecting electrical and electronic equipment systems.

Pilot

Occupation Description:

- Conduct flight operations with various RCAF aircraft.
- Plan, communicate, coordinate and execute tactical missions in support of civil authority or military objectives.
- Support humanitarian and disaster relief, and air intercept operations.
- Work with sophisticated technology for precision tactical navigation systems, advanced communication systems, sensor systems, counter-measure systems and weapon delivery systems.

Air Combat Systems Officer

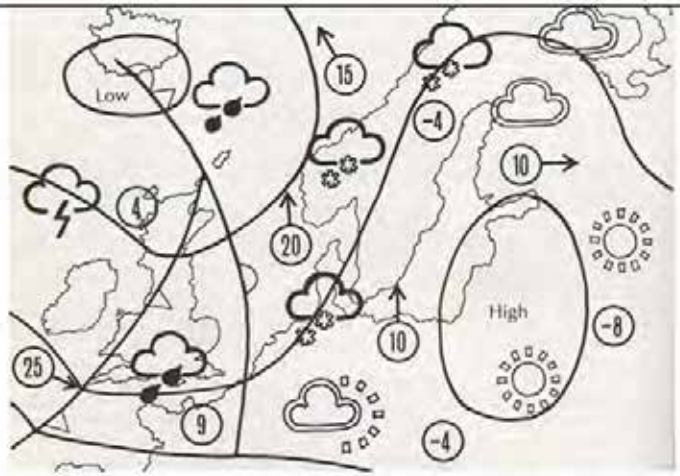
Occupation Description:

- Conduct search and rescue, anti-submarine operations.
- Perform maritime surface surveillance and targeting.
- Take part in sovereignty and fisheries patrols, counter-narcotics operations.
- Train in electronic warfare and unmanned aerial vehicle operation.

Aircraft Structures Technician

Occupation Description:

- Restore or repair defects using unique aircraft fastening hardware metals, composite materials, chemicals, adhesives, paints and textiles.
- Manufacture and install aircraft structural components for prototype projects.
- Manufacture aircraft equipment from base metals using special cutting tools, engine lathe and milling machines.
- Fabricate and repair aircraft structures using various materials.



Meteorological Technician

Occupation Description:

- Observe and record surface, marine and upper air weather conditions
- Process, analyze and interpret meteorological information.
- Operate and maintain specialized meteorological instruments and equipment.
- Brief wing, ship and land unit personnel on actual and expected weather conditions.
- Forecast weather conditions.

Dental Technician

Occupation Description:

- Perform preventive dentistry procedures and give preventive dentistry instruction.
- Produce dental x-rays and preliminary impressions for study casts.
- Perform clinical dental laboratory procedures.
- Perform preventive maintenance on dental equipment.
- Operate and maintain the Air Transportable Dental System.

Medical Technician

Occupation Description:

- Provide initial care for patients.
- Prescribe some medications in accordance with their scope of practice.
- Participate in rescues from crashed vehicles, tanks, ships, aircraft and damaged buildings.
- Collect specimens and perform basic laboratory procedures.
- Perform electrocardiograms and audiograms

Resource Management Support Clerk

Occupation Description:

- Control pay and leave documentation.
- Create and distribute letters to other military and civilian groups.
- Human resource administration and services.
- Financial management support services.
- Personnel support services.
- Corporate and general purpose administration.

Cook

Occupation Description:

- Operate, clean and maintain food services equipment and facilities.
- Assist in the handling and control of food and non-food supplies.
- Prepare and serve meals that range from cafeteria-style menu items to formal multi-course meals for military and civilian dignitaries.

Construction Technician

Occupation Description:

- Construct, repair and maintain buildings for the protection of personnel and equipment
- Produce related structural designs and specifications
- Produce related structural drawings
- Construct field defences
- Harden field structures
- Erect prefabricated structures

Special Operations Forces

Occupation Description:

- Train in advanced armed defence techniques.
- Take part in counter-terrorism operations and armed assistance.
- Render armed assistance in to support Canadian national security.
- Take part in various military operations, which may include, but are not limited to, surveillance, security advice and close personal protection.

Search and Rescue Technician

Occupation Description:

- Conduct Search and Rescue operations on the ground, at sea, and in the air.
- Train and use emergency medial care.
- Train and regularly use parachutes.
- Conduct mountain operations.
- Be on standby and respond to emergencies at a moments notice.

Military Police

Occupation Description:

- Investigate and report incidents involving military or criminal offenses
- Develop and apply crime prevention measures to protect military. communities against criminal acts
- Provide security at selected Canadian embassies around the world.
- Perform other policing duties, such as traffic control, traffic-accident investigation, and emergency response.

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LIFE IN THE ROYAL CANADIAN NAVY (RCN), ROYAL CANADIAN AIR FORCE (RCAF) OR CANADIAN ARMY

OBJECTIVE: The aim of this learning station is to familiarize the cadets with life in the RCN, RCAF or Canadian Army.

TIME: 15 minutes

TRAINING LEVEL: 1–4

PRE-ACTIVITY INSTRUCTIONS:

- Assign an instructor to this activity.
- Choose and download one of the videos from www.forces.ca> WHO WE ARE > LIFE IN THE FORCES > Navy, Army, Air Force, Reserve Force, such as:
  - Life in the Royal Canadian Navy (RCN), 9:30 min
  - Life in the Canadian Army, 7:50 min
  - Life in the Royal Canadian Air Force (RCAF), 7:53 min
- Gather the required resources: Multimedia equipment (laptop / projector / speakers).

ACTIVITY INSTRUCTIONS:

1. Have the cadets watch one of the videos.
2. Following the video, have a discussion about what the cadets learned from it. Questions can include:
   (a) Name one thing you learned about life in the RCN / RCAF / Canadian Army?
   (b) Did you see anything that the RCN / RCAF / Canadian Army do that you do as a cadet?
   (c) What types of jobs do the RCN / RCAF / Canadian Army do that keep you safe?

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CONTACT A DEPLOYED CANADIAN ARMED FORCES (CAF) MEMBER

OBJECTIVE: The aim of this activity is to have the cadets contact a deployed CAF member.

TIME: 30 min

TRAINING LEVELS: 1–4

PRE-ACTIVITY INSTRUCTIONS:

- Assign an instructor to this activity.
- Visit the Canadian Forces Operations website (http://www.forces.gc.ca/site/operations/index-eng.asp) and print off the information regarding the current operations in which CAF personnel are participating.
- Display the operations information in a prominent location at the learning station. It may be printed on a larger piece of paper to ensure that it can be read by all cadets.
- Prepare an envelope / package in which to send the postcards to the deployed member. Refer to the Mail for “Any Canadian Armed Forces Member” handout, located at Appendix 1, for further details.
- Gather the required resources:
  - Operation Information handout,
  - Postcards,
  - Pens / pencils, and
  - Coloured pencils.

Post cards could be simple index cards with corps / squadron crest on the back side.

ACTIVITY INSTRUCTIONS:

1. Explain the following to the cadets:
   (a) They will be sending a postcard to a CAF member who is currently deployed on an operation.
   (b) They are to write a brief paragraph to the CAF member detailing information about the corps / squadron, the cadet’s name, and at least one question about the deployed member’s current operation. They are not to include any personal information.
   (c) The postcards will be reviewed to ensure that personal information is not shared and that the content is appropriate.
2. Lead a discussion on the chosen operation, to include:
   (a) location,
   (b) culture in the area,
   (c) perceived challenges CAF members may face, and
   (d) how the operation ties into Canadian values.
3. Review the Appendix and share the pertinent details with the cadets.

4. Have the cadets write the postcard to the deployed member.
5. Have each cadet share the question they posed for the CAF member.
6. Mail the postcards to the deployed member following the instructions contained in the Mail for “Any Canadian Armed Forces Member” handout.

MAIL FOR “ANY CANADIAN ARMED FORCES MEMBER”

CAF members serving overseas appreciate receiving correspondence from Canadians as well as groups, schools, cadet corps / squadrons and organizations from across Canada.

Bulk Mail

Schools, groups, businesses and associations may send cards and letters bulked in a parcel. The parcel is not to contain any other item other than correspondence. Parcels found to contain items other than correspondence will be returned to the sender at the sender’s expense.

Addressing

The Canada Post free letter mail program is not extended to letters / cards addressed to “Any Canadian Armed Forces Member”; all such items will require postage.

Only parcels as described in the “Bulk Mail” section above are acceptable. Parcels addressed to “Any Canadian Armed Forces Member” containing any items other than correspondence will be returned to sender at the sender’s expense.

All letters and parcels containing letters / cards are to be addressed to "Any Canadian Armed Forces Member". Please refer to www.forces.gc.ca > WRITE TO THE TROOPS for additional information about mailing addresses. Note that the lines "Rank / Initials / Name" and "Unit / Section" of the operational address are to be replaced with "Any Canadian Armed Forces member".

For example, if writing to Afghanistan, the address should be:

Any Canadian Armed Forces Member
Op Attention
Kabul
PO Box 5140 Stn Forces
Belleville ON K8N 5W6

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COMMON TRAINING

ALL TRAINING LEVELS

INSTRUCTIONAL GUIDE

CANADIAN ARMED FORCES FAMILIARIZATION

SECTION 9

EO CX20.01 – PARTICIPATE IN CAF FAMILIARIZATION ACTIVITIES

Total Time:	Six sessions (18 periods)

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO. REFER TO THE LESSON SPECIFICATION LOCATED IN A-CR-CCP-801/PG-001, *ROYAL CANADIAN AIR CADETS PROFICIENCY LEVEL ONE QUALIFICATION STANDARD AND PLAN*.

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CHAPTER 11

PO 121 – PARTICIPATE IN CANADIAN AVIATION, AEROSPACE AND AERODROME OPERATIONS COMMUNITY FAMILIARIZATION ACTIVITIES

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 1

EO M121.01 – DISCUSS AVIATION OPPORTUNITIES

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Prepare Career Investigation Sheets located at Attachment A for each group.

Prepare Career Information Envelopes located at Attachment B for each group.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An in-class activity was chosen for TP 1 as it is an interactive way to provoke thought and stimulate interest in aviation careers among the cadets.

A group discussion was chosen for TP 2 as it allows the cadets to interact with their peers and share their knowledge about aviation careers. A group discussion helps the cadets improve their listening skills and develop as members of a team.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadets shall have discussed aviation opportunities.

IMPORTANCE

There are many career opportunities available within the aviation industry. Identifying possible opportunities stimulates an interest in the different aspects of the cadet program including aviation, aerospace, aerodrome operations and aircraft manufacturing and maintenance.

BACKGROUND KNOWLEDGE

PILOTS AND FLIGHT INSTRUCTORS

Pilots fly airplanes and helicopters to provide air transportation, training, and surveying services. Flying instructors teach flying techniques and procedures to student and licensed pilots.

Pilots and flight instructors are employed by airlines, airfreight companies, flying schools, the Canadian Forces (CF), and other public and private sector aircraft operators.

Topics such as aerodrome operations, aircraft maintenance, radio, theory of flight, navigation and meteorology will assist cadets in preparing for pilot training.

***Cadet summer training qualifications include a three-week basic aviation qualification, a three-week advanced aviation qualification and gliding and power flying scholarship qualifications*.**

AIR TRAFFIC CONTROLLERS AND FLIGHT SERVICE SPECIALISTS

Air traffic controllers use radio communication to direct air traffic within assigned airspace. Also, they control aircraft and vehicle movement at airports. Flight service specialists provide pilots with flight information essential to aviation safety, such as weather conditions.

Air traffic controllers and flight service specialists are employed by NAV Canada and the CF.

Topics such as radio communication, aerodrome operations and air traffic control will assist cadets in preparing for air traffic control training.

***Cadet summer training qualifications include a three-week basic aviation technology and aerospace qualification and a six-week advanced aviation technology qualification – airport operations*.**

AIRCRAFT MAINTENANCE ENGINEERS (AME)

Aircraft maintenance engineers maintain, repair, overhaul, modify and test aircraft structures and systems. The aircraft systems they work on include mechanical, hydraulic, instrument, electrical and avionics.

Aircraft manufacturing, maintenance, repair companies, airlines, the CF and other aircraft operators employ AMEs.

Topics such as aircraft maintenance will assist cadets in preparing for AME training.

***Cadet summer training qualifications include a three-week basic aviation technology and aerospace qualification and a six-week advanced aviation technology qualification – aircraft maintenance*.**

AIR TRANSPORT RAMP ATTENDANTS

Air transport ramp attendants operate ramp-servicing vehicles and equipment, handle cargo and baggage, and perform other ground support duties.

They are employed by airlines, air services companies and the federal government.

Topics such as aerodrome operations and radio will assist cadets in preparing for groundside careers.

***Cadet summer training qualifications include a three-week basic aviation technology and aerospace qualification and a six-week advanced aviation technology qualification – airport operations*.**

AERODROME MANAGERS

Aerodrome managers plan, organize, direct, control and evaluate the operations of an aerodrome. Some areas of responsibility may include marketing, budgeting, human resources, and managing the buildings and the land.

Aerodrome managers work for airport authorities, local governments or private airports.

Topics such as aerodrome operations and leadership will assist cadets in preparing for aerodrome management careers.

***Cadet summer training qualifications include a three-week basic aviation technology and aerospace qualification and a six-week advanced aviation technology qualification – airport operations*.**

AEROSPACE ENGINEERS AND AIRCRAFT ASSEMBLERS

Aerospace engineers research, design, and develop aerospace vehicles, aerospace systems and their components. They also perform duties related to testing, evaluation, installation, operation and maintenance of the same.

Aircraft and spacecraft manufacturers, air transport carriers and research institutions employ aerospace engineers.

Aircraft assemblers assemble, fit and install prefabricated parts to manufacture fixed wing aircraft, rotary wing aircraft or aircraft components.

Aircraft subassembly manufacturers employ aircraft assemblers. Subassembly companies assemble the different sections of aircraft like the landing gear.

Topics such as theory of flight, aircraft maintenance and aerospace will assist cadets in preparing for design and assembly training.

***Cadet summer training qualifications include a three-week basic aviation technology and aerospace qualification and a six-week advanced aviation technology qualification – aircraft maintenance*.**

Teaching Point 1 **Conduct an aviation careers matching activity.**

Time: 15 min Method: In-Class Activity

ACTIVITY

OBJECTIVE

This activity is designed allow cadets to think about different aviation careers and how cadet training relates to these careers.

RESOURCES

- One Career Investigation Sheet per group.
- One set of Career Information Envelopes per group, to include:
  - job descriptions envelope;
  - employers envelope;
  - POs envelope; and
  - summer training qualifications envelope.

ACTIVITY INSTRUCTIONS

1. Divide the cadets into six groups. Assign each group an aviation career from the following list:
   - pilots and flying instructors;
   - air traffic controllers and flight service specialists;
   - aircraft maintenance engineers;
   - air transport ramp attendants;
   - aerodrome managers; and
   - aerospace engineers and aircraft assemblers.

If there are less than 12 cadets in the class, divide them into three groups and assign each group two careers.

2. Give each group a Career Investigation Sheet and set of Career Information Envelopes. Advise each group that they will present their career to the class at the end of their investigation.
3. Have the groups open their job description envelopes. Cadets will have two minutes to:
   - read through all of the descriptions;
   - select the job description statements that match their careers; and
   - record the descriptions on their Career Investigation Sheets.
4. Have the groups open their employer envelopes. Cadets will have two minutes to:
   - read through all of the employers;
   - select the employers that someone from their career might work for. There may be many possible answers for each career;
   - record the employers on their Career Investigation Sheets; and
   - make a sensible case for the employers they have selected.
5. Have the groups open their PO envelopes. Cadets will have one minute to:
   - Read through all of the POs;
   - Select the POs that will help them prepare for their career; and
   - Record these POs on their Career Investigation Sheets.
6. Have the groups open their summer training qualifications envelopes. Cadets will have one minute to:
   - Read through all of the summer training qualifications;
   - Select the summer training qualifications that will help them prepare for their career; and
   - Record these summer training qualifications on their Career Investigation Sheets.
7. Call upon each group to present their career.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in the activity will serve as the confirmation of this TP.

Teaching Point 2 **Lead a discussion on aviation careers.**

Time: 10 min Method: Group Discussion

GROUP DISCUSSION

TIPS FOR ANSWERING / FACILITATING DISCUSSION:

- Establish ground rules for discussion, eg, everyone should listen respectfully; don't interrupt; only one person speaks at a time; no one's ideas should be made fun of; you can disagree with ideas but not with the person; try to understand others as much as you hope they understand you; etc.
- Sit the group in a circle, making sure all cadets can be seen by everyone else.
- Ask questions that will provoke thought; in other words avoid questions with yes or no answers.
- Manage time by ensuring the cadets stay on topic.
- Listen and respond in a way that indicates you have heard and understood the cadet. This can be done by paraphrasing their ideas.
- Give the cadets time to respond to your questions.
- Ensure every cadet has an opportunity to participate. One option is to go around the group and have each cadet answer the question with a short answer. Cadets must also have the option to pass if they wish.
- Additional questions should be prepared ahead of time.

SUGGESTED QUESTIONS:

Q1. What career interests you and why?

Q2. Does anyone know someone that works in one of these careers? What can you tell us about their job?

Q3. How do the opportunities in the air cadet program stimulate your interest in aviation, aerospace, aerodrome operations and aircraft manufacturing and maintenance?

CONFIRMATION OF TEACHING POINT 2

The cadets' participation in the activity will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the activity will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

The myriad air cadet program activities expose cadets to various aspects of aviation, aerospace, aerodrome operations and aircraft manufacturing and maintenance. These experiences may encourage cadets to pursue an education / career in one these areas.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A3-003 CATO 51-01 Director Cadets 3. (2011). *Air cadet program outline*. Ottawa, ON: Department of National Defence.

C3-001 *National Occupation Classification 2001 (NOC2001)*. (2001). Retrieved 23 Mar 2006 from http://www.hrdc.drhc.gc.ca/2001/e/generic/welcome.shtml

CAREER INVESTIGATION SHEET

Team Members:

Career:

Job Description:

Employers:

Related POs

Related Summer Qualifications

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CAREER INFORMATION ENVELOPES

Job Descriptions	
Fly airplanes and helicopters to provide air transportation, training, and surveying services.	Teach flying techniques and procedures to students and licensed pilots.
Direct air traffic within assigned airspace, and control moving aircraft and service vehicles at airports.	Provide pilots with flight information essential to aviation safety.
Maintain, repair, and test aircraft structures and systems.	Drive ramp equipment, handle cargo and baggage, and do other ground support jobs at airports.
Manage the operations of an aerodrome, including the people, the money, the buildings, and the land.	Design aerospace vehicles and systems.
Put together and install pre-made parts to make airplanes and helicopters.	

Employers				
Airlines	Air cargo companies	Canadian Forces	Private companies	Flying schools
NavCanada – runs all the air traffic control services in Canada	Aircraft manufacturing companies	Aircraft maintenance companies	Ground support companies	Airport management authorities
Local governments	Private airports	Aircraft and spacecraft manufacturers	Research institutions	Aircraft part manufacturers

POs				
Radio Communication	Principles of Flight	Meteorology	Propulsion	Navigation
Aerospace	Aerodrome Operations	Aircraft Manufacturing and Maintenance		

Summer Qualifications				
Basic Aviation	Advanced Aviation	Basic Aviation Technology and Aerospace	Advanced Aerospace	Advanced Aviation Technology – Airport Operations
Advanced Aviation Technology – Aircraft Manufacturing and Maintenance	Glider Pilot Scholarship	Power Pilot Scholarship		

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 2

EO C121.01 – PARTICIPATE IN A PRESENTATION GIVEN BY A MEMBER OF THE CANADIAN AVIATION, AEROSPACE OR AERODROME OPERATIONS COMMUNITY

Total Time: 60 min X 4

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO

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CHAPTER 12

PO 129 – COMMUNICATE USING THE PHONETIC ALPHABET AND NUMBERS

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

EO M129.01 – RECITE THE PHONETIC ALPHABET AND NUMBERS

Total Time: 30 min

PREPARATION

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TP 1 as it orients the cadets to identify the phonetic alphabet and numbers, generates interest and presents basic information.

A game was chosen for TP 2 as it is a fun and challenging way to review the material and have the cadets practice the skills.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadets shall have recited the phonetic alphabet and numbers.

IMPORTANCE

It is important to know how to properly use the phonetic alphabet and numbers while communicating over a radio. This skill mitigates any potential confusion when speaking over a radio. Real danger can occur from misinterpretation of messages. Cadets will use this skill during familiarization flying, airport operations activities and aircrew survival training.

Teaching Point 1 **Describe the phonetic alphabet and identify the phonetic numbers.**

Time: 10 min Method: Interactive Lecture

PHONETIC ALPHABET

The phonetic alphabet is used because letters that sound similar might be confused when said over a radio. An example of similar sounding letters is ‘M’ and ‘N’. Therefore, each letter of the alphabet is associated with a word that is easily understood over the radio.

The phonetic alphabet is as follows:

- A – Alpha.
- B – Bravo.
- C – Charlie.
- D – Delta.
- E – Echo.
- F – Foxtrot.
- G – Golf.
- H – Hotel.
- I – India.
- J – Juliet.
- K – Kilo.
- L – Lima.
- M – Mike.
- N – November.
- O– Oscar.
- P – Papa.
- Q – Quebec.
- R – Romeo.
- S – Sierra.
- T – Tango.
- U – Uniform.
- V – Victor.
- W – Whiskey.
- X – X-Ray.
- Y – Yankee.
- Z – Zulu.

Use of the phonetic alphabet can be heard on a familiarization flight when the pilot communicates the aircraft's call letters to the tower.

PHONETIC NUMBERS

Phonetic numbers are used to avoid misunderstandings when using radio communication. Numbers are enunciated in the following manner:

- 0 – Zee-ro.
- 1 – Wun.
- 2 – Too.
- 3 – Tree.
- 4 – Fow-er.
- 5 – Fife.
- 6 – Six.
- 7 – Seven.
- 8 – Ait.
- 9 – Nin-er.

Numbers are always spoken as single digits, except for whole thousands. For example, 5 280 would be spoken "fife too ait zee-ro" and 5 000 would be spoken "fife tou-sand."

Symbols are spoken as words over the radio; eg. the word decimal, pronounced "day-see-mal", is used where there is a number with a decimal point.

Air traffic controllers use phonetic numbers to communicate to pilots what runway to use when taking off and landing.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. Why is the phonetic alphabet used?

Q2. How is "Y" pronounced using the phonetic alphabet?

Q3. How is the number four pronounced?

ANTICIPATED ANSWERS:

A1. To avoid confusion between letters that sounds alike.

A2. Yankee.

A3. Fow-er.

Teaching Point 2 **Conduct games where the cadets use the phonetic alphabet and numbers.**

Time: 15 min Method: Game

ACTIVITY

Time: 5 min

OBJECTIVE

The objective of this game is for cadets to spell out their name using the phonetic alphabet and numbers.

RESOURCES

- Whiteboard, and
- Whiteboard markers.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Divide the class into two groups.
2. Alternating groups, have each cadet spell their first and last name using the phonetic alphabet.
3. Give each cadet a number to pronounce.
4. For each cadet that spells their name correctly and provides the correct pronunciation for the number, give the group two points (one point for their name and one point for the number).
5. The group with the most points wins the game.

SAFETY

Nil.

ACTIVITY

Time: 10 min

OBJECTIVE

The objective of this game is to solve hangman words and phrases by asking for the letters and numbers phonetically.

RESOURCES

- Whiteboard, and
- Whiteboard markers.

ACTIVITY LAYOUT

Provide the cadets with a classroom or training area with a whiteboard placed visible to all the cadets.

ACTIVITY INSTRUCTIONS

1. Divide the class into two groups.
2. Choose a word or phase and write the number of blanks on the whiteboard (incorporate numbers into the word or phrase, eg. Mission Impossible 3).
3. Draw the frame for the man to be hung on.
4. Alternating groups, have each group choose a letter or number phonetically.
5. If the letter or number is in the word or phrase, write it in the proper blank.
6. If the letter is not in the word or phrase, draw the head on the frame and write the letter on the board so it does not get chosen again.
7. Continue drawing the head, body, arms, legs and feet each time a letter is not present in the word or phrase.
8. The first group to guess the word or phrase wins.
9. If the man is completely drawn before the word or phrase is guessed, both groups lose.
10. Repeat steps 3 to 9.

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadets' participation in the games will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Knowledge of the proper way to use the phonetic alphabet and numbers is essential to ensure radio messages are transmitted and understood. This knowledge ensures the proper use of voice procedures during familiarization flying, airport operations activities and aircrew survival training.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A3-001 A-CR-CCP-263/PT001 *From the ground up: Millennium edition* (2000). Ottawa, ON: Aviation Publishers.

CHAPTER 13

PO 130 – PARTICIPATE IN AVIATION ACTIVITIES

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 1

EO M130.01 – IDENTIFY AIRCRAFT AS MILITARY, CIVILIAN AND CADET

Total Time: 60 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Review all aircraft listed to determine if any have been acquired for / retired from service.

The training aids for this EO can be presented in a number of ways, depending on the resources available at the squadron. Images of the aircraft are located at Attachment A in a MS Word document. If the squadron has the means to use a computer / projector, the aircraft images can be accessed from a PowerPoint presentation located at Attachment B.

Set up equipment for visual presentation for TPs 1–3.

Create enough sets of matching cards for TP 4 from the set located at Attachment B. It is recommended that the cards be printed in colour on heavy stock (450 g/m^2 / 120 lb) paper. Ensure matching cards are in complete sets.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TPs 1–3 as it orients the cadets to aircraft, generates interest and presents basic information.

A game was selected for TP4 as it is a fun and challenging way to confirm the cadets' knowledge of the material.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have identified military, civilian and cadet aircraft.

IMPORTANCE

Basic aircraft identification creates a base of understanding for further aviation topics. It adds value to additional aviation activities such as aerodrome tours, air shows and familiarization flying. It also fosters an interest in the military and civilian aviation communities by introducing cadets to aircraft commonly found in those communities.

Teaching Point 1 **Identify Canadian military aircraft.**

Time: 15 min Method: Interactive Lecture

CANADIAN MILITARY AIRCRAFT

Military aircraft are used for a wide variety of tasks. These tasks include training, transport, maritime patrol, defence and search and rescue. Most military aircraft are painted flat grey or camouflage for low visibility. These high visibility planes used for Search and Rescue (SAR) work are painted bright yellow and red.

Select at least 11 aircraft to present during TP1 with at least one aircraft from each category. Present aircraft common to the cadets' community.

CANADIAN CARRIERS (TRANSPORT)

CC-115 Buffalo

The CC-115 Buffalo is mainly used for SAR operations. It has short take-off and landing (STOL) capability, which is ideal for rough landing strips. It is able to fly in almost any weather. The Buffalo is painted a highly visible yellow. It has two turboprop engines, high wings and a t-tail.

http://www.airforce.forces.gc.ca/v2/netpub/index-eng.asp?rid=2204-CX2005-0096-393a

Figure 1 CC-115 Buffalo

CC-130 HERCULES

The CC-130 Hercules is one of the most multipurpose transport planes. It is used to airlift troops, equipment and cargo. It is also used in SAR operations and in air-to-air refuelling of fighters. With its rear cargo ramp, rugged landing gear, good short-field performance and high ground clearance of engines / propellers, the C-130 is designed to operate from unimproved airstrips in active military areas. The Hercules has four turboprop engines, high wings and a distinctively large tail.

http://www.airforce.forces.gc.ca/v2/netpub/index-eng.asp?rid=1956-CX2005-0096-331a

Figure 2 CC-130 Hercules

CC-138 TWIN OTTER

The highly adaptable CC-138 Twin Otter is well suited for Canada's ever-changing northern climate and terrain. This STOL utility transport aircraft can land on water, land, snow and ice. Powered by twin turboprop engines, the Twin Otter is highly manoeuvrable and has a service ceiling of over 8 000 metres. It can be outfitted with wheels, skis or floats to land on virtually any surface. The CC-138 is used in SAR missions, and transport and support roles to the Canadian Forces' northern operations. It can carry up to 20 passengers or 2 999 kg of payload, and has a range of 1 427 km.

http://www.airforce.forces.gc.ca/v2/netpub/index-eng.asp?rid=4209-540-IMG0075

Figure 3 CC-138 Twin Otter

CC-144 CHALLENGER

The CC-144 Challenger, DND's twin-engine, long-range executive jet, offers rapid air transportation to Canadian and international VIPs. With a range of up to 5 930 km and a maximum speed of Mach 0.83, the Challenger can quickly deliver passengers almost anywhere in the world. The Air Force's Challenger fleet includes four VIP aircraft and two utility aircraft. The utility jets are used for military transport and can be configured for medical evacuations (medevacs) when troops are in need.

http://www.airforce.forces.gc.ca/v2/netpub/index-eng.asp?rid=4322-761-IMG0029

Figure 4 CC-144 Challenger

CC-150 A310 POLARIS

The CC-150 Polaris is the military version of a popular civilian commercial airliner, the Airbus A310-300. The main role of the Polaris is long-range transport of personnel and equipment. It can transport up to 194 passengers or 32 000 kg of cargo. The CC-150 is a wide-body, two engine turbojet with low wings.

http://www.airforce.forces.gc.ca/v2/netpub/index-eng.asp?rid=5687-2007-03-19-02HQ

Figure 5 CC-150 Polaris

CC-177 (C-17) GLOBEMASTER III

CC-177 Globemasters transport large amounts of passengers and equipment over long distances in response to domestic emergencies or international crises. It provides rapid strategic delivery of troops to cargo transport of oversized combat equipment from coast to coast and to anywhere in the world - including to troops in Afghanistan. The Globemaster can be flown with night vision goggles which give it tactical advantage when flying into threatening territory. Operated by a crew of three - pilot, co-pilot and loadmaster - the CC-177, with a payload of 160 000 pounds, can fly long distances and land in remote airfields, making it a premier transporter for military, humanitarian and peacekeeping missions. The CC-177 is able to take off and land on unpaved runways as short as 3 500 feet and as narrow as 90 feet wide during the day or night.

http://www.airforce.forces.gc.ca/v2/netpub/index-eng.asp?rid=8223-GD2008-0786-002

Figure 6 CC-177 Globemaster III

CANADIAN FIGHTERS (CF) (DEFENCE)

CF-188 (CF-18) Hornet

The CF-18 Hornet is a high-performance twin-engine jet fighter that can perform air-to-air combat or ground-attack roles. The most visible difference of the CF version of this aircraft is a paint scheme incorporating a “spoof” canopy on the underside of the front fuselage. This “spoof” canopy is used to confuse an opponent in the heat of a dogfight as to “which side is up”. The distinctive angled twin vertical fins on the tail most easily identify the CF-18.

http://www.airforce.forces.gc.ca/v2/netpub/index-eng.asp?rid=7356-BN2008-0094-19

Figure 7 CF-188 Hornet

CANADIAN HELICOPTERS (CH)

CH-124 SEA KING

A ship-borne maritime helicopter, the CH-124 Sea King’s compact design boasts a fold-up rotor and tail that help it fit on the smallest warship’s deck, and its amphibious hull lends it the ability to land on water. It is powered by two turboshaft engines and is equipped with subsurface acoustic detection equipment and homing torpedoes. The Sea King lifts off from destroyers and frigates to locate and destroy submarines. Capable of flying in day or night, the CH-124 is a versatile surveillance aircraft, contributing to SAR operations, disaster relief, counter-narcotic operations, and fisheries and pollution patrols. The Sea King is to be replaced by the CH-148 Cyclone.

http://www.airforce.forces.gc.ca/v2/netpub/index-eng.asp?rid=8197-SW2006-0343-66

Figure 8 CH-124 Sea King

CH-139 JET RANGER

This single-engine trainer is currently used at 3 Canadian Forces Flying Training School (3 CFFTS) in Portage la Prairie, Manitoba, where the Air Force's helicopter trainees earn their wings. Side-by-side pilot seating makes the CH-139 ideal for training. Flight controls and doors are fitted at both positions, making them easily accessible to pilot and trainer alike. The passenger / cargo compartment is located immediately behind the cockpit, providing seating for three passengers or space for cargo.

http://www.airforce.forces.gc.ca/v2/equip/ch139/index-eng.asp

Figure 9 CH-139 Jet Ranger

CH-146 GRIFFON

The CH-146 Griffon is Canada's Utility Transport Tactical Helicopter (UTTH). It performs a wide variety of roles that includes airlift of equipment and personnel, command and liaison flights, surveillance and reconnaissance, casualty evacuation, logistic transport, SAR, counter-drug operations and domestic relief operations. The Griffon has a four-blade main rotor and landing skids. It has a camouflage paint scheme.

http://www.airforce.forces.gc.ca/v2/netpub/index-eng.asp?rid=7848-VH2007-0004-039

Figure 10 CH-146 Griffon

CH-147 CHINOOK

The CH-147 Chinook is a twin-engine medium-to-heavy-lift helicopter re-introduced as a Canadian aircraft first deployed with the Joint Task Force Afghanistan. The CH-147 Chinook is used for troop movement and transportation of equipment and supplies with a minimum range of 100 km at maximum loading in various climatic conditions. The CH-147 Chinook provides SAR support within Canada. It has the ability to provide timely response to national emergencies in both the eastern and western regions of the country assisting in emergency response to disasters such as floods, forest fires and earthquakes. The fleet will be based primarily at CFB Petawawa with CH-147 Chinook's supporting the Canadian Manoeuvre Training Center in Wainwright Alberta, being based at CFB Edmonton.

http://www.airforce.forces.gc.ca/v2/equip/ch147d/index-eng.asp

Figure 11 CH-147 Chinook

CH-148 CYCLONE

The CH-148 Cyclone will replace the CH-124 Sea King as Canada's main ship-borne maritime helicopter. The Cyclone will conduct Surface and Subsurface Surveillance and Control, utility and SAR missions. This twin-engine helicopter is compatible with the latest high-tech naval frigates and includes several new safety features. Its aluminum and composite airframe is built with lightning-strike and high-intensity radio frequency pulse protection. The CH-148 Cyclone has a day-and-night flight capability, and can fly in most weather conditions in temperatures ranging from minus 51 to plus 49 degrees Celsius. The CH-148 Cyclone can also fly 450 km without refuelling.

http://www.airforce.forces.gc.ca/v2/netpub/index-eng.asp?rid=3016-PMO06-0001-B

Figure 12 CH-148 Cyclone

CH-149 CORMORANT

The CH-149 Cormorant is a SAR helicopter. It has three powerful engines that drive a five-bladed rotor. Its ice protection system allows it to operate in continuous icing conditions. It is able to withstand high winds. These features make it ideal for Canada's demanding geography and climate. The CH-149 Cormorant has rear-ramp access and a large amount of cabin space. It can carry 12 stretchers or a load of 5 000 kg. Unlike the Griffon, the CH-149 Cormorant has retractable landing gear and is painted bright yellow.

http://www.airforce.forces.gc.ca/v2/netpub/index-eng.asp?rid=2857-ISD01-2009

Figure 13 CH-149 Cormorant

CANADIAN TRAINERS (CT)

CT-114 Tutor

The CT-114 Tutor may be the most well known aircraft flown by the Canadian Forces (CF). It is the plane flown in the Snowbirds air demonstration squadron. The CT-114 Tutor was used as a training aircraft from 1971 until 2000. It was designed and built in Canada. The CT-114 Tutor has a single jet engine, low wings and a t-tail.

http://www.airforce.forces.gc.ca/v2/equip/ct114/index-eng.asp

Figure 14 CT-114 Tutor

CT-142 DASH-8

Navigators from around the world come to Canada to train on the CT-142 Dash-8. At the Canadian Forces Air Navigation School (CFANS) in Winnipeg, MB, this twin turboprop aircraft is used to teach students aerial navigation and tactics. Designed and produced in Canada, the CT-142 is a conversion of the popular Dash-8 airliner. It was adapted for navigation training by manufacturer Bombardier Inc. in the late 1980s.

http://www.airforce.forces.gc.ca/v2/netpub/index-eng.asp?rid=2177-WG2002-0257-20a

Figure 15 CT-142 Dash-8

CT-155 HAWK

The CT-155 Hawk was selected for the North Atlantic Treaty Organization (NATO) Flying Training in Canada (NFTC) program because of its similarities to frontline fighter aircraft. Student pilots graduate from the CT-156 Harvard II to this highly advanced jet trainer. Its Rolls-Royce turbofan engine powers the jet to supersonic speeds. The Hawk's sophisticated glass cockpit features a heads-up display (HUD), hands-on throttle and stick (HOTAS) controls, and integrated navigation and targeting systems. The jet can perform a wide range of high performance training missions. NFTC students train on the Hawk during the program's final stage. Once they've logged 125 flight hours, Canada's student fighter pilots are ready to join 410 Squadron, the Operation Training Unit, which flies CF-18 Hornets.

http://www.airforce.forces.gc.ca/v2/equip/ct155/index-eng.asp

Figure 16 CT-155 Hawk

CT-156 HARVARD II

This agile turboprop trainer is the aircraft of choice for the early stages of NFTC program. The CT-156 has an initial climb rate of about 1 km per minute. It can handle sustained 2G turns at an altitude of 7 500 metres. The aircraft is ideally suited to help new pilots move seamlessly from basic flight training to high-performance jet training. Its performance, cockpit layout and ejection protocols mimic those of the CT-155 Hawk jet trainer.

http://www.airforce.forces.gc.ca/v2/equip/ct156/index-eng.asp

Figure 17 CT-156 Harvard II

CANADIAN PATROL (CP)

CP-140 Aurora

The CP-140 Aurora is a maritime patrol aircraft. It carries special sensing equipment so it can detect and monitor boats and submarines. The prominent tail boom is the most obvious feature of this aircraft. It has four turboprop engines and low wings.

http://www.airforce.forces.gc.ca/v2/netpub/index-eng.asp?rid=4412-824-IMG0001

Figure 18 CP-140 Aurora

CP-140A ARCTURUS

The CP-140A Arcturus is the sister aircraft to the CP-140 Aurora. The CP-140A Arcturus is used to monitor Canada's East Coast. This long-range patrol aircraft protects our coastlines from foreign threats and illegal activity. This aircraft also fulfills many of the same roles as the CP-140 Aurora: maritime surveillance, SAR operations, drug trafficking interdiction and territorial and sovereignty patrols. It is also used for pilot and crew training.

http://www.airforce.forces.gc.ca/v2/equip/resrc/images/hst/l-g/arcturus.jpg

Figure 19 CP-140A Arcturus

CONFIRMATION OF TEACHING POINT 1

Amend the questions and answers to include the aircraft discussed in TP1

QUESTIONS:

Q1. What aircraft is this? (Show CC-130 Hercules)

Q2. What aircraft is this? (Show CT-114 Tutor)

Q3. What aircraft is this? (Show CH-146 Griffon)

ANTICIPATED ANSWERS:

A1. Military, CC-130 Hercules.

A2. Military, CT-114 Tutor.

A3. Military, CH-146 Griffon.

Teaching Point 2 **Identify civilian aircraft.**

Time: 10 min Method: Interactive Lecture

CIVILIAN AIRCRAFT

Civilian aircraft are used in a wide variety of roles including recreational, training, and transportation of people and cargo. Civilian aircraft have a wide range of paint schemes and use more colors than military aircraft. These aircraft are seen at civilian aerodromes.

Cessna 172

The Cessna 172 is commonly used for primary flight training and familiarization flying. It is a four seat aircraft that has high wings, tricycle landing gear and a single propeller.

http://www.airliners.net/search/photo.search?id=277285

Figure 20 Cessna 172

Piper PA-28 Cherokee

Another popular recreational and training aircraft is the Piper PA-28 Cherokee. This aircraft has low wings, tricycle landing gear and a single propeller.

http://www.airliners.net/search/photo.search?id=246912

Figure 21 Piper PA-28

Boeing 737

The Boeing 737 is one of the world's most popular commercial jet transport aircraft. It is a short- to medium-range airplane. They can carry 85 to 189 passengers, depending on the model. The Boeing 737 is flown by airlines including WestJet and Sunwing. The Boeing 737 has a low-wing configuration and tricycle landing gear, like most commercial transport planes. It has two turbofan jet engines mounted under the wings.

http://www.airliners.net

Figure 22 Boeing 737

Airbus A320

The Airbus A320 is a very popular commercial jet transport aircraft. They can carry 100 to 220 passengers, depending on the model. The Airbus 320 also has a low-wing configuration, nose gear, and two turbofan jet engines mounted under the wings. The biggest difference between the Airbus and the Boeing 737 is the technology in the cockpit. Airbus uses computer technology to a greater extent than Boeing. Air Canada flies the Airbus A320, and several other Airbus models.

http://www.airliners.net/search/photo.search?id=313545

Figure 23 Airbus A320

Bombardier 415

The Bombardier 415 amphibious aircraft is the backbone of firefighting missions around the world. Launched in 1994, this high-wing, all-metal amphibian remains the only aircraft specifically designed for aerial firefighting. Its proven technology and fire-extinguishing power make it an effective machine for the job. This aircraft may also be configured for humanitarian relief, maritime SAR, surveillance and personnel transport.

http://www.aircraftinformation.info/Images/Bombardier_415_02.jpg

Figure 24 Bombardier 415

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. What aircraft is this? (Show Piper PA-28)

Q2. What aircraft is this? (Show Boeing 737)

Q3. What aircraft is this? (Show Cessna 172)

ANTICIPATED ANSWERS:

A1. Civilian, Piper PA-28.

A2. Civilian, Boeing 737.

A3. Civilian, Cessna 172.

Teaching Point 3 **Identify cadet aircraft**

Time: 5 min Method: Interactive Lecture

CADET AIRCRAFT

Cadet aircraft are used for training and familiarization flying. They are usually painted bright yellow and blue. (The term “cadet aircraft” is intended to mean aircraft currently owned by the cadet program and does not include other aircraft cadets may use on Power Flying Scholarships (other model Cessnas, Katanas, etc.).

GLIDER

Schweitzer - SGS 2-33a Glider

The Schweitzer SGS 233A is the glider used by the Air Cadet Gliding Program for training and familiarization flying. It is a sturdy, two-place tandem (front and back seating, instead of side by side) glider, with high wings. They can be launched by auto-tow, winch or tow-plane.

http://www.aircadetleague.com/manitoba/Gliding.html

Figure 25 SGS 233A Glider

TOW AIRCRAFT

Bellanca Scout – 8GCBC

The Bellanca Scout is one of the types of tow-planes used in the Air Cadet Gliding Program. It is a two-place tandem, high wing, tail-dragger aircraft.

http://www.aircadetleague.com/manitoba/Gliding.html

Figure 26 Bellanca Scout

L19 BIRD DOG – CESSNA 305 (C305)

The L19 Bird Dog is another tow-plane used in the Air Cadet Gliding Program. Like the Scout, the Bird Dog is a two-place tandem, high wing, tail-dragger aircraft. The L19 has a rear window, and more of a bend to the fuselage than the Scout.

http://www.aircadetleague.com/manitoba/Gliding.html

Figure 27 L19 Bird Dog

Cessna 182P

The Cessna 182P is another tow plane used in the Air Cadet Gliding Program. Like the Bird Dog, it has a rear window but has four seats instead of two. Unlike either the Scout or the Bird Dog, which are both tail-draggers, it has a tricycle landing gear.

http://www.cadets.ca/regions/pac/air-aviation.aspx?id=95360&terms=cadet+tow+plane

Figure 28 Cessna 182P

CONFIRMATION OF TEACHING POINT 3

QUESTIONS:

Q1. What aircraft is this? (Show L19 Bird Dog)

Q2. What aircraft is this? (Show Schweitzer SGS 233A)

Q3. What aircraft is this? (Show Bellanca Scout)

ANTICIPATED ANSWERS:

A1. Cadet, L19 Bird Dog.

A2. Cadet, Schweitzer SGS 233A.

A3. Cadet, Bellanca Scout.

Teaching Point 4 **Conduct an aircraft identification game.**

Time: 25 min Method: Game

OBJECTIVE

The objective of this activity is to have the cadets practice identifying military, civilian and cadet aircraft by participating in a memory matching game.

RESOURCES

- One set of aircraft identification matching cards located at Attachment B per group.

ACTIVITY LAYOUT

Set up the classroom with large flat areas, one for each group, to play the game.

ACTIVITY INSTRUCTIONS

1. Divide cadets into groups of four or less.
2. Issue each group one set of aircraft identification matching cards. The cards should be laid out in a five by four grid, face down (as illustrated in Figure 30).

Note. Created by Director Cadets 3, 2009 Ottawa, ON: Department of National Defence.

Figure 29 Five by Four Card Grid

3. Have the first cadet turn two cards over:
   (a) if it is not a match, the cards are turned back face down and the turn passes to the next cadet.
   (b) if it is a match:
      (1) but the cadet is unable to identify the aircraft; the cards are turned back over and the turn passes to the next cadet; or
      (2) and the cadet identifies the aircraft; the cadet keeps the two cards, and takes another turn.
4. The game can be repeated as time allows, mixing up the cards.

Circulate among the groups to supervise and assist as necessary.

Answer questions the cadets have about the game.

Ensure cadets are able to correctly identify the matching pairs before removing them from the grid.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 4

The cadets' participation in the game will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the activity game will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK/READING/PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Aircraft identification is a fun way of getting involved in aviation. Cadets can apply this knowledge during aviation field trips, familiarization flying and any time they see aircraft.

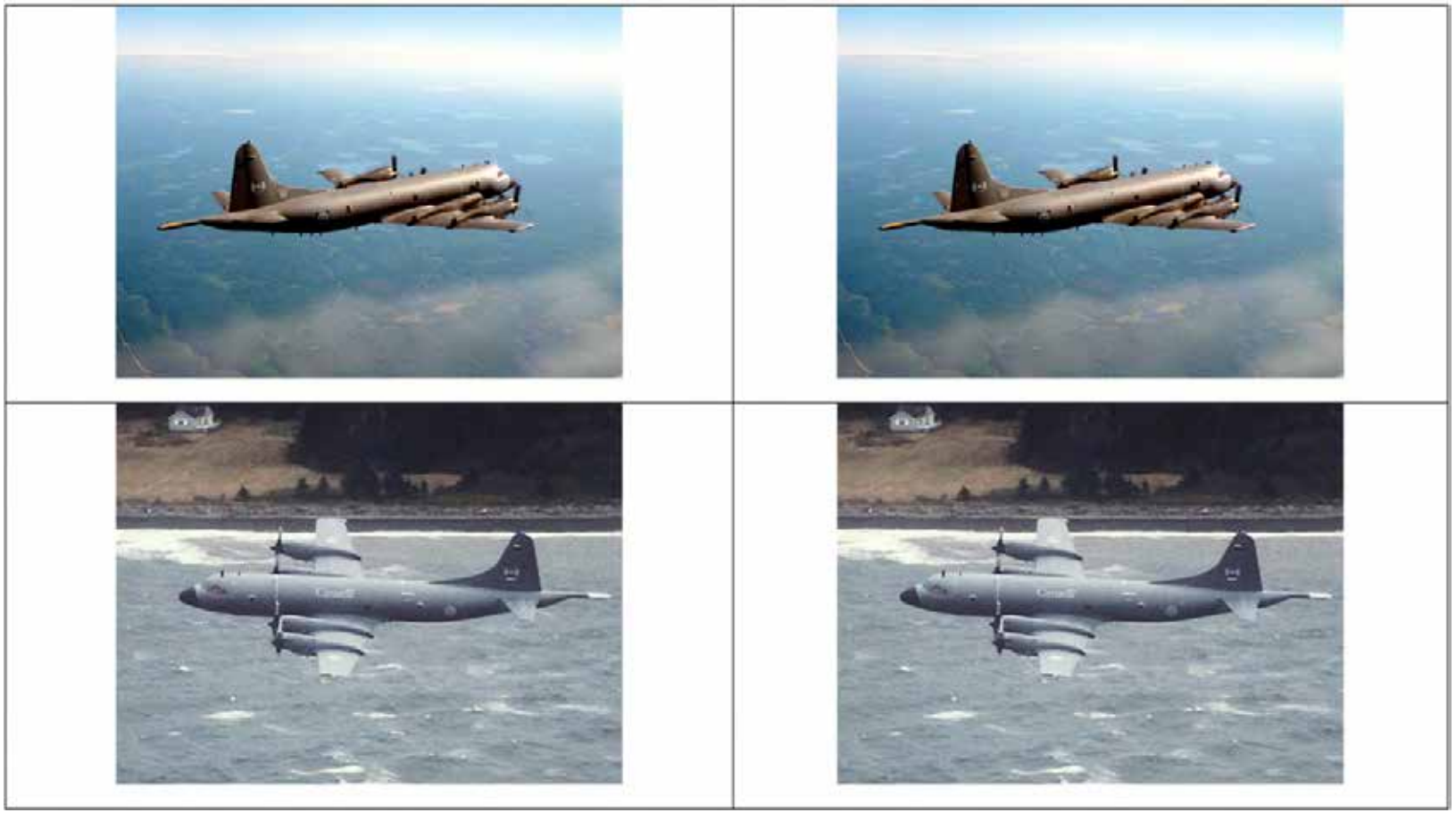
INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A3-007 Canadian Forces. (2009). Retrieved 24 Jul 2009, from http://www.airforces.forces.gc.ca/v2/equip/index-eng.asp

AIRCRAFT IDENTIFICATION MATCHING GAME CARDS

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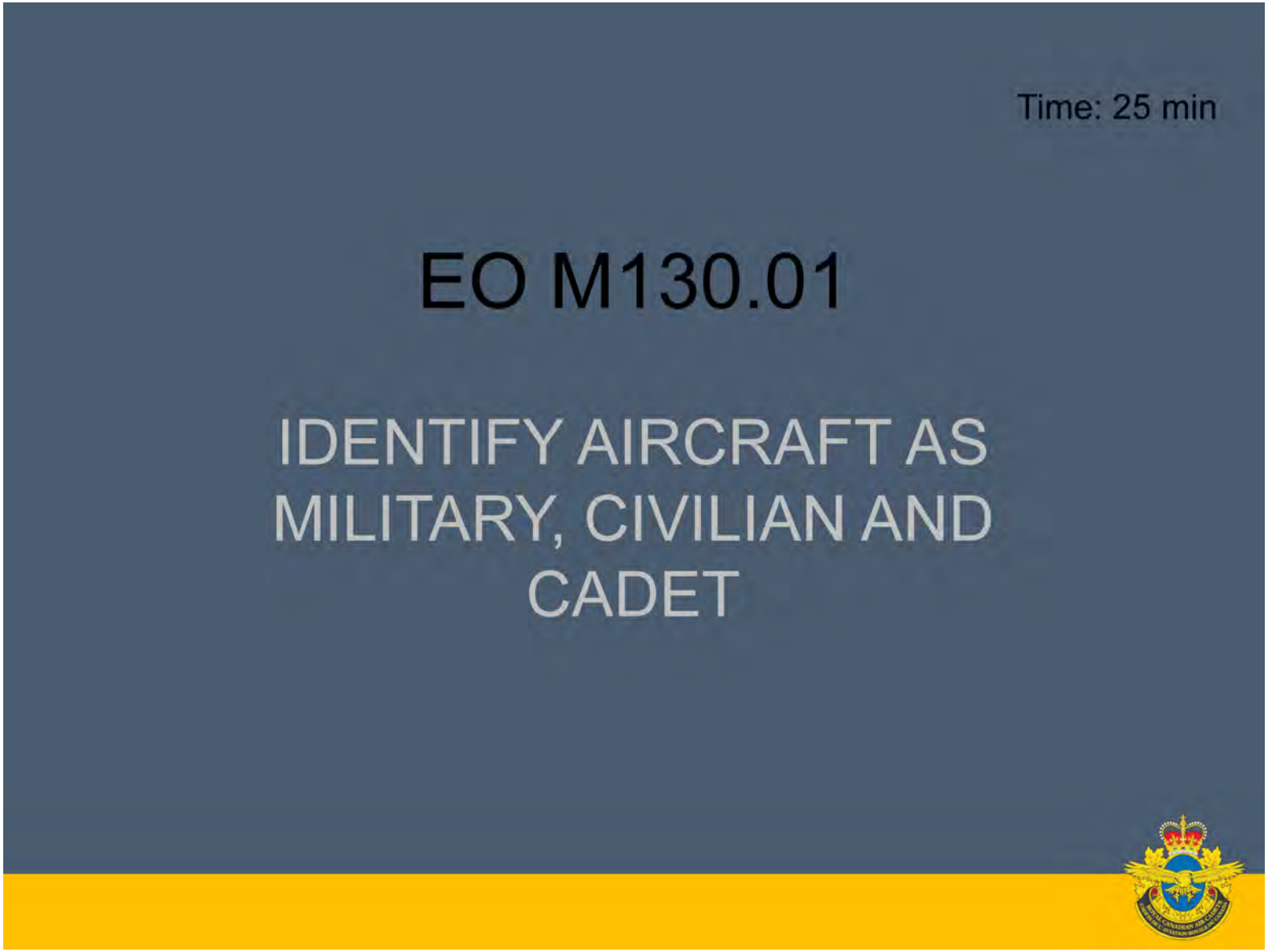
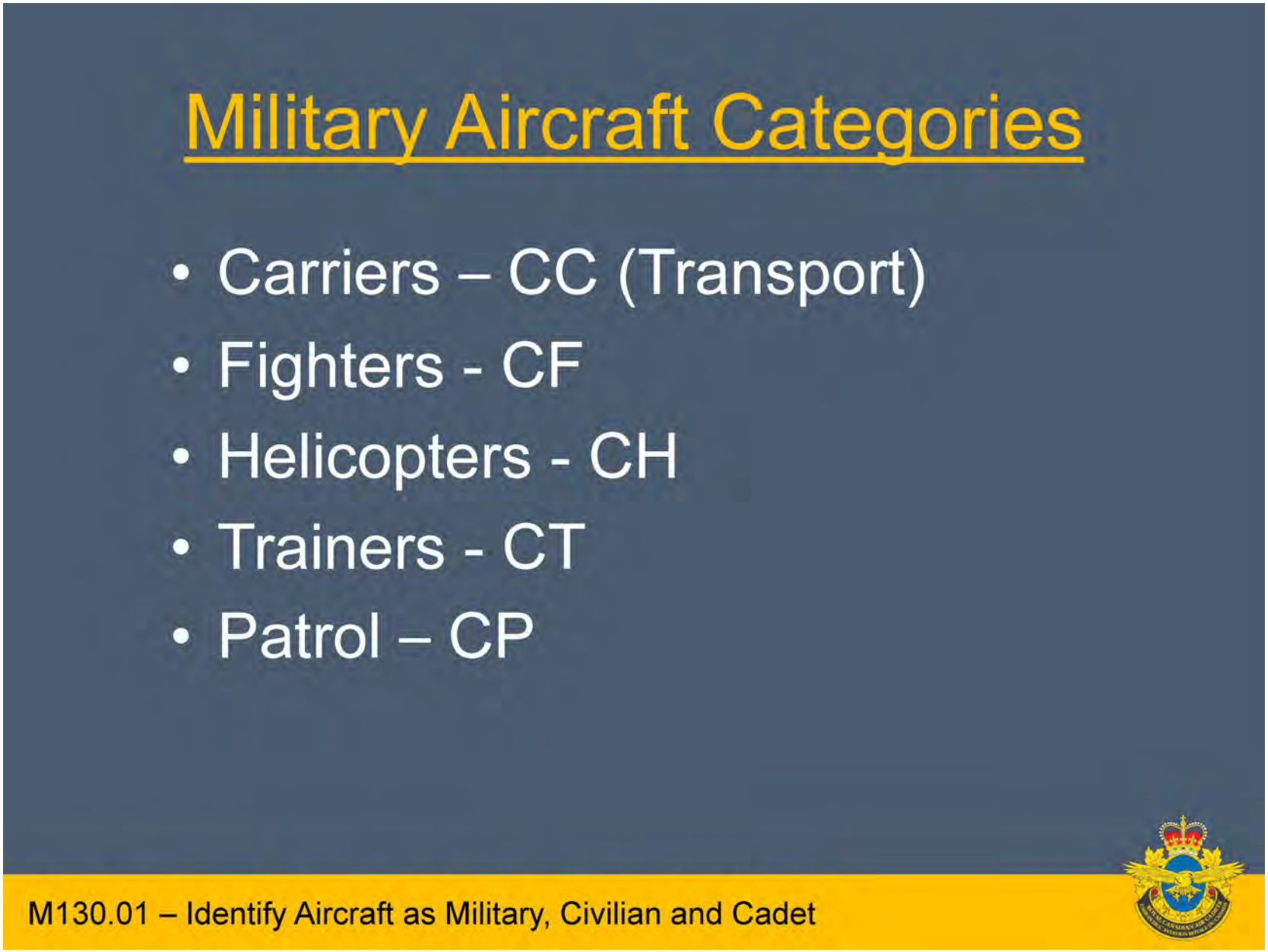
7
4
C-GSSD

CC-115 Buffalo 	CC-130 Hercules 	CC-138 Twin Otter 	CC-144 Challenger 	CC-150 Polaris 
CC-177 Globemaster 	CF-188 Hornet 	CH-124 Sea King 	CH-139 Jet Ranger 	CH-146 Griffon 
CH-147 Chinook 	CH-148 Cyclone 	CH-149 Cormorant 	CT-114 Tutor 	CT-142 Dash-8 

CT-155 Hawk 	CT-156 Harvard II 	CP-140 Aurora 	CP-140A Arcturus 	Cessna 172 
Piper PA-28 Cherokee 	Boeing 737 	Airbus A320 	Bombardier 415 	Schweitzer SGS 2-33A 
	Bellanca Scout 	L19 Bird Dog – Cessna 305 (C305) 	Cessna 182P 	


Time: 25 min
EO M130.01
IDENTIFY AIRCRAFT AS MILITARY, CIVILIAN AND CADET


Military Aircraft Categories
• Carriers – CC (Transport)
• Fighters - CF
• Helicopters - CH
• Trainers - CT
• Patrol – CP
M130.01 – Identify Aircraft as Military, Civilian and Cadet

Carrier (Transport) Aircraft

- CC-115 Buffalo
- CC-130 Hercules
- CC-138 Twin Otter
- CC-144 Challenger
- CC-150 A320 Polaris
- CC-177 (C-17) Globemaster III

M130.01 – Identify Aircraft as Military, Civilian and Cadet

CC-115 BUFFALO

M130.01 – Identify Aircraft as Military, Civilian and Cadet

CC-130 HERCULES

M130.01 – Identify Aircraft as Military, Civilian and Cadet

CC-138 TWIN OTTER

M130.01 – Identify Aircraft as Military, Civilian and Cadet

CC-144 CHALLENGER

M130.01 – Identify Aircraft as Military, Civilian and Cadet

CC-150 A320 POLARIS

M130.01 – Identify Aircraft as Military, Civilian and Cadet

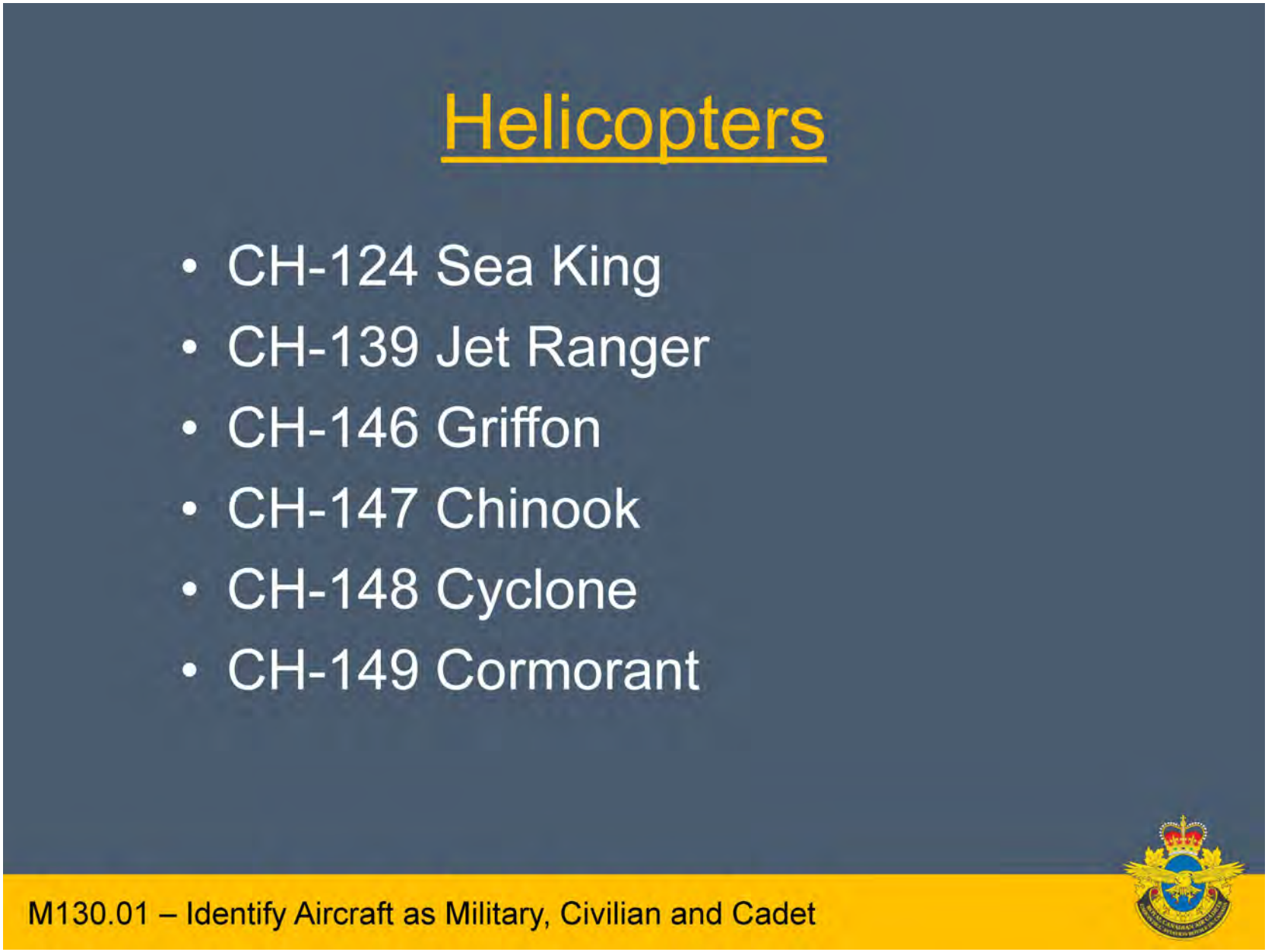
CC-177 (C-17) GLOBEMASTER III

M130.01 – Identify Aircraft as Military, Civilian and Cadet


Fighter Aircraft
• CF-188 (CF-18) Hornet
M130.01 – Identify Aircraft as Military, Civilian and Cadet

CF-188 (CF-18) HORNET

M130.01 – Identify Aircraft as Military, Civilian and Cadet


Helicopters
• CH-124 Sea King
• CH-139 Jet Ranger
• CH-146 Griffon
• CH-147 Chinook
• CH-148 Cyclone
• CH-149 Cormorant
M130.01 – Identify Aircraft as Military, Civilian and Cadet

CH-124 SEA KING

M130.01 – Identify Aircraft as Military, Civilian and Cadet

CH-139 JET RANGER

M130.01 – Identify Aircraft as Military, Civilian and Cadet

CH-146 GRIFFON

M130.01 – Identify Aircraft as Military, Civilian and Cadet

CH-147 CHINOOK

M130.01 – Identify Aircraft as Military, Civilian and Cadet

CH-148 CYCLONE

M130.01 – Identify Aircraft as Military, Civilian and Cadet

CH-149 CORMORANT

M130.01 – Identify Aircraft as Military, Civilian and Cadet

Patrol Aircraft

- CP-140 Aurora
- CP-140A Arcturus

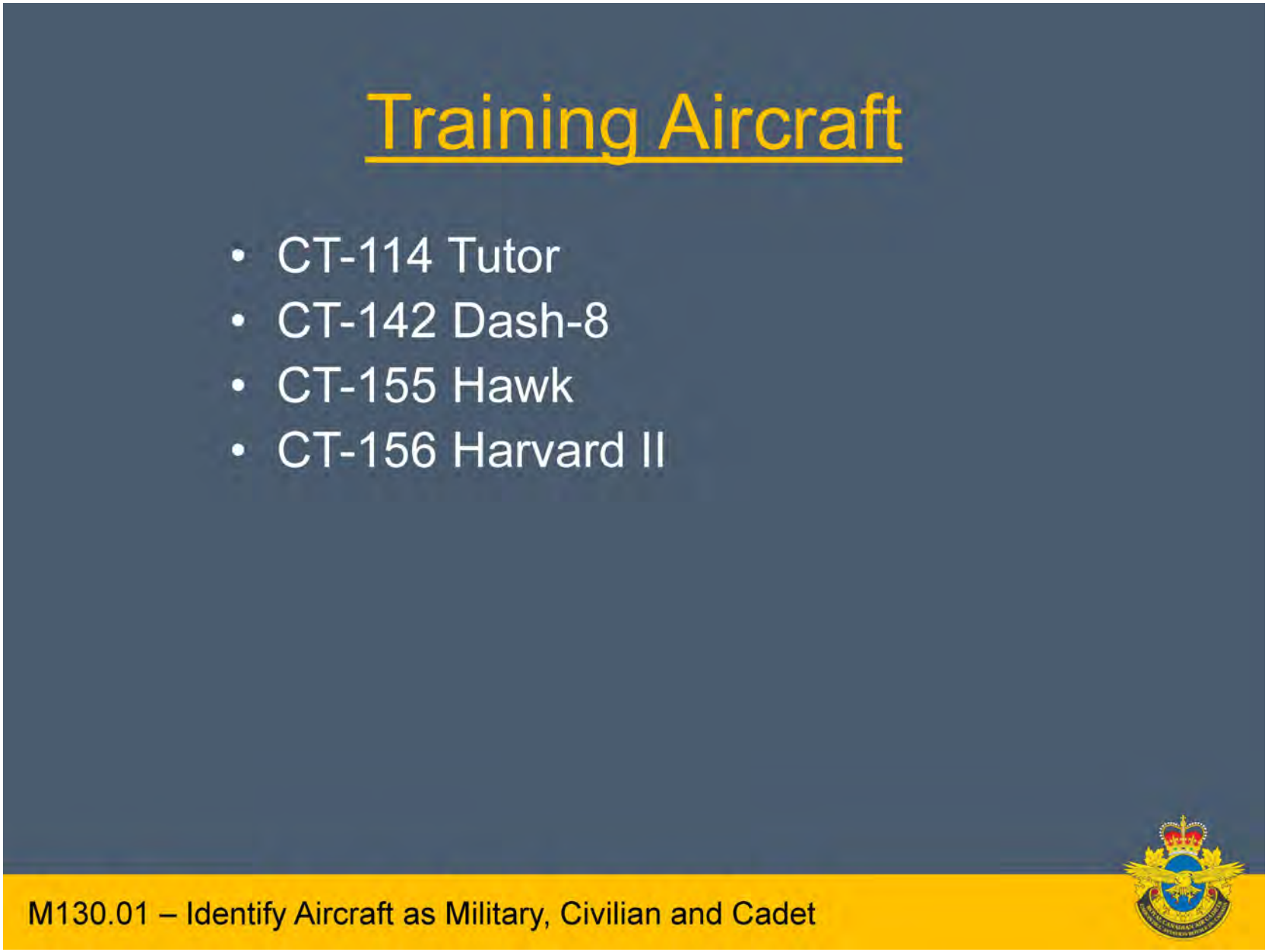
M130.01 – Identify Aircraft as Military, Civilian and Cadet

CP-140 AURORA

M130.01 – Identify Aircraft as Military, Civilian and Cadet

CP-140A ARCTURUS

M130.01 – Identify Aircraft as Military, Civilian and Cadet


Training Aircraft
• CT-114 Tutor
• CT-142 Dash-8
• CT-155 Hawk
• CT-156 Harvard II
M130.01 – Identify Aircraft as Military, Civilian and Cadet

CT-114 TUTOR

M130.01 – Identify Aircraft as Military, Civilian and Cadet

CT-142 DASH-8

M130.01 – Identify Aircraft as Military, Civilian and Cadet

CT-155 HAWK

M130.01 – Identify Aircraft as Military, Civilian and Cadet

CT-156 HARVARD II

M130.01 – Identify Aircraft as Military, Civilian and Cadet


WHAT KIND
OF
AIRCRAFT
ARE THESE?
M130.01 – Identify Aircraft as Military, Civilian and Cadet


M130.01 – Identify Aircraft as Military, Civilian and Cadet

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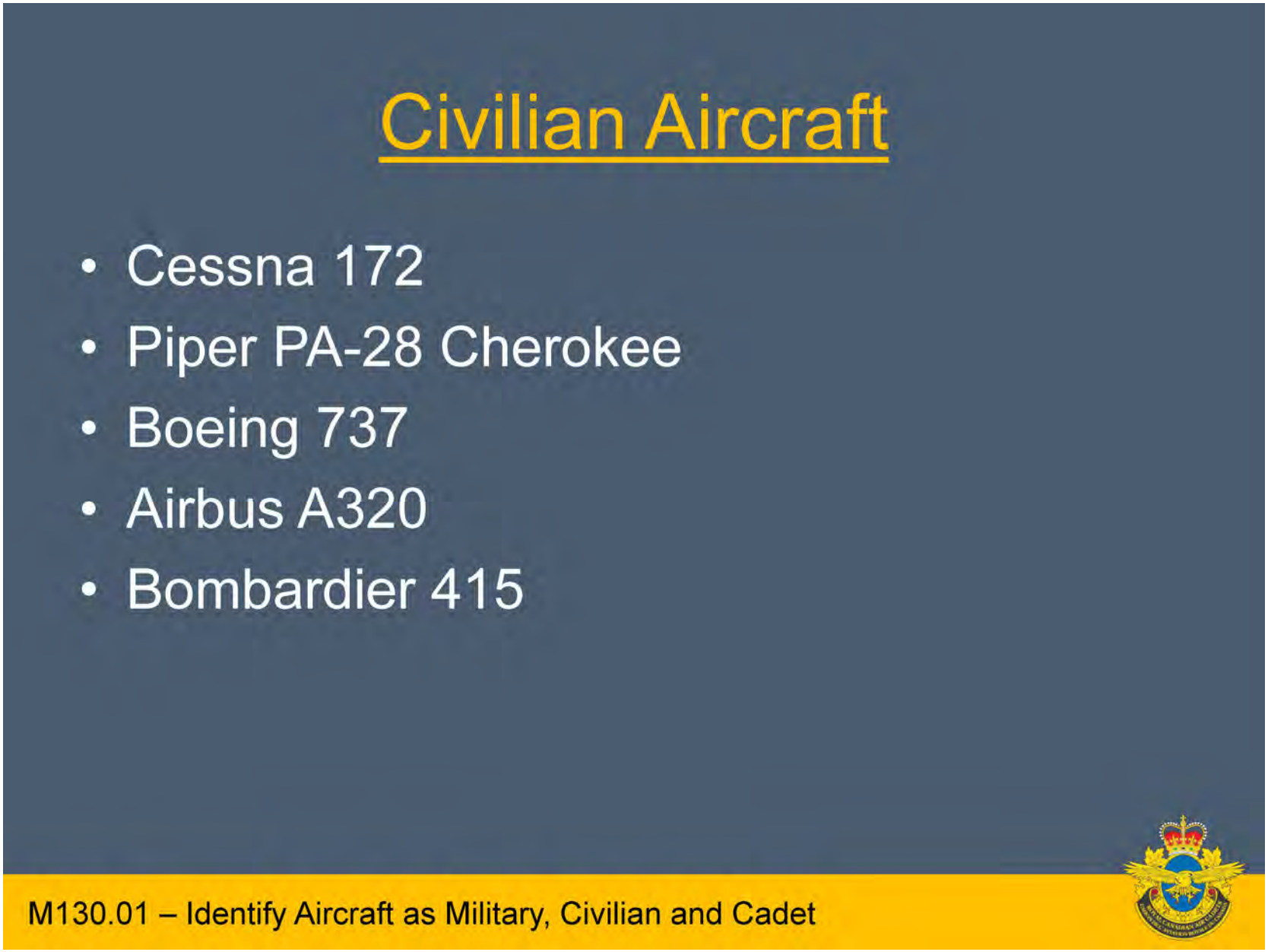
M130.01 – Identify Aircraft as Military, Civilian and Cadet


Civilian Aircraft
• Cessna 172
• Piper PA-28 Cherokee
• Boeing 737
• Airbus A320
• Bombardier 415
M130.01 – Identify Aircraft as Military, Civilian and Cadet

CESSNA 172

M130.01 – Identify Aircraft as Military, Civilian and Cadet

PIPER PA-28 CHEROKEE

M130.01 – Identify Aircraft as Military, Civilian and Cadet

BOEING 737

M130.01 – Identify Aircraft as Military, Civilian and Cadet

AIRBUS A320

M130.01 – Identify Aircraft as Military, Civilian and Cadet

BOMBARDIER 415

M130.01 – Identify Aircraft as Military, Civilian and Cadet


WHAT KIND
OF
AIRCRAFT
ARE THESE?
M130.01 – Identify Aircraft as Military, Civilian and Cadet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M130.01 – Identify Aircraft as Military, Civilian and Cadet

M130.01 – Identify Aircraft as Military, Civilian and Cadet

Cadet Aircraft

- Schweitzer SCG 2-33A
- Bellanca Scout 8 GCBC
- L19 Bird Dog – Cessna 305 (C305)
- Cessna 182P

M130.01 – Identify Aircraft as Military, Civilian and Cadet

SCHWEITZER SCG 2-33A

M130.01 – Identify Aircraft as Military, Civilian and Cadet

BELLANCA SCOUT 8 GCBC

M130.01 – Identify Aircraft as Military, Civilian and Cadet

L19 BIRD DOG – CESSNA 305

M130.01 – Identify Aircraft as Military, Civilian and Cadet

CESSNA 182P

M130.01 – Identify Aircraft as Military, Civilian and Cadet


WHAT KIND
OF
AIRCRAFT
ARE THESE?
M130.01 – Identify Aircraft as Military, Civilian and Cadet


M130.01 – Identify Aircraft as Military, Civilian and Cadet


7
C-FLNM
ROYAL CANADIAN AIR CADET
M130.01 – Identify Aircraft as Military, Civilian and Cadet

M130.01 – Identify Aircraft as Military, Civilian and Cadet

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 2

EO M130.02 – DESCRIBE THE MAIN COMPONENTS OF AN AIRPLANE

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Create enough puzzle envelopes for each group with puzzle pieces as outlined at Attachments A to D. It is recommended that the cards be printed on heavy stock (450 g/m^2 / 120 lb) paper.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for this lesson as it allows the cadets to identify and describe the major components of an airplane and it generates interest in the subject.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have described the main components of an airplane.

IMPORTANCE

A basic understanding of the components of an airplane provides a foundation for further aviation learning. It creates a familiarity that contributes to the cadets' appreciation of the familiarization flying and aviation tour experiences.

Before starting the class, split the cadets into groups as described in the activities. This allows for the class to be conducted within time limits.

Teaching Point 1 **Define aircraft and airplane. Describe the fuselage.**

Time: 5 min Method: Interactive Lecture

DEFINITIONS

Aircraft

“An aircraft is a device that is used or intended to be used for flight in the air. Some examples of aircraft are hot air balloons, blimps, gliders, planes, helicopters, and hang-gliders.”

Aviation Safety Board, 2007.

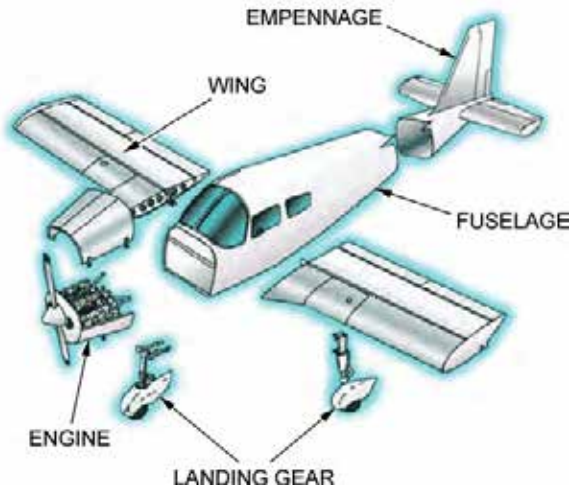
Airplane

“An airplane is a power-driven, heavier-than-air aircraft deriving its lift in flight from aerodynamic reactions (lift) on surfaces that remain fixed under given conditions of flight (wings).”

MacDonald, 2006.

FUSELAGE

The fuselage is the body of the aircraft, designed to accommodate the crew, passengers and cargo. The cockpit or crew flight deck is the part of the fuselage where the pilot and flight crew operate the aircraft. The fuselage is the structural body to which the wings, the tail section, landing gear and (in most small aircraft) the engine are attached.



Note: From Free Online Private Pilot Ground School. (2007). Private Pilot Ground School. Retrieved December 14, 2011 from http://www.free-online-private-pilot-ground-school.com/aircraft-structure.html

Figure 1 Airplane Components

ACTIVITY

Time: 1 min

OBJECTIVE

This objective of this activity is to familiarize the cadet with the five components of an airplane.

RESOURCES

Basic Airplane Component Puzzle Pieces, one set per group.

ACTIVITY LAYOUT

Divide the class into groups of four or less. Cadets will work in the same groups for all the puzzle activities.

ACTIVITY INSTRUCTIONS

1. Provide each group with an envelope of puzzle pieces.
2. Give the groups one minute to put together the puzzle.

SAFETY

Nil.

INSTRUCTOR GUIDELINES

- Confirm the puzzles are assembled correctly.
- Assist cadets experiencing difficulty with the activity.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in this activity will serve as confirmation of this TP.

Teaching Point 2 **Describe the wings.**

Time: 5 min Method: Interactive Lecture

See Figure 1 – Airplane components to reference the location of these parts.

WINGS

The fuselage is fitted with a wing on each side. The primary purpose of the wings is to support the aircraft in flight by producing lift.

The **wing root** is where the wing meets the fuselage.

The **wing tip** is the part farthest from the fuselage.

The **leading edge** is the front edge of the wing running from wing root to wing tip. The trailing edge is the back edge of the wing running from wing root to wing tip.

Ailerons are moveable surfaces that are hinged to the trailing edge of each wing, close to the wingtip. The ailerons control roll. Roll is the banking of the aircraft to the left and the right. The ailerons move in opposite directions to each other.

Flaps are moveable surface that are hinged to the trailing edge of each wing, closer to the wing root than the ailerons. They can be used during landing and take-off to provide more controlled flight at slower airspeeds. Flaps are operated with a lever or hand-wheel in the cockpit.

ACTIVITY

Time: 1 min

OBJECTIVE

The objective of this activity is to familiarize the cadet with the fuselage and wings.

RESOURCES

Fuselage and Wing Puzzle Pieces, one set per group.

ACTIVITY LAYOUT

Cadets will work in the same groups as the previous puzzle activity.

ACTIVITY INSTRUCTIONS

1. Provide each group with an envelope of puzzle pieces.
2. Give the groups one minute to put together the puzzle.

SAFETY

Nil.

INSTRUCTOR GUIDELINES

- Confirm the puzzles are assembled correctly.
- Assist cadets experiencing difficulty with the activity.

CONFIRMATION OF TEACHING POINT 2

The cadets' participation in this activity will serve as confirmation of this TP.

Teaching Point 3 **Describe the empennage.**

Time: 5 min Method: Interactive Lecture

EMPENNAGE

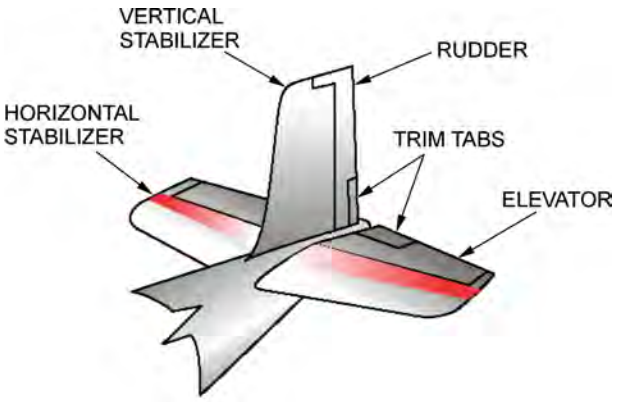
The empennage refers to the whole tail section of a plane. It includes the horizontal stabilizer, elevator, vertical stabilizer, and rudder.

The **horizontal stabilizer** is at the back of the aircraft, and helps keep the aircraft stable as it flies through the air. The horizontal stabilizer does not move.

The **elevator** is hinged to the horizontal stabilizer and is operated by moving the control column forward and backward. The elevator controls pitch. Pitch is the up and down movement of the aircraft's nose.

The **vertical stabilizer**, also called the fin, is an upright surface on the empennage. It helps keep the aircraft stable as it flies through the air. The vertical stabilizer does not move.

The **rudder** is hinged to the fin and is operated by the rudder pedals in the cockpit. The rudder controls yaw. Yaw is the side-to-side movement of the aircraft.



Note: From Free Online Private Pilot Ground School. (2007). Private Pilot Ground School. Retrieved December 14, 2011 from http://www.free-online-private-pilot-ground-school.com/aircraft-structure.html

Figure 2 Empennage Components

ACTIVITY

Time: 1 min

OBJECTIVE

The objective of this activity is to familiarize the cadet with the empennage.

RESOURCES

Empennage Puzzle Pieces, one set per group.

ACTIVITY LAYOUT

Cadets will work in the same groups as the previous puzzle activity.

ACTIVITY INSTRUCTIONS

1. Provide each group with an envelope of puzzle pieces.
2. Give the groups one minute to put together the puzzle.

SAFETY

Nil.

INSTRUCTOR GUIDELINES

- Confirm the puzzles are assembled correctly.
- Assist cadets experiencing difficulty with the activity.
- This puzzle will attach to the puzzle from TP2.

CONFIRMATION OF TEACHING POINT 3

The cadets' participation in this activity will serve as confirmation of this TP.

Teaching Point 4 **Describe the landing gear.**

Time: 5 min Method: Interactive Lecture

LANDING GEAR

Landing gear on an airplane is like the tires on a car. The landing gear supports the aircraft when it is on the ground and absorbs the shock of landing. All aircraft have their landing gear under the main part of the fuselage or wings. Landing gear can be fixed or retractable. Fixed gear is attached to the airplane in a permanent position. Retractable gear can fold up into the wings or the fuselage.

There are two main landing gear configurations. Both configurations have the main wheels or main gear toward the middle of the aircraft. In a nose wheel configuration (also called tricycle) there is another wheel or gear under the nose. In a tail wheel configuration (also called conventional or tail dragger) there is another wheel or gear under the tail.

Note: From Bush-Planes.com. Best bush planes: flying. Retrieved December 14, 2011 from http://www.bush-planes.com/index.html

Figure 3 Nose Gear v. Tail Gear

CONFIRMATION OF TEACHING POINT 4

The cadets' participation in this activity will serve as confirmation of this TP.

Teaching Point 5 **Describe the propulsion system.**

Time: 5 min Method: Interactive Lecture

PROPULSION SYSTEM

Power is produced by an internal combustion engine (the same as a car) with a two or three bladed propeller or a gas turbine (jet) engine. A jet can be used to power a propeller – this is called a turboprop engine.

The cowling (also called the nacelle) is like the hood of a car. It encloses the engine and streamlines the airplane to reduce drag. The cowling provides cooling of the engine by ducting cool air around the engine.

ACTIVITY

Time: 1 min

OBJECTIVE

This objective of this activity is to familiarize the cadet with the landing gear and propulsion system.

RESOURCES

Landing Gear and Propulsion System Puzzle Pieces, one set per group.

ACTIVITY LAYOUT

Cadets will work in the same groups as the previous puzzle activity.

ACTIVITY INSTRUCTIONS

1. Provide each group with an envelope of puzzle pieces.
2. Give the groups one minute to assemble the puzzle.

SAFETY

Nil.

INSTRUCTOR GUIDELINES

- Confirm the puzzles are assembled correctly.
- Assist cadets experiencing difficulty with the activity.
- This puzzle will attach to the puzzle from TP3.

CONFIRMATION OF TEACHING POINT 5

The cadets' participation in this activity will serve as confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the activities will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING/PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Being able to describe the main components of an airplane gives the cadets the knowledge needed to appreciate and successfully participate in further aviation lessons.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A3-001 A-CR-CCP-263/PT-001 *From the ground up: Millennium edition (28th edition)*. (2000). Ottawa, ON: Aviation Publishers.

C3-023 *Electronic Code of Federal Regulations Title 14: Aeronautics and Space, Section 1.1 (2005)*. Retrieved 25 April 2006 from www.ecfr.gpoaccess.gov

C3-346 Bush-Planes.com. *Best bush planes: flying. Retrieved December 14, 2011 from http://www.bush-planes.com/index.html*

C3-347 Free Online Private Pilot Ground School. (2007). *Private Pilot Ground School*. Retrieved December 14, 2011 from http://www.free-online-private-pilot-ground-school.com/aircraft-structure.html

C3-348 FAA-Aircraft-Certification.com. *Your complete guide to FAA aircraft certification*. (2007). Retrieved October 17, 2011, from http://www.faa-aircraft-certification.com/faa-definitions.html#H

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 3

EO M130.03 – CONSTRUCT A MODEL AIRPLANE

Total Time: 60 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering this lesson.

Prepare a completed model airplane and collect model material and tools.

Photocopy Paper Model Assembly Instruction located at Attachment A and Attachment B, one for each cadet.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An in-class activity was chosen for TP 1 as it is an interactive way to present the content and the construction of a model airplane.

A group discussion was chosen for TP 2 as it allows the cadets to interact with their peers and share their knowledge about building a model airplane.

INTRODUCTION

REVIEW

The review for this lesson is EO M130.02.

OBJECTIVES

By the end of this lesson the cadet shall have constructed a model airplane.

IMPORTANCE

Cadets have learned to identify the components of an airplane. This knowledge will be useful during familiarization flights, hangar visits, and other aviation activities. Being able to construct a model airplane provides cadets a method of confirming their knowledge of airplane components.

Teaching Point 1 **Construct a model airplane.**

Time: 45 min Method: In-Class Activity

ACTIVITY

Time: 30 min

OBJECTIVE

The objective of this activity is to have the cadets construct a model airplane.

The purpose of this model is to incorporate the major components as discussed in M130.02 – NOT to build a flying model. With the propeller and landing gear attached, this model will be too heavy to fly. The assembly time provided in this lesson does not allow sufficient drying time to produce an airworthy model. Aerodynamic features of assembly have been omitted for simplicity.

RESOURCES

- Paper model template (one per cadet),
- Instruction sheet located at Attachment A (one per cadet),
- Thumbtack (one per cadet),
- 1” binder clip (one per cadet),
- Scissors (one pair per cadet),
- Glue stick (one stick per two cadets), and
- Markers (to be shared by all cadets).

ACTIVITY LAYOUT

Nil.

Supervise the cadets’ work to ensure that they are following the instructions provided.

While supervising and assisting as needed, ask cadets to identify parts of the airplane.

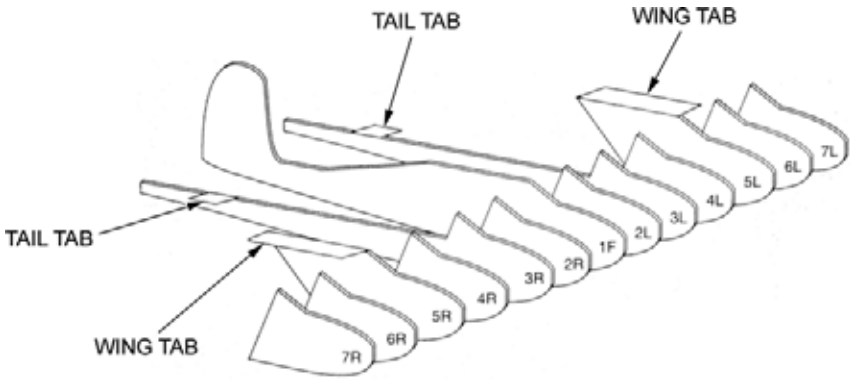
Ensure cadets identify the leading and trailing edges of the wings and attach the wings facing the correct direction

Ask other instructors to assist in supervising the activity and assisting in answering questions.

ACTIVITY INSTRUCTIONS

1. Provide the cadets with the instructions sheet located at Attachment A.
2. Have the cadets cut out all the airplane pieces. Cadets must be careful not to mix their pieces with others around them.

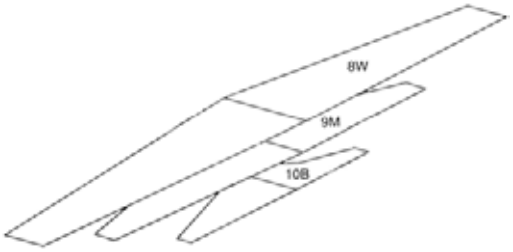
3. Have the cadets assemble the fuselage by gluing pieces 1F through 7R and 7L to build up fuselage layers, carefully aligning parts. Ensure that the entire contacting surface of a smaller piece being fastened to a larger one is completely covered with glue.



Adapted from Fabulous Paper Gliders

Figure 1 Fuselage Assembly

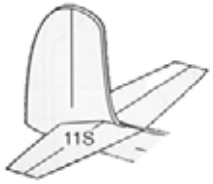
4. Have the cadets assemble the wings by gluing 9M to the bottom of wing part 8W. Glue 10B to the bottom of 9M making sure the wing parts are aligned along the centreline. Fold down the wing tabs on the fuselage, and apply glue to them. Fasten the wing assembly to the fuselage.



Adapted from Fabulous Paper Gliders

Figure 2 Wing Assembly

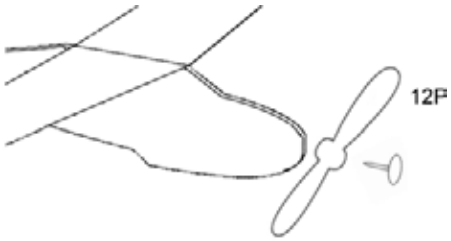
5. Have the cadets assemble the tail by folding down the tail tabs on the fuselage, and applying glue to them. Fasten the horizontal stabilizer 11S to the fuselage.



Adapted from Fabulous Paper Gliders

Figure 3 Tail Assembly

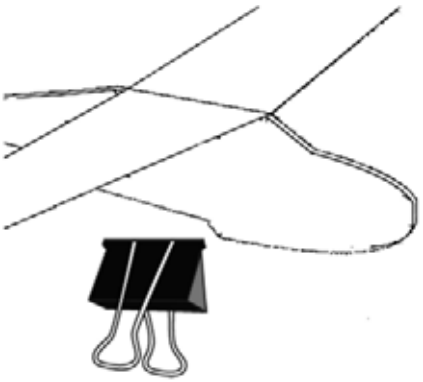
6. Have the cadets attach the propeller by piercing the centre of 12P with the thumbtack, and pushing the thumbtack into the centre of the fuselage assembly.



Adapted from Fabulous Paper Gliders

Figure 4 Propeller Assembly

7. Have the cadets attach the landing gear by clipping the binder clip to the bottom of the fuselage, underneath the wings.



Adapted from Fabulous Paper Gliders

Figure 5 Landing Gear Assembly

8. Have the cadets color the model as desired.

9. Have the cadets clean up, discarding all scrap paper and return materials.

Once the activity has been completed, examine the model airplanes to ensure that all of the components are assembled correctly.

SAFETY

Care should be taken when handling the thumbtacks, scissors, and glue.

INSTRUCTOR GUIDELINES

Nil.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in the assembly of an airplane will serve as the confirmation of this TP.

Teaching Point 2 **Participate in a group discussion on parts of an airplane and constructing the model airplane.**

Time: 5 min Method: Group Discussion

TIPS FOR ANSWERING/FACILITATING DISCUSSION:

- Ask questions that help facilitate discussion; in other words, avoid questions with yes or no answers.
- Prepare questions ahead of time.
- Be flexible (you are not bound to only the prepared questions).
- Encourage cadets to participate by using praise such as “great idea” or “excellent response, can anyone add to that?”.
- Try to involve everyone by directing questions to non-participants.

SUGGESTED QUESTIONS:

Q1. What did you learn about airplane parts from this activity?

Q2. How did this activity help you understand airplanes better?

CONFIRMATION OF TEACHING POINT 2

The cadets' participation in the group discussion will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

Review the components of an airplane with the following questions, using the model created by the cadets as a training aid. Point out the various components of an airplane discussed in the previous class.

SUGGESTED QUESTIONS:

Q1. What is the purpose of the landing gear?

Q2. Where are the ailerons located?

Q3. What movement does the rudder produce?

SUGGESTED ANSWERS:

A1. The landing gear supports the aircraft when it is on the ground and absorbs the shock of landing.

A2. Ailerons are hinged to the trailing edge of each wing, close to the wingtip. .

A3. The rudder controls the movement called yaw. Yaw is the side-to-side movement of the aircraft.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Model building is an excellent opportunity to apply theoretical knowledge. Being able to identify and describe the main components of an airplane allows the cadets to more actively participate aviation activities.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A3-001 A-CR-CCP-263/PT-001 *From the Ground Up: Millennium Edition* (2000). Ottawa, ON: Aviation Publishers Co. Limited.

C3-017 ISBN 1-895569-23-0 Schmidt, N. (1998). *Fabulous Paper Gliders*. Sterling Publishing: New York, NY.

PAPER MODEL ASSEMBLY INSTRUCTIONS

1. Cut out all the airplane pieces. Be careful not to mix your pieces with others.

2. Glue pieces 1F through 7R and 7L to build up fuselage layers, carefully aligning parts. Ensure that the entire contacting surface of a smaller piece being fastened to a larger one is completely covered with glue.

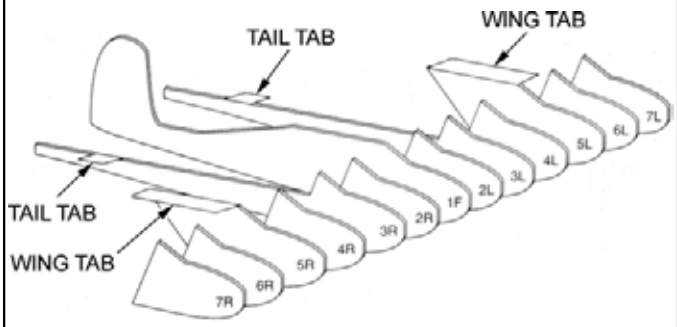


Figure A-1 Fuselage Assembly

3. To assemble the wings, glue 9M to the bottom of wing part 8W. Then glue 10B to the bottom of 9M. Make sure the wing parts are aligned along the centreline. Fold down the wing tabs on the fuselage, and apply glue to them. Fasten the wing assembly to the fuselage.

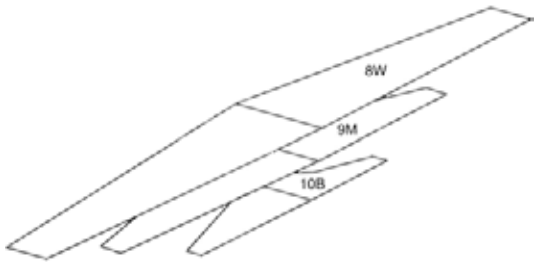


Figure A-2 Wing Assembly

4. To assemble the tail, fold down the tail tabs on the fuselage, and apply glue to them. Fasten the horizontal stabilizer 11S to the fuselage.

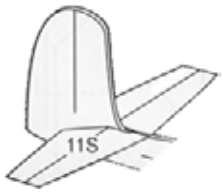


Figure A-3 Tail Assembly

5. To attach the propeller, pierce the centre of 12P with the thumbtack, and push the thumbtack into the centre of the fuselage assembly.

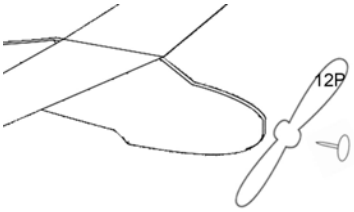


Figure A-4 Propeller Assembly

6. To attach the landing gear, clip the binder clip to the bottom of the fuselage, underneath the wings.

Figure A-5 Landing Gear Assembly

7. Color the model as desired.

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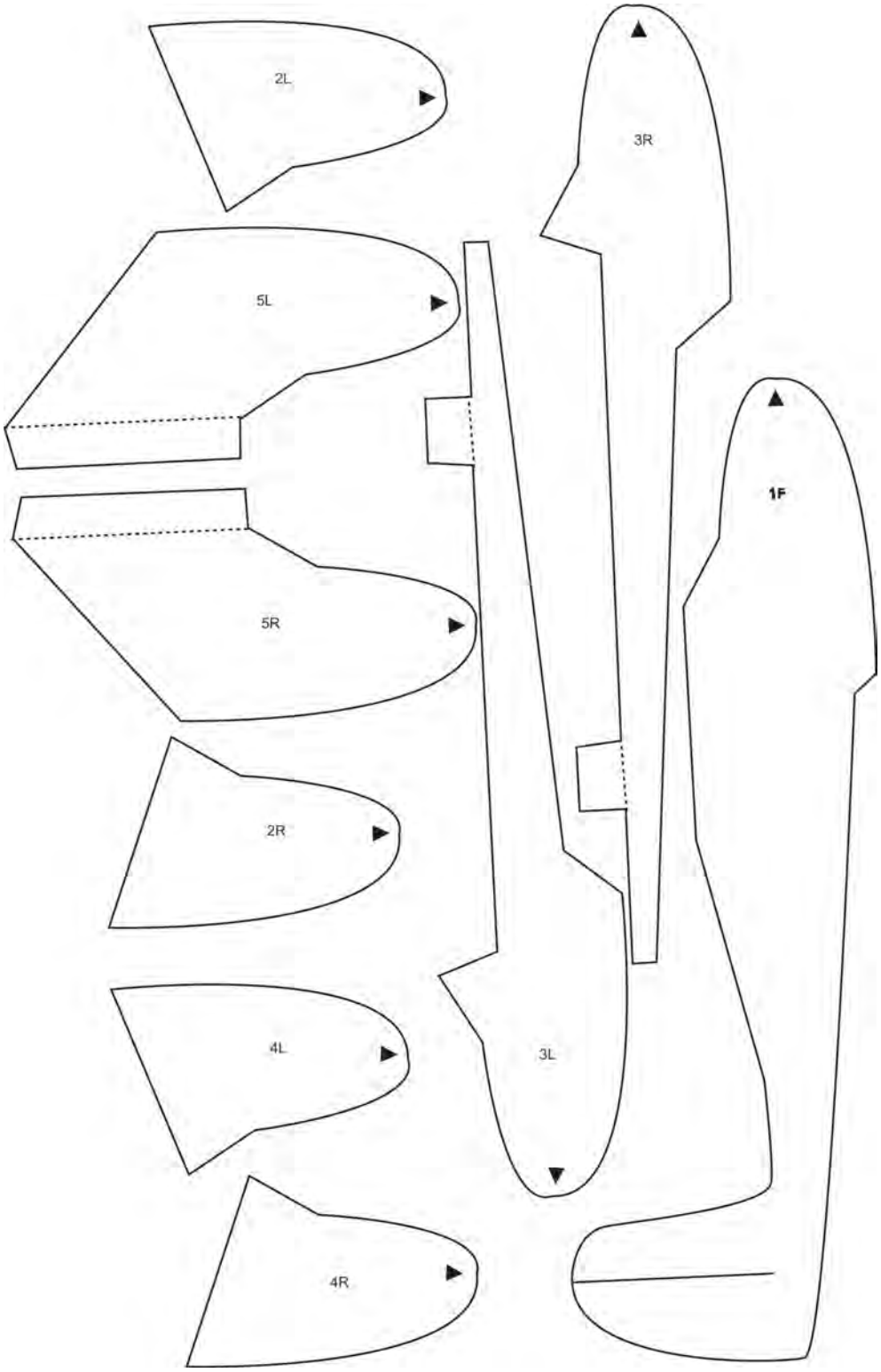
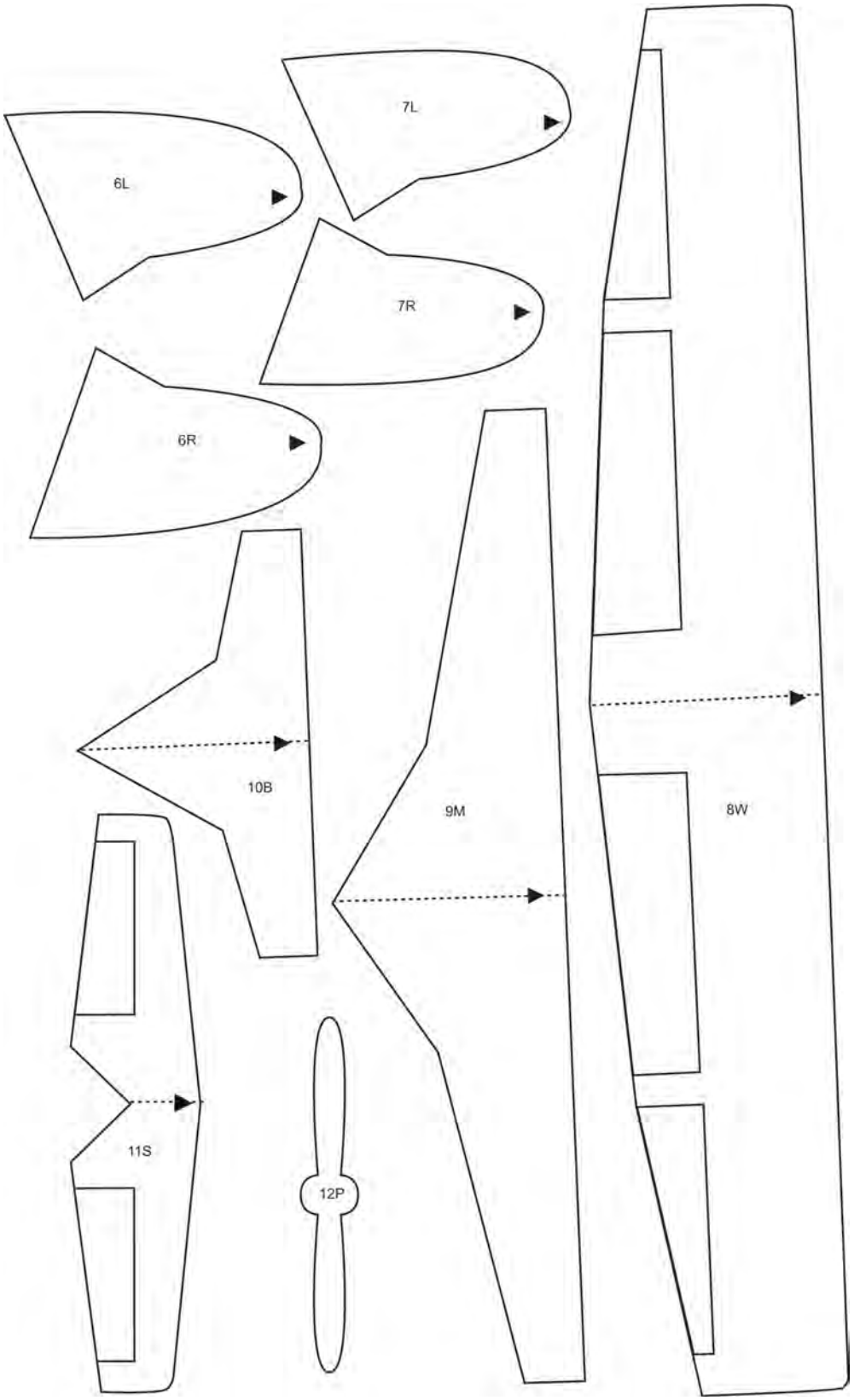

2L
3R
5L
1F
5R
2R
4L
3L
4R


7L
6L
7R
6R
10B
9M
8W
11S
12P

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 4

EO M130.04 – WATCH AN *ON CANADIAN WINGS* SEGMENT

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering this lesson.

Prepare a suitable classroom area with available media.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An in-class activity was chosen as it is an interactive way to present the content.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have watched an *On Canadian Wings* segment.

IMPORTANCE

Discovering Canadian aviation history will give cadets a better understanding of the current role of aviation in Canada. Knowledge gained in this lesson will assist in stimulating an interest in the RCAF.

Teaching Point 1 **Watch an *On Canadian Wings* segment.**

Time: 25 min Method: In-Class Activity

ACTIVITY

Time: 25 min

OBJECTIVE

The objective of this activity is to become familiar with Canadian aviation history through watching an episode of *On Canadian Wings*.

RESOURCES

Select one video segment. The video segments include the following information:

EPISODE: CANADA'S FIRST FLIGHT

The shaky flights of flying machines sow the seeds for military aviation. Soon hundreds of Canadian flying cadets are shown dashing around in their biplanes. Canada's first aircrews are on their way to war.

Length (00:13:26)

EPISODE: AERIAL WARFARE

Canadian aircrews serve in fighter squadrons at Dunkirk and go into action against German Zeppelins, seaplanes and U-boats. Canadian flying aces Major Billy Bishop, Major Raymond Collishaw and Major Billy Barker become household names.

Length (00:12:22)

EPISODE: THE BIRTH OF A NATIONAL AIR FORCE

With little fanfare, the RCAF comes into being on April 1, 1924. As war clouds loom over Europe, the new air force is on active service. The RCAF grows to the fourth largest air force of the allied nations.

Length (00:11:58)

EPISODE: THE AERODROME OF DEMOCRACY

Canadian squadrons see sustained combat in the Battle of Britain and help to keep the sea lanes from Canada to England open. RCAF schools across Canada train more than 150,000 Commonwealth air and groundcrews.

Length (00:12:48)

EPISODE: SOME OF THE FEW

Flying aces F/L Buzz Beurling, Wing Commander Johnnie Johnson and Flight Lt. D.E. Hornell are immortalized with a string of spectacular wartime successes.

Length (00:12:22)

EPISODE: BOMBS OVER EUROPE

The famous No. 6 Bomber Group is formed as the bomber offensive heats up over Europe. Squadron Leader Ian Bazalgette and Pilot Officer Andrew Mynarski each earned a Victoria Crosses (VC).

Length (00:12:55)

EPISODE: FAST TIMES FOR THE GOLDEN JETS

Canadian aircrews are again involved in combat over Korea. The Golden Hawks formation flying team of F86 Sabres – the Spitfires of the jet age, dazzle audiences around the world.

Length (00:12:37)

EPISODE: A TIME OF TRANSITION

Canada develops the Avro Arrow – a supersonic jet fighter that could out fly anything in the world. The Diefenbaker government mysteriously cancels the project and destroys all drawing and prototypes.

Length (00:11:57)

EPISODE: THERE SHALL BE WINGS

Canada's air force support North Atlantic Treaty Organization (NATO) and United Nations (UN) operations in the Balkans, the Middle East, Africa, Central America and Haiti, and humanitarian relief worldwide.

Length (00:13:00)

ACTIVITY LAYOUT

Arrange the room to ensure all cadets are able to see and hear the video segment.

ACTIVITY INSTRUCTIONS

1. Introduce the video segment to be shown.
2. Show the complete video segment.
3. Following the segment, have the cadets answer questions specific to the chosen segment.

SAFETY

Nil.

INSTRUCTOR GUIDELINES

Choose one of the following sets of questions to pose, based on the segment selected.

CONFIRMATION OF TEACHING POINT 1

SUGGESTED QUESTIONS:

Canada's First Flight

Q1. Who were the founding members of the Aerial Experimental Association?

Q2. What was the name of the aircraft they initially used?

Q3. In which year did the first aviation policy appear?

Q4. How many people were members of the Canadian aviation corps?

A1. Alexander Graham Bell, J.A.D. McCurdy, Casey Bothman.

A2. The Silver Dart.

A3. 1907.

A4. Three People.

Aerial Warfare

Q1. How long did the strategic bombing campaign last?

Q2. How many zeppelins were destroyed during World War 1 (WW 1)? How many by Canadians?

Q3. Who was Billy Bishop and what did he do?

A1. One Year.

A2. 12 destroyed, 6 of them by Canadians.

A3. Billy Bishop was one of the first Canadian aviation aces. He had 72 confirmed victories and was decorated with the Victoria Cross.

The Birth of a National Air Force

Q1. What major event occurred in 1920?

Q2. What was the goal of military aviation at that time?

Q3. Where was the largest pilot training camp situated?

Q4. In 1937 the RCAF was given a very precise mandate, what was that mandate?

A1. The CAF was dismantled.

A2. Cartography, medical evacuations, ice patrols, surveillance and fighting forest fires.

A3. Borden, Ontario.

A4. To defend Canadian airspace.

The Aerodrome of Democracy

Q1. What was Canada's role at the beginning of WW 2?

Q2. Most of the pilots were trained on which aircraft?

Q3. How many Squadrons were initially based in Halifax?

Q4. How many U-boats did the RCAF sink?

A1. Canada was an immense centre of pilot training for the Commonwealth nations.

A2. Tiger Moth.

A3. Five.

A4. Twenty-seven.

Some of the Few

Q1. Name the ace of Canadian aces during WW II?

Q2. Which Canadian squadron was victorious over the most enemy aircraft in 1944 and how many aircraft did they shoot down?

Q3. Name the two new types of aircraft used by Canada as the end of the war approached.

A1. Buzz Beurling.

A2. 418 Sqn with 103 confirmed victories.

A3. Mustang, Typhoon, and Mosquito.

Bombs over Europe

Q1. What was the first Canadian bomber Squadron and when was it created?

Q2. Which bombers did Canadians use?

Q3. Who was the commander of the first all-Canadian Squadron in Great Britain?

A1. 405 Sqn was formed in April 1941.

A2. Wellington, Halifax, Lancaster, Liberator, and Mosquito.

A3. Johnny Fauquier.

Fast times for the Golden Jets

Q1. In 1948, Canada acquired numerous aircraft. What were they and how many were acquired?

Q2. Canada was divided, due to resources, into several search and rescue regions. How many regions and how many aircraft were assigned to this task?

Q3. What was the name of the aircraft and the training base used in the formation of the first military aviation demonstration team?

Q4. Canada began the construction of its own all-Canadian aircraft. What was its name?

A1. Eighty-five Vampires.

A2. Five regions and 34 aircraft.

A3. Blue Devils flew Vampires at St-Hubert, Quebec (QC).

A4. CF-100 Canuck.

A Time of Transition

Q1. What aircraft was supposed to replace the CF-100?

Q2. Following the failure of the Avro Arrow, which aircraft did Canada buy?

Q3. What major event occurred in 1968?

Q4. New aircraft appeared during this period. Name at least 3 of them.

A1. The Avro Arrow.

A2. F-101 Voodoo.

A3. The unification of the three branches of the Canadian Forces.

A4. Caribou, Buffalo, Hercules, Tutor, Dassault Falcon, Sea King, and CF 5 Freedom Fighter.

There Shall be Wings

Q1. In which year was the aerial command group formed?

Q2. In which year did the first CF-18 (CF-188 Hornet) arrive in Canada?

Q3. How many Canadian CF-18s were sent to serve during the Gulf War?

A1. 1975.

A2. 1981.

A3. Twenty-four.

END OF LESSON CONFIRMATION

The cadet's participation in the activity will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Discovering Canadian aviation history will give cadets a better understanding of the current role of aviation in Canada. Knowledge gained in this lesson will assist in stimulating an interest in the RCAF.

INSTRUCTOR NOTES / REMARKS

The instructor shall choose only one segment to watch for the mandatory period.

The instructor may choose to view and discuss additional segments as part of complementary training, C130.03 (Watch an *On Canadian Wings* Segment).

REFERENCES

C3-039 Squires, C. (1999). *On Canadian wings* [Series]. Winnipeg, MB: PWGSC.

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 5

EO C130.01 – PARTICIPATE IN A WALK-AROUND AIRCRAFT INSPECTION

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Ensure access to single engine, non-high performance airplane.

Arrange for 1 qualified pilot per 10 cadets (maximum group size) to conduct the inspection.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An in-class activity was chosen for TP 1 as it is an interactive way to present a walk-around aircraft inspection.

A group discussion was chosen for TP 2 as it allows the cadets to interact with their peers and share their knowledge about and experience with walk-around aircraft inspection.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have participated in a walk-around aircraft inspection.

IMPORTANCE

Carefully inspecting an airplane before flight is one way the pilot ensures that the airplane is operational and safe. The walk-around inspection is an opportunity to apply knowledge of major airplane components. It is an introduction to the culture of safety that surrounds aviation.

Teaching Point 1 **Supervise a walk-around aircraft inspection.**

Time: 20 min Method: In-Class Activity

BACKGROUND KNOWLEDGE

This information is representative only. Always refer to and follow the recommendations of the manufacturer in carrying out any inspections and procedures. Individual models of airplane may have special procedures and inspection guidelines that may vary from the information given in this guide.

GENERAL

Flight safety includes the possession of knowledge, using common sense, and self-discipline. Thorough inspections and following established procedures allows a pilot to ensure that important safety considerations are not overlooked. One of these practices is conducting a walk-around inspection of the aircraft before a flight. The purpose of the walk-around is to notice any damage or condition that may pose a safety hazard to the flight. A walk-around can identify problems early in the flight preparation process, so that changes can be made if necessary (eg, minor repairs, changing aircraft, etc.). If any damage is noticed, it should be brought to the attention of an aircraft maintenance engineer, and noted in the aircraft's technical logbook. It is ultimately the pilot's decision whether an aircraft is in condition to fly. It is always better to make a decision on the side of safety, than to be caught in a potentially dangerous situation while flying.

CABIN

Before beginning the external inspection of the airplane, there are some preparatory things to be done inside the cabin.

Control locks should be removed. The control lock is a device that makes the control column / yolk immobile, so that the control surfaces (ailerons and elevators) do not move in the wind.

The pilot should ensure that the ignition is off, to avoid an unintended engine start.

The master switch controls power to the electrical systems in the airplane. The master switch should be turned on to supply power to the fuel gauges and the flaps. The fuel level indicated on the fuel gauges should be noted. This indicated level is cross-checked with a visual check of the actual fuel levels. The flaps should be fully lowered. The master switch should then be turned off to avoid draining the battery.

WINGS

Aircraft that are parked outside overnight are usually tied down to anchors beneath the wings and tail. The wing tie-downs should be removed from the airplane. There may be external control locks placed over the ailerons to prevent movement. These should be removed.

The flap sliders should be inspected to ensure secure attachment and minimal "play" or unwanted freedom of movement.

The aileron attachment points should be inspected to ensure security. The ailerons should be moved through their full range of motion to confirm correct and free movement.

All wing surfaces, the leading edge, and the trailing edge should be checked for dents, tears, cracks, wrinkles, bulges or missing rivets.

A small amount of fuel should be drained from the fuel tank drain valve and visually checked to see if there is any water or sediment in the fuel. Water appears as bubbles at the bottom of the cup as water is heavier than fuel. The fuel should also be checked to see that it is the correct fuel grade. Different grades of fuel are different colours. One hundred low lead is the fuel grade most commonly used in light aircraft, and is coloured blue.

The fuel levels should be visually confirmed by removing the fuel cap and using a dipstick. The fuel cap must be properly secured after checking the fuel.

The pitot tube is connected to the instruments in the cockpit. In order for it to work properly, it must be clear of obstructions.

FUSELAGE

The baggage compartment should be checked to see if there is anything stored there that may be required for the flight, such as a survival kit. Knowing what is on board the airplane is important for calculating the weight and balance.

All fuselage surfaces should be checked for dents, tears, cracks, wrinkles, bulges or missing rivets.

The static port is connected to the instruments in the cockpit. In order for it to work properly, it must be clear of obstructions.

EMPENNAGE

If the aircraft is tied down, the tie-downs from the tail must be removed. External control locks should be removed.

All empennage surfaces should be checked for dents, tears, cracks, wrinkles, bulges or missing rivets.

The rudder and elevator attachment points should be inspected to ensure security. The rudder and elevator should be moved through their full ranges of motion to confirm correct and free movement.

LANDING GEAR

Wheel chocks are used to keep the airplane from rolling while parked. They should be removed.

The wheels and brakes should be checked to ensure there is no excessive wear or fluid leaks.

The tires should be checked to ensure they are properly inflated and there are no signs of excessive wear or damage.

ENGINE

Extra caution should always be exercised around the propeller arc. The propeller should be checked for damage or evidence of a propeller strike. This could indicate damage to the engine.

The openings to the cowling should be checked for obstructions, particularly bird or animal nests.

The oil level is checked with a dipstick, and should be within the prescribed limits. The cap and dipstick must be secured after checking the oil.

A small amount of fuel should be drained from the main fuel strainer to clear any water or sediment that may have accumulated.

ACTIVITY

Time: 20 min

The cadets should be guided through a complete walk-around inspection. The instructor / pilot should cover all of the relevant information provided in the background information section of this guide.

OBJECTIVE

The objective of this activity is designed to familiarize the cadet with the procedures of a walk-around aircraft inspection.

RESOURCES

- Single engine, non-high performance airplane,
- Operator's manual inspection checklist for the aircraft type,
- Fuel dipstick, and
- Fuel drain cup.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Divide the cadets into groups of ten or less. Brief all cadets on the safety guidelines before beginning the inspection.
2. If there is more than one group inspecting one plane, they should start at opposite points (eg, opposite wings, or nose and tail).
3. Have the groups walk around and conduct an aircraft inspection.

SAFETY

- Caution should always be exercised around the propeller arc.
- Indentify boundaries.
- Only the aircraft involved in the lesson can be touched.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in the activity will serve as the confirmation of this TP.

Teaching Point 2 **Lead a group discussion about what the cadets learned and found interesting.**

Time: 5 min Method: Group Discussion

BACKGROUND INFORMATION

Background Information

You have had the opportunity to participate in a walk-around aircraft inspection during which you saw the process to inspection various parts of the aircraft. The walk-around aircraft inspection can identify problems that require minor repairs or changing the aircraft that is not serviceable.

DISCUSSION QUESTIONS

TIPS FOR ANSWERING / FACILITATING DISCUSSION:

- Establish ground rules for discussion, eg, everyone should listen respectfully; don't interrupt; only one person speaks at a time; no one's ideas should be made fun of; you can disagree with ideas but not with the person; try to understand others as much as you hope they understand you; etc.
- Sit the group in a circle, making sure all cadets can be seen by everyone else.
- Ask questions that will provoke thought; in other words avoid questions with yes or no answers.
- Manage time by ensuring the cadets stay on topic.
- Listen and respond in a way that indicates you have heard and understood the cadet. This can be done by paraphrasing their ideas.
- Give the cadets time to respond to your questions. Ensure every cadet has an opportunity to participate. One option is to go around the group and have each cadet answer the question with a short answer. Cadets must also have the option to pass if they wish.
- Additional questions should be prepared ahead of time.

Cadets can be divided into more than one group to conduct the group discussion. This enables all cadets the opportunity to participate in the discussion if the initial group is too large. Assistant instructors will be needed to conduct this activity.

SUGGESTED QUESTIONS:

Q1. Why is it important to conduct a walk-around aircraft inspection?

Q2. What would a pilot do if damage to the airplane is noticed?

Q3. How would a pilot change the walk-around procedure if the pilot was in a hurry to go flying?

(The pilot wouldn't! Procedures, checklists, and inspections are too important!)

Other questions and answers will develop throughout the discussion stage. The group discussion should not be limited to the suggested questions.

Reinforce those answers given and comments made during the group discussion, ensuring the teaching point is covered. Cadets should be given time to share information, experiences and feelings about the aircraft inspection.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

The walk-around inspection is one of the procedures followed to ensure the safety of a flight. Carefully following procedures on every flight is very important to ensure nothing is overlooked. Safety is paramount in aviation.

INSTRUCTOR NOTES / REMARKS

This lesson should be conducted by a qualified pilot / in conjunction with familiarization flying.

REFERENCES

A3-001 A-CR-CCP-263/PT-001 *From the ground up: Millennium edition (28th edition)*. (2000). Ottawa, ON: Aviation Publishers.

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 6

EO C130.02 – IDENTIFY INTERNATIONAL AIRCRAFT

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Prepare PowerPoint presentation or a slideshow with pictures located at Attachment A.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for this lesson to orient the cadets to identifying international aircraft and generate interest.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have identified international aircraft.

IMPORTANCE

Being able to identify international aircraft supports the aim of stimulating an interest in the aviation community. Cadets can use this knowledge when visiting an aerodrome, at a local air show, or while attending a CSTC.

Teaching Point 1 **Describe American aircraft.**

Time: 15 min Method: Interactive Lecture

F/A-22A RAPTOR

The F/A-22A Raptor is the United States Air Force's (USAF) newest fighter aircraft. Its combination of stealth, supercruise, manoeuvrability and integrated avionics represents an exceptional leap in war fighting capabilities. Its primary role is air dominance. The Raptor performs both air-to-air and air-to-ground missions. Also, it produces more thrust than any current fighter. The combination of the increased thrust and its unique aerodynamic design allows the aircraft to cruise at supersonic speeds without using afterburner. The Raptor is manufactured by Lockheed-Martin and is powered by two Pratt & Whitney F119-PW-100 turbofan engines with afterburners.

United States Air Force website, http://www.af.mil

Figure 1 F/A-22A Raptor

United States Air Force website, http://www.af.mil

Figure 2 F/A-22A Raptor

A-10 THUNDERBOLT II

The A-10 Thunderbolt II is the first USAF aircraft specially designed for close air support of ground forces. The A-10 can be used against all ground targets including tanks and other armoured vehicles. Its wide combat

radius and short takeoff and landing capability permit operations in and out of locations near front lines. The Thunderbolt is distinguished by its 30mm GAU-8/A Gatling gun. This weapon is mounted on the nose, can fire 3 900 rounds per minute and can defeat an array of armoured vehicles. The A-10 is manufactured by Fairchild Republic Company and is powered by two General Electric TF34-GE-100 turbofans mounted high on the rear of the aircraft.

United States Air Force website, http://www.af.mil

Figure 3 A-10 Thunderbolt II

United States Air Force website, http://www.af.mil

Figure 4 A-10 Thunderbolt II

F-117A NIGHTHAWK

The F-117A Nighthawk is the world's first operational aircraft designed to use low observable stealth technology. This technology allows the aircraft to not be easily detected by radar. This precision strike aircraft penetrates high threat airspace and uses laser-guided weapons systems against critical targets. The Nighthawk created a revolution in military warfare by incorporating low observable technology into operational aircraft. It has a sleek design that allows for its stealth technology to be very effective. The F-117A is manufactured by Lockheed-Martin and is powered by two GE F404 non-afterburning engines.

United States Air Force website, http://www.af.mil

Figure 5 F-117A Nighthawk

United States Air Force website, http://www.af.mil

Figure 6 F-117A Nighthawk

B-52 STRATOFORTRESS

The B-52 is a long-range heavy bomber that can perform a variety of missions. The bomber is capable of flying at high subsonic speeds at altitudes up to 50 000 feet. It can carry nuclear or precision-guided weapons. The B-52 is a large aircraft with a length of 159 feet 4 inches and a wingspan that measures 185 feet. The Stratofortress is manufactured by Boeing Military Airplane Company and is powered by eight Pratt & Whitney TF33-P-3/103 turbofan engines.

United States Air Force website, http://www.af.mil

Figure 7 B-52 Stratofortess

United States Air Force website, http://www.af.mil

Figure 8 B-52 Stratofortess

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. What is distinctive about the A-10 Thunderbolt II?

Q2. What type of weapons systems does the F-117A Nighthawk use against critical targets?

Q3. How long is the wingspan of the B-52 Stratofortress?

ANTICIPATED ANSWERS:

A1. The nose mounted 30mm Gatling gun.

A2. Laser guided.

A3. One hundred and eighty-five feet.

Teaching Point 2 **Describe British aircraft.**

Time: 5 min Method: Interactive Lecture

EF-2000 TYPHOON

The Typhoon is an agile, single seat, multi-role aircraft optimized for high altitude supersonic air combat. It is also capable of operating at lower levels in an air-to-ground role. Its low weight and high thrust means it can reach 36 000 feet in less than two minutes from a standing start. The engine intake is mounted on the bottom of the fuselage. A tall sharply swept tail is at the rear of the fuselage with twin-engine pipes directly below. The Typhoon is manufactured by Eurofighter and is powered by two Eurojet EJ200 turbofan engines.

Royal Air Force image website, http://www.defenceimages.mod.uk

Figure 9 EF-2000 Typhoon

Royal Air Force image website, http://www.defenceimages.mod.uk

Figure 10 EF-2000 Typhoon

Royal Air Force image website, http://www.defenceimages.mod.uk

Figure 11 EF-2000 Typhoon

JAGUAR GR3

The Jaguar is a dual-role advanced operational trainer and tactical support aircraft. It is a fighter-bomber that is capable of using 1 000 lb general-purpose bombs that are guided to their targets by lasers. The Jaguar has a long sleek fuselage with a large swept tail fin and rudder. It has short-span swept wings that are mounted on top of the fuselage. The internal jet engines have intakes on either side of the fuselage behind the cockpit. The raised bubble canopy is set above the sharply pointed nose. The Jaguar is manufactured by Sepecat and is powered by two Rolls-Royce Adour turbofan engines.

Airliners.net, http://www.airliners.net

Figure 12 Jaguar GR3

Airliners.net, http://www.airliners.net

Figure 13 Jaguar G3

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. Where is the Typhoon's sharply swept tail located?

Q2. Where is the engine intake mounted on the Typhoon?

Q3. Where is the canopy located on the GR3 Jaguar?

ANTICIPATED ANSWERS:

A1. At the rear of the upper fuselage.

A2. On the underside of the fuselage.

A3. Above the sharply pointed nose.

Teaching Point 3 **Describe Russian aircraft.**

Time: 5 min Method: Interactive Lecture

MIG-29 FULCRUM

The MiG-29 Fulcrum is an all weather, single seat fighter interceptor flown by the Russian Air Force. The MiG-29's wings are swept back and tapered with square tips. It is equipped with twin jet engines mounted low and to the sides of the fuselage. Diagonal shaped air intakes give the aircraft a box like appearance. The fuselage is made of a long, thin, slender body. The MiG-29 is manufactured by the Moscow Air Production Organization and is powered by two Klimov / Sarkisov RD-33 turbofans.

Airliners.net, http://www.airliners.net

Figure 14 MiG-29 Fulcrum

Airliners.net, http://www.airliners.net

Figure 15 MiG-29 Fulcrum

ANTONOV AN-124-100

The Antonov AN-124-100 is a civil certified long-range commercial freighter. It is widely used for the carriage of outsize and very heavy pieces of air cargo that other aircraft cannot accommodate. Pieces of cargo have included the space launcher, satellites, helicopters, large wheeled vehicles and a 109 tonne locomotive. The AN-124 has the largest payload and the largest interior of any airplane in the world. It features a double deck fuselage layout with the upper deck containing the cockpit and personnel compartments. The lower deck is a massive pressurized cargo compartment. The AN-124 is manufactured by O.K. Antonov and is powered by four D-18T series 3 engines.

Airliners.net, http://www.airliners.net

Figure 16 Antonov AN-124-100

Airliners.net, http://www.airliners.net

Figure 17 Antonov AN-124-100

CONFIRMATION OF TEACHING POINT 3

QUESTIONS:

Q1. How are the MiG-29 Fulcrum's wings shaped?

Q2. What is the MiG-29's fuselage made of?

Q3. Name one of the large pieces of cargo the AN-124 has carried.

ANTICIPATED ANSWERS:

A1. Swept back and tapered with square tips.

A2. A long, thin, slender body.

A3. The space launcher, satellites, helicopters, large wheeled vehicles and a 109 tonne locomotive.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Cadets have identified American, British and Russian aircraft. Being able to identify these aircraft supports the aim of stimulating an interest in the aviation community. Cadets can use this knowledge when visiting an aerodrome, when at a local air show, or while attending CSTC training.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

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C3-011 *Federation of American Scientists*. (2006) Retrieved March 21, 2006, from http://www.fas.org/nuke/guide/russia/airdef/mig-29.htm

C3-012 *Antonov airlines*. (2006). Retrieved March 21, 2006, from http://www.antonovairlines.co.uk/antonov/military-logistics/antonov-124.asp


AFRC


AB
www.Defenceimages.mod.uk


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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 7

EO C130.03 – WATCH AN *ON CANADIAN WINGS* SEGMENT

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering this lesson.

Prepare a suitable classroom area with available media.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An in-class activity was chosen for this lesson as it is an interactive way to present the content.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have watched an *On Canadian Wings* segment.

IMPORTANCE

Discovering Canadian aviation history will give cadets a better understanding of the current role of aviation in Canada. Knowledge gained in this lesson will assist in stimulating an interest in the RCAF.

Teaching Point 1 **Watch an *On Canadian Wings* segment.**

Time: 25 min Method: In-Class Activity

ACTIVITY

Time: 25 min

OBJECTIVE

The objective of this activity is to become familiar with Canadian aviation history through watching an episode of *On Canadian Wings*.

RESOURCES

Select one video segment. The video segments include the following information:

EPISODE: CANADA'S FIRST FLIGHT

The shaky flights of flying machines sow the seeds for military aviation. Soon hundreds of Canadian flying cadets are shown dashing around in their biplanes. Canada's first aircrews are on their way to war.

Length (00:13:26)

EPISODE: AERIAL WARFARE

Canadian aircrews serve in fighter squadrons at Dunkirk and go into action against German Zeppelins, seaplanes and U-boats. Canadian flying aces Major Billy Bishop, Major Raymond Collishaw and Major Billy Barker become household names.

Length (00:12:22)

EPISODE: THE BIRTH OF A NATIONAL AIR FORCE

With little fanfare, the RCAF comes into being on April 1, 1924. As war clouds loom over Europe, the new air force is on active service. The RCAF grows to the fourth largest air force of the allied nations.

Length (00:11:58)

EPISODE: THE AERODROME OF DEMOCRACY

Canadian squadrons see sustained combat in the Battle of Britain and help to keep the sea lanes from Canada to England open. RCAF schools across Canada train more than 150,000 Commonwealth air and groundcrews.

Length (00:12:48)

EPISODE: SOME OF THE FEW

Flying aces F/L Buzz Beurling, Wing Commander Johnnie Johnson and Flight Lt. D.E. Hornell are immortalized with a string of spectacular wartime successes.

Length (00:12:22)

EPISODE: BOMBS OVER EUROPE

The famous No. 6 Bomber Group is formed as the bomber offensive heats up over Europe. Squadron Leader Ian Bazalgette and Pilot Officer Andrew Mynarski each earned a Victoria Crosses (VC).

Length (00:12:55)

EPISODE: FAST TIMES FOR THE GOLDEN JETS

Canadian aircrews are again involved in combat over Korea. The Golden Hawks formation flying team of F86 Sabres – the Spitfires of the jet age, dazzle audiences around the world.

Length (00:12:37)

EPISODE: A TIME OF TRANSITION

Canada develops the Avro Arrow – a supersonic jet fighter that could out fly anything in the world. The Diefenbaker government mysteriously cancels the project and destroys all drawing and prototypes.

Length (00:11:57)

EPISODE: THERE SHALL BE WINGS

Canada's air force support North Atlantic Treaty Organization (NATO) and United Nations (UN) operations in the Balkans, the Middle East, Africa, Central America and Haiti, and humanitarian relief worldwide.

Length (00:13:00)

ACTIVITY LAYOUT

Arrange the room to ensure all cadets are able to see and hear the video segment.

ACTIVITY INSTRUCTIONS

1. Introduce the video segment to be shown.
2. Show the complete video segment.
3. Following the session, have the cadets answer questions specific to the chosen segment.

SAFETY

Nil.

INSTRUCTOR GUIDELINES

Choose one of the following sets of questions to pose, based on the segment selected.

CONFIRMATION OF TEACHING POINT 1

SUGGESTED QUESTIONS:

Canada's First Flight

Q1. Who were the founding members of the Aerial Experimental Association?

Q2. What was the name of the aircraft they initially used?

Q3. In which year did the first aviation policy appear?

Q4. How many people were members of the Canadian aviation corps?

A1. Alexander Graham Bell, J.A.D. McCurdy, Casey Bothman.

A2. The Silver Dart.

A3. 1907.

A4. Three People.

Aerial Warfare

Q1. How long did the strategic bombing campaign last?

Q2. How many zeppelins were destroyed during World War 1 (WW 1)? How many by Canadians?

Q3. Who was Billy Bishop and what did he do?

A1. One Year.

A2. 12 destroyed, 6 of them by Canadians.

A3. Billy Bishop was one of the first Canadian aviation aces. He had 72 confirmed victories and was decorated with the Victoria Cross.

The Birth of a National Air Force

Q1. What major event occurred in 1920?

Q2. What was the goal of military aviation at that time?

Q3. Where was the largest pilot training camp situated?

Q4. In 1937 the RCAF was given a very precise mandate, what was that mandate?

A1. The CAF was dismantled.

A2. Cartography, medical evacuations, ice patrols, surveillance and fighting forest fires.

A3. Borden, Ontario.

A4. To defend Canadian airspace.

The Aerodrome of Democracy

Q1. What was Canada's role at the beginning of WW 2?

Q2. Most of the pilots were trained on which aircraft?

Q3. How many Squadrons were initially based in Halifax?

Q4. How many U-boats did the RCAF sink?

A1. Canada was an immense centre of pilot training for the Commonwealth nations.

A2. Tiger Moth.

A3. Five.

A4. Twenty-seven.

Some of the Few

Q1. Name the ace of Canadian aces during WW II?

Q2. Which Canadian squadron was victorious over the most enemy aircraft in 1944 and how many aircraft did they shoot down?

Q3. Name the two new types of aircraft used by Canada as the end of the war approached.

A1. Buzz Beurling.

A2. 418 Sqn with 103 confirmed victories.

A3. Mustang, Typhoon, and Mosquito.

Bombs over Europe

Q1. What was the first Canadian bomber Squadron and when was it created?

Q2. Which bombers did Canadians use?

Q3. Who was the commander of the first all-Canadian Squadron in Great Britain?

A1. 405 Sqn was formed in April 1941.

A2. Wellington, Halifax, Lancaster, Liberator, and Mosquito.

A3. Johnny Fauquier.

Fast times for the Golden Jets

Q1. In 1948, Canada acquired numerous aircraft. What were they and how many were acquired?

Q2. Canada was divided, due to resources, into several search and rescue regions. How many regions and how many aircraft were assigned to this task?

Q3. What was the name of the aircraft and the training base used in the formation of the first military aviation demonstration team?

Q4. Canada began the construction of its own all-Canadian aircraft. What was its name?

A1. Eighty-five Vampires.

A2. Five regions and 34 aircraft.

A3. Blue Devils flew Vampires at St-Hubert, Quebec (QC).

A4. CF-100 Canuck.

A Time of Transition

Q1. What aircraft was supposed to replace the CF-100?

Q2. Following the failure of the Avro Arrow, which aircraft did Canada buy?

Q3. What major event occurred in 1968?

Q4. New aircraft appeared during this period. Name at least 3 of them.

A1. The Avro Arrow.

A2. F-101 Voodoo.

A3. The unification of the three branches of the Canadian Forces.

A4. Caribou, Buffalo, Hercules, Tutor, Dassault Falcon, Sea King, and CF 5 Freedom Fighter.

There Shall be Wings

Q1. In which year was the aerial command group formed?

Q2. In which year did the first CF-18 (CF-188 Hornet) arrive in Canada?

Q3. How many Canadian CF-18s were sent to serve during the Gulf War?

A1. 1975.

A2. 1981.

A3. Twenty-four.

END OF LESSON CONFIRMATION

The cadet's participation in the activity will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Discovering Canadian aviation history will give cadets a better understanding of the current role of aviation in Canada. Knowledge gained in this lesson will assist in stimulating an interest in the RCAF.

INSTRUCTOR NOTES / REMARKS

One segment will already have been viewed in M130.04 (Watch an *On Canadian Wings* Segment) and squadrons may choose other segments for viewing in any of the complementary periods. A thirty-minute period is required for each additional segment selected. To view all segments, eight additional periods are required. It is not necessary to watch all the segments.

REFERENCES

C3-039 Squires, C. (1999). *On Canadian wings* [Series]. Winnipeg, MB: PWGSC.

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 8

EO C130.04 – TOUR A LOCAL AVIATION MUSEUM

Total Time:	90 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 9

EO C130.05 – ATTEND A LOCAL AIR SHOW

Total Time:	180 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO

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CHAPTER 14

PO 140 – PARTICIPATE IN AEROSPACE ACTIVITIES

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 1

EO M140.01 – LAUNCH A WATER ROCKET

Total Time: 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001*Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Photocopy and prepare Water Rocket Launch System; see instructions located at Attachment A, if required.

Prepare a Water Rocket launch site; see instructions located at Attachment B.

Practice assembling the Water Rocket launch System and launching water rockets before this lesson.

Water Rocket Safety Orders are located at Attachment C.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TP 1 to orient the cadets to Newton's Laws of Motion.

An in-class activity was chosen for TP 2 as a fun way to have the cadets launch a water rocket in a safe and controlled environment.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet will have launched a water rocket.

IMPORTANCE

This lesson will demonstrate for the cadets Newton's Laws of Motion and they will this in action when they launch a water rocket.

Teaching Point 1 **Explain and Discuss Newton’s Three Laws of Motion.**

Time: 15 min Method: Interactive Lecture

Newton’s Laws of Motion

The three laws of motion were first compiled by Sir Isaac Newton in his work *Philosophiæ Naturalis Principia Mathematica*, first published on July 5, 1687. Newton used them to explain and investigate the motion of many physical objects and systems.

Newton's laws of motion are three physical laws that form the basis for classical mechanics. They describe the relationship between the forces acting on a body and its motion due to those forces. A force can be defined as a push or a pull on an object.

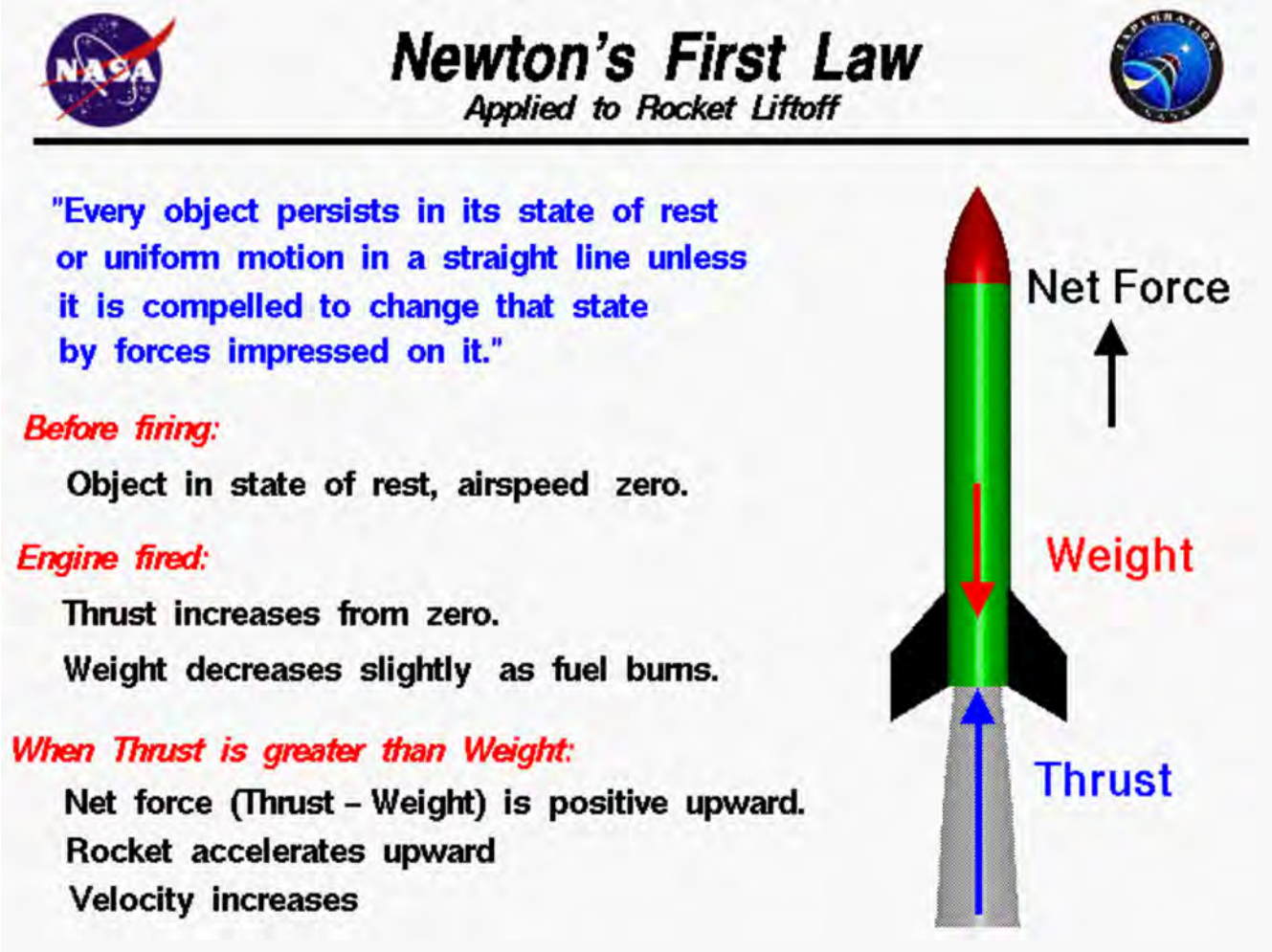
Demonstrate force by pushing and pulling an object (book, pen, etc.) in a straight line across a flat surface.

Newton’s First Law of Motion, or the Law of Inertia.

Newton's first law states that every object remains at rest or in uniform motion in a straight line until an external or internal force is applied to the object. This is also the definition of inertia.

Inertia is the resistance of any physical object to a change in its state of motion or rest, or the tendency of an object to resist any change in its motion.

Point to a movable object at rest. The object is following Newton’s First Law of Motion.



Note: From NASA (2011). Newton's First Law. Retrieved December 7, 2011 from http://exploration.grc.nasa.gov/education/rocket/newton1r.html

Figure 1 Newton's First law

If there is no force acting on an object then the object maintains a constant velocity. If that velocity is zero, then the object remains at rest. If an external force is applied, the velocity changes because of the external force.

Constant velocity can only happen in a vacuum like space. On Earth, air and / or gravity creates resistance or friction, slowing the object down.

This first law gives a frame of reference for the other laws of motion by establishing that an object at rest or in motion can have its state of rest or motion altered by external or internal forces.

Examples of this Law are:

- The pen placed on a flat level desk will not move as the forces of friction and gravity are acting on it.
- A satellite in outer space continues on its trajectory unless the gravity of an object it passes alters its trajectory.
- The Water Rocket on the Launch Tower will not move (other than a slight wobble due to air resistance from wind) as gravity keeps it on the launch tower until it is pressurized and launched.

Newton's Second Law of Motion

Newton's second law of motion explains how an object changes velocity if external forces are applied to it.

1. The law states that if a force is applied to an object, it accelerates or changes its velocity, and it changes its velocity in the direction of the force.

An object accelerates in the direction that the force is applied.

2. The acceleration is directly proportional to the force applied. If an object is pushed, it causes it to accelerate. If the object is pushed three times harder, the acceleration is three times greater.

3. The acceleration is inversely proportional to the mass of the object. If two objects are pushed equally, and one of the objects has five times more mass than the other, it accelerates at one fifth the acceleration of the other.

If the mass of an object increases, the acceleration decreases proportionately.

Some of the forces that can change an objects state are:

- gravity,
- air resistance,
- friction,
- external or internal force.

A formula to help explain this is:

F=*m*a

Where F is equal to the force, measured in Newton Metres and m is equal to the mass of the object. A is equal to the acceleration of the object.

Rockets during launch burn some of their propellant and therefore become lighter, changing their mass. As the rocket mass changes or becomes lighter, and the rocket engine continues to produce the same amount of thrust, the rocket accelerates.

Newton's Third Law of Motion

Newton's Third Law of Motion states that for every action or force in nature there is an equal and opposite reaction. This force is proportionate to the mass of the objects involved

When the trigger is pulled on a firearm, the gunpowder explodes, pushing the projectile or bullet out of the barrel. The force applied to the projectile is the same as the force applied to the firearm. The mass of the firearm is less than the mass of the projectile resulting in less force applied to the shooter.

A rocket engine forces gasses or propellant out its nozzle, pushing the rocket in the opposite direction.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. What is Newton’s First Law of Motion?

Q2. What is Newton’s Second Law of Motion?

Q3. What is Newton’s Third Law of Motion?

ANTICIPATED ANSWERS:

A1. Newton's first law states that every object remains at rest or in uniform motion in a straight line until an external or internal force is applied to the object.

A2. Newton's second law of motion explains how an object changes velocity if it is pushed or pulled upon.

A3. Newton’s Third Law of Motion states that for every action or force in nature there is an equal and opposite reaction.

Teaching Point 2 **Have the cadets launch a water rocket.**

Time: 65 min Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to demonstrate Newton’s Laws of Motion in a dynamic and interesting way.

RESOURCES

- An outdoor area 10 by 20 square metres,
- A water rocket launch system,
- A pump to supply compressed air to the launch system (a bicycle pump or tire inflator is best)
- A two litre soda bottle in good condition (no deep scratches or obvious defects). Only use carbonated drink type bottles. Water bottles are not strong enough to be used on a pressurized system,
- Safety glasses one per cadet instructors, and
- Water to launch the water rocket several times.

ACTIVITY LAYOUT

Setup the launch site using the instructions included in Attachment B.

Brief the cadets as per Attachment B Launch Site Setup.

ACTIVITY INSTRUCTIONS

For both launches use the same air pressure, 50 to 60 Psi. For the first launch, load the 2 litre soda bottle onto the launch system without water in it to demonstrate thrust with air as the propellant mass.

1. Mount the empty two-litre soda bottle on the water rocket launch tower.
2. Explain to the cadets that the bottle is demonstrating Newton's First Law of Motion as it is stationary and the only force currently applied is gravity.
3. Pressurize the launch tower to 50 to 60 psi.
4. Have the cadets count down from five and launch the soda bottle.

The force of the air escaping from the soda bottle pushes the bottle into the air. This demonstrates two of Newton's Laws of Motion.

The First Law of Motion is demonstrated as the rocket is at rest on the tower.

The Second Law of Motion is demonstrated as the rocket lifts off. The force of the air escaping pushes the bottle in a linear direction off the launch tower.

The Third Law of Motion is demonstrated as the reaction of the air being pushed out of the bottle forces it away from the launch tower.

5. Recover the soda bottle and fill it one third full with water.
6. Reload the soda bottle onto the launch tower.
7. Pressurize the launch tower to the same pressure as the empty bottle launch.
8. Have the cadets count down from five and launch the water rocket.

For the second launch, load the two litre soda bottle onto the launch system after filling it one third full with water to demonstrate thrust with water as the part of the propellant. The mass of the bottle with the water in it slows the rocket down on launch, but the mass of the water being forced out of the bottle pushes the bottle much higher. As the bottle gets lighter, it accelerates faster until the propellant and pressure diminish. Even after the water has evacuated the bottle, the air pressure left in the bottle continues to provide thrust to the bottle until it is exhausted.

9. Have the cadets discuss the difference between the two launches.

SAFETY

Water Rocket Safety Orders are located at Attachment C.

END OF LESSON CONFIRMATION

The cadets' participation in the activity will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Newton's Laws of Motion apply to everything around us. In rocketry, these laws govern the entire flight profile of a rocket before, during and after launch.

INSTRUCTOR NOTES / REMARKS

Cadets qualified as Advanced Aerospace may serve as assistant instructors.

The water rockets may be launched indoors in an area easy to clean up (eg, gymnasium floor) or out of doors in favourable weather.

REFERENCES

C3-266 Science Toy Maker. (2008). Making (and using) an overhead water rocket launcher. Retrieved October 1, 2008, from http://www.sciencetoymaker.org/waterRocket/buildWaterRocketLauncher.htm

C3-291 Retter, Y. (2008). *Water Rocket – Skewer Design*. Retrieved November 21, 2008, from http://www.geocities.com/yoramretter/SkewerDesign-v02.html

C3-351 National Aeronautics and Space Administration. (2008). *Adventures in Rocket Science*. Retrieved October 27, 2011, from http://www.nasa.gov/pdf/265386main_Adventures_In_Rocket_Science.pdf

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CONSTRUCTING A WATER ROCKET LAUNCH SYSTEM

Material List

Quantity	Part No.	Item	Length
1	A1	½-inch CPVC tube	7 inches
1	A2	¾ x ½ CPVC reducer	
1	A3	¾-inch CPVC tube	40 inches
1	A4	¾-inch female CPVC adapter	
1	A5	¾-inch male CPVC adapter	
1	A6	¾-inch CPVC tube	3 inches
1	B1	tire stem valve (for a ½-inch hole)	
2	B2, C1	¾-inch CPVC end cap	
2	B3,C2	¾-inch CPVC tube	24 inches
2	B4, C3	¾-inch CPVC T-joint	
1	B5	¾-inch CPVC tube	19 inches
1	B6	¾-inch CPVC ball valve	
1	C4	¾-inch CPVC tube	7 inches
1		8 x 2 inch sticky (Duct) tape	
10		6 to 7 inch long cable ties	
1		¾-inch O-ring, or soft hose washer	
2		#12 steel hose clamp	
1		1¼-inch ABS coupler	
1		braided string	
1		2-litre soda bottle	
1		CPVC Cement	
1		CPVC Solvent / Cleaner	
1		Heavy weight (eg. sand bag)	

One 10 foot length of ¾ inch CPVC schedule 40 tube will build one launch system.

7 inches of ½ inch CPVC tube is required for the bottle guide for each launch system.

Only use PET plastic soda bottles designed for carbonated drinks in good condition. Do not substitute a water PET bottle for a soda bottle. Bottles with deep scratches, hard creases, or more than 10 pressurized launches will not be used. Indicate the number of launches on the bottle with an indelible marker. Do not use sandpaper, hot melt glue, solvent based glue or any other chemical or heat that may weaken the soda bottle.

The launch system will be able to launch 500 millilitres to 2 litre carbonated soda bottles.

Tool list

Pliers,

Saw,

Scissors,

Drill,

Drill bits for ½ inch and 1/8 inch holes,

Hand file, and

Source of compressed air with a gauge (eg. bicycle pump, tire inflator or compressor).

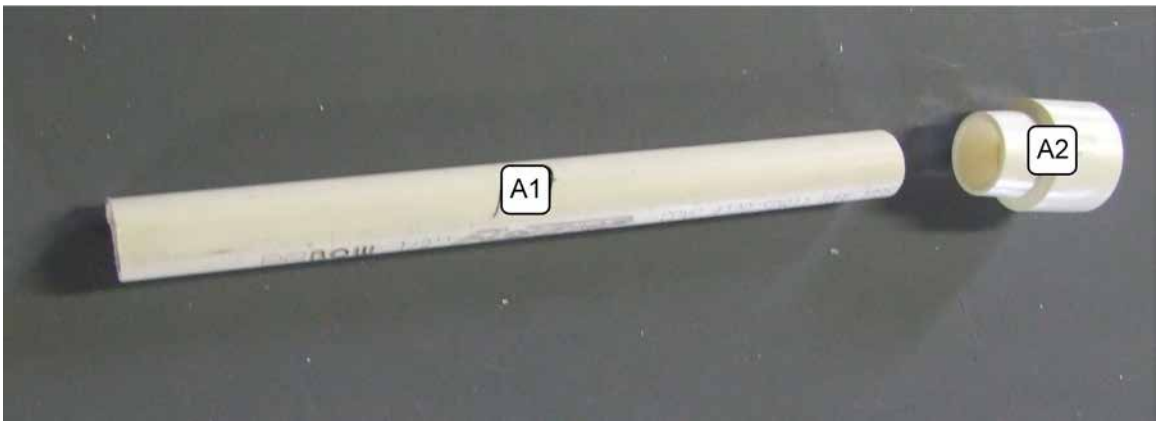
Assembling the Water Rocket Launch System

The launch system will be assembled in 3 sections of tubing, and a bottle clamp and release system

Section A

Section A consists of:

- A1 – ½-inch CPVC tube, 7 inches
- A2 – ¾ x ½ CPVC reducer



Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 1-A Section A, A1 and A2

- A3 – ¾-inch CPVC tube, 40 inches
- A4 – female ¾-inch CPVC adapter
- A5 – male ¾-inch CPVC adapter
- A6 – ¾-inch CPVC tube, 3 inches

Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

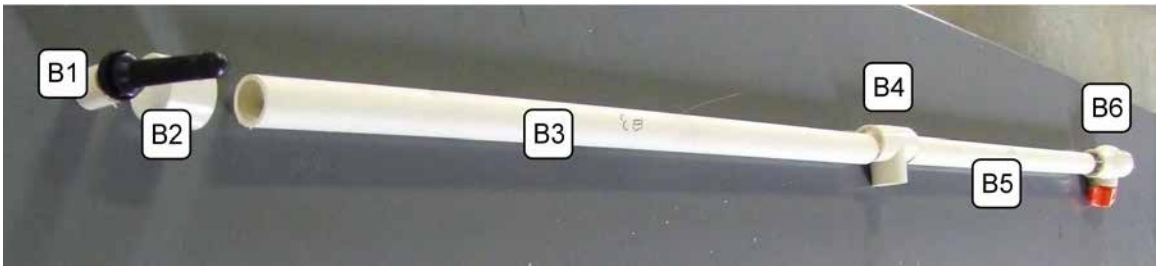
Figure 2-A Section A: A3, A4, A5 and A6

Section B

Section B consists of:

- B1 – tire valve stem
- B2 – ¾-inch CPVC end cap
- B3 – ¾-inch CPVC tube, 24 inches
- B4 – ¾-inch CPVC T-joint

- B5 – ¾-inch CPVC tube, 19 inches
- B6 – 1 ¼-inch CPVC ball valve



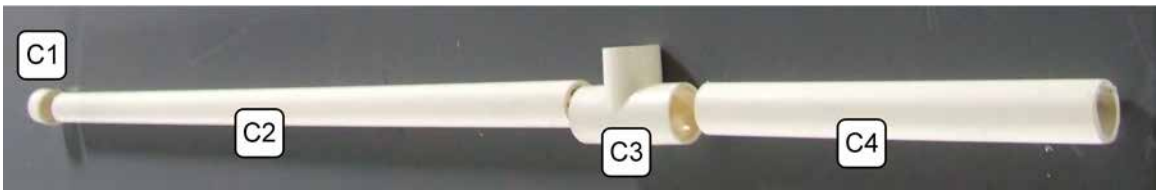
Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 3-A Section B: B1, B2, B3, B4, B5, and B6

Section C

Section C consists of:

- C1 – ¾-inch CPVC end cap
- C2 – ¾-inch CPVC tube, 24 inches
- C3 – ¾-inch CPVC T-joint
- C4 – ¾-inch CPVC tube, 7 inches



Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 4-A Section C: C1, C2, C3 and C4

Cut the ¾-inch CPVC pipe as close to 90 degrees as possible. This allows the most glue surface area possible, and makes a solid reliable join.

Deburr the cut edges with a file or sandpaper and when gluing the pieces together, clean all joint surfaces with CPVC Solvent / Cleaner before gluing.

Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 5-A Deburring the end of the tube with a hand file.

When gluing, apply CPVC Cement to both ends to be joined, join ends and twist joint clockwise until resistance is felt. Use only enough glue to coat the two parts. Avoid excess glue as this can melt the inside of the tube or fitting, weakening it. The cement sets in less than 30 seconds so be sure to align the parts quickly and accurately.

Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

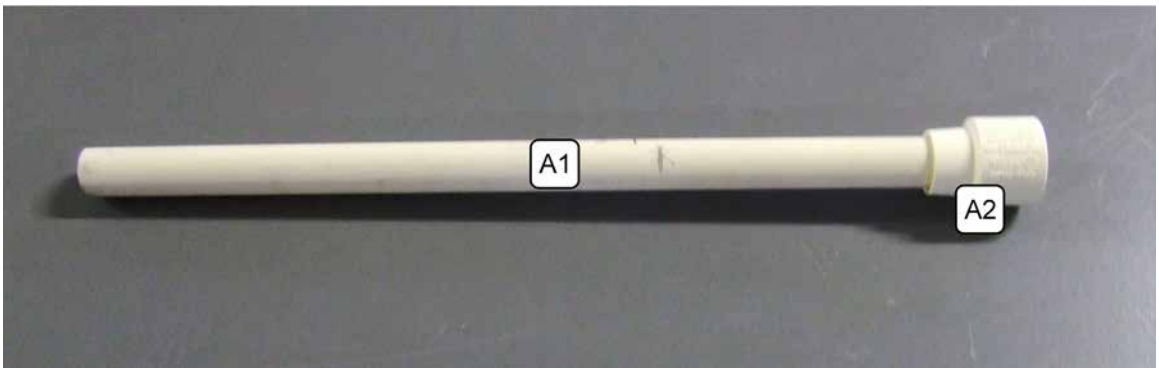
Figure 6-A Applying cleaner or glue to the joint surfaces before gluing.

Building Directions

Section A

Apply CPVC Cement and join:

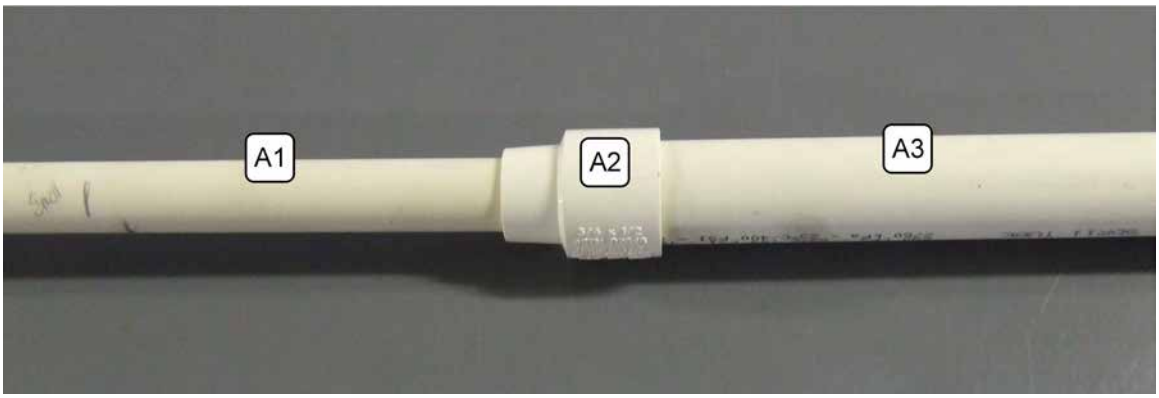
- bottom part A1 (½-inch CPVC tube, 7 inches) to A2 (½-inch end of ¾ x ½ inch CPVC reducer);



Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 7-A Section A, A1 and A2

- A2 (¾-inch end of ¾ x ½ inch CPVC reducer) to A3 (¾-inch CPVC tube, 40 inches);



Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

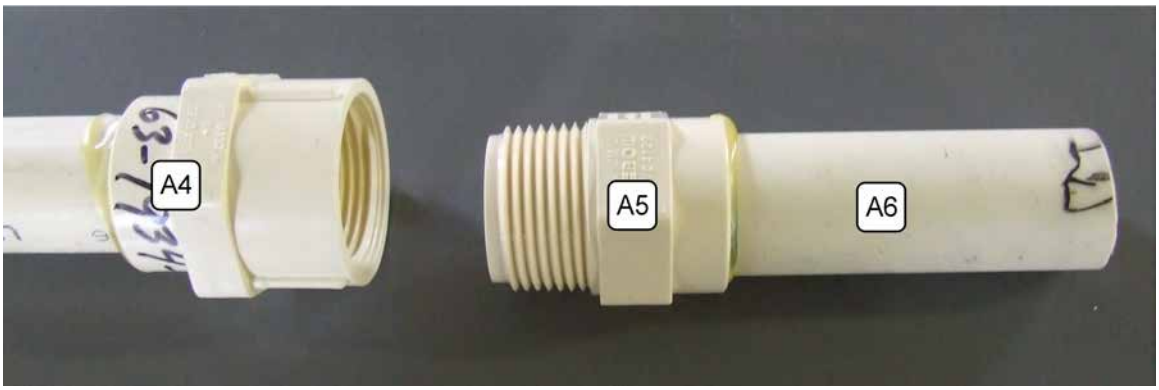
Figure 8-A Section A, A1, A2 and A3

- A3 ¾-inch CPVC tube, 40 inches) to A4 (¾-inch female CPVC adapter); and

Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 9-A Section A, A3 and A4

- A6 (¾-inch CPVC tube, 3 inches) to A5 (¾-inch male CPVC adapter).



Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 10-A Section A, A4, A5 and A6

Do not allow glue to touch the threaded portion or the gasket surfaces of A4 (¾-inch female CPVC adapter) and A5 (¾-inch male CPVC adapter).

Use the male / female adapter joint to disassemble the water rocket launcher for transport and storage.

Section B

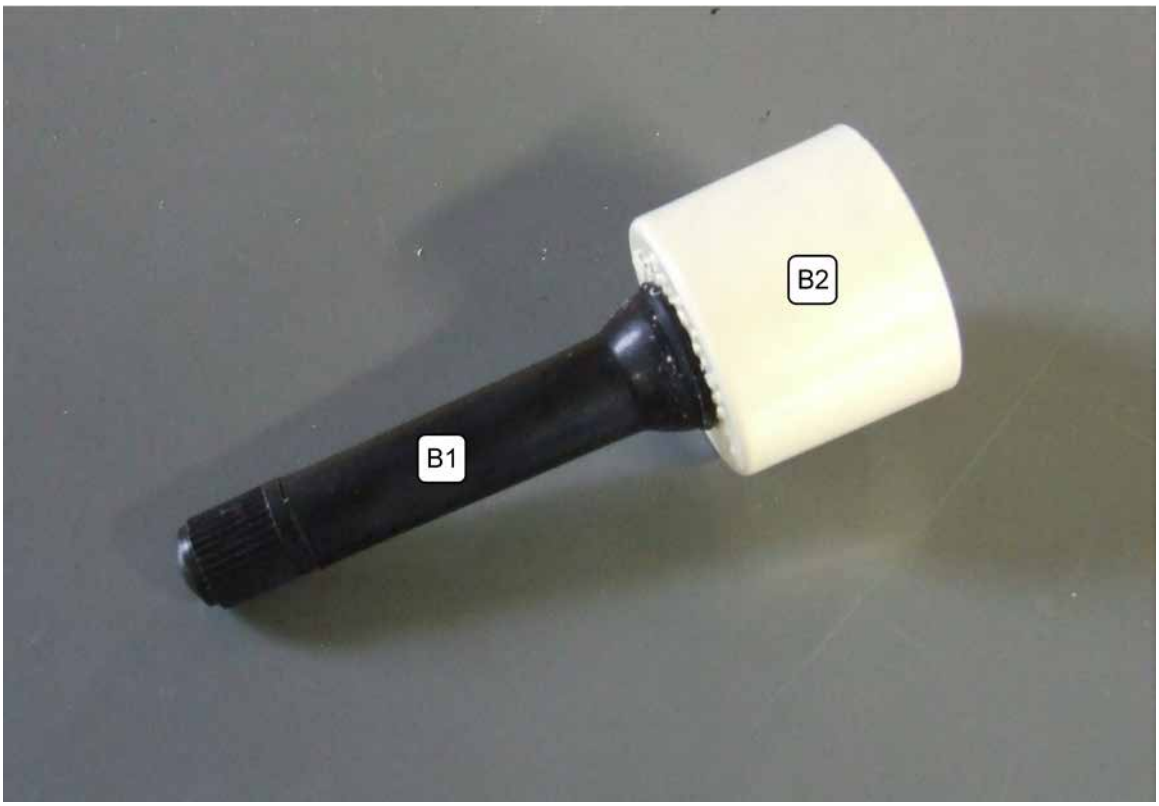
Prepare B2 (¾-inch CPVC end cap) for the tire valve stem:

- Drill a ½ inch hole in B2 (¾-inch CPVC end cap). Drill at a slow speed and hold the end cap in a vise or pair of pliers.

Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 11-A Section B, Drilling the hole for the tire valve stem.

- Pull B1 (tire valve stem) through the ½ -inch hole from the inside in B2 (¾-inch CPVC end cap) until the valve stem is seated on the end cap.

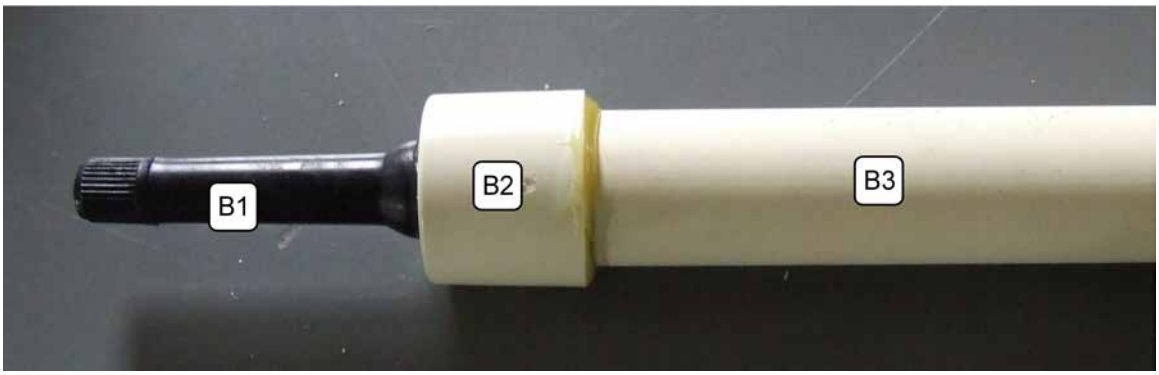


Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 12-A Section B, Tire Valve Pulled Through B2

Apply CPVC Cement and join:

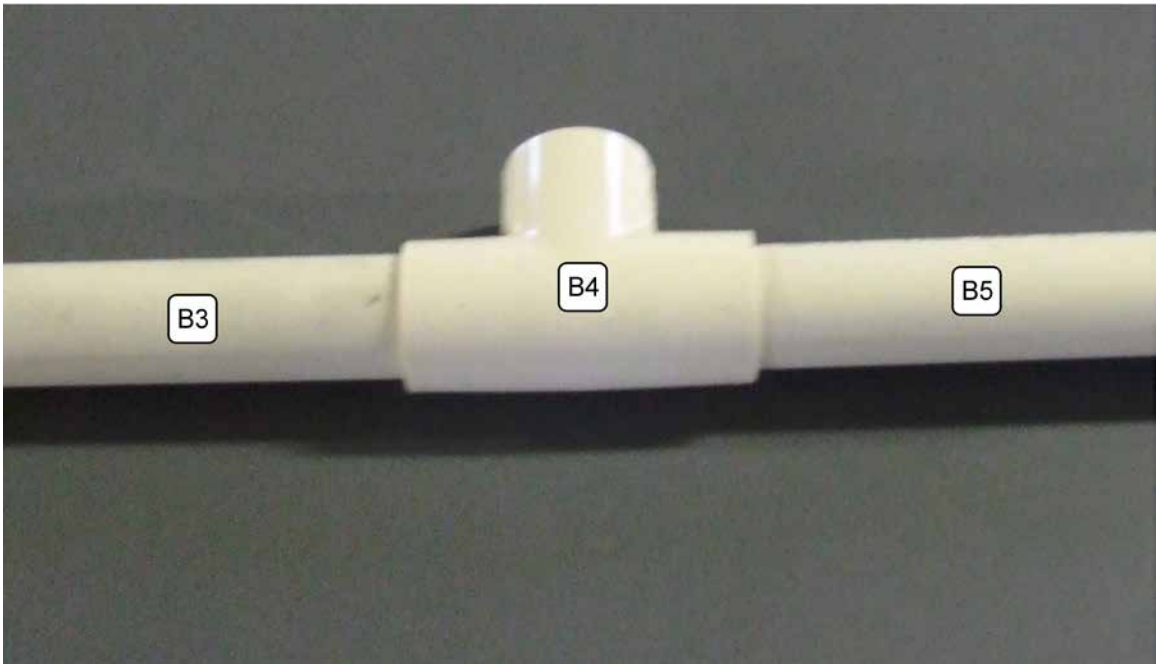
- B2 (¾-inch CPVC end cap with tire stem valve) to B3 (¾-inch CPVC tube, 24 inches);



Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 13-A Section B, B1, B2 and B3

- B3 (¾-inch CPVC tube, 24 inches) to B4 (¾-inch CPVC T-joint);
- B4 (¾-inch CPVC T-joint) to B5 (¾-inch CPVC tube, 19 inches); and

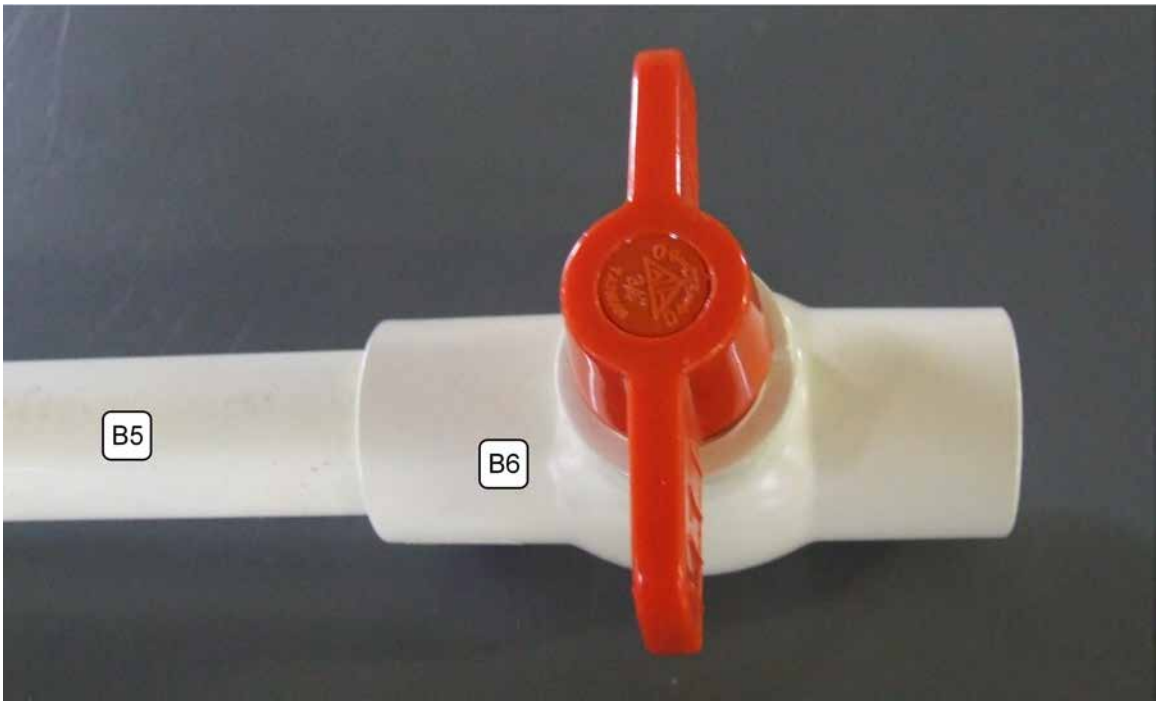


Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 14-A Section B, B3, B4 and B5

- B5 (¾-inch CPVC tube, 19 inches) to B6 (¾-inch CPVC valve). Ensure that the valve handle is clocked 90? to B4 (¾-inch CPVC T-joint).

Clocking is aligning the parts along their centre axis. The handle of B6 (¾-inch CPVC valve) points vertically and the open centre female connection of B4 (¾-inch CPVC T-joint) points horizontally



Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

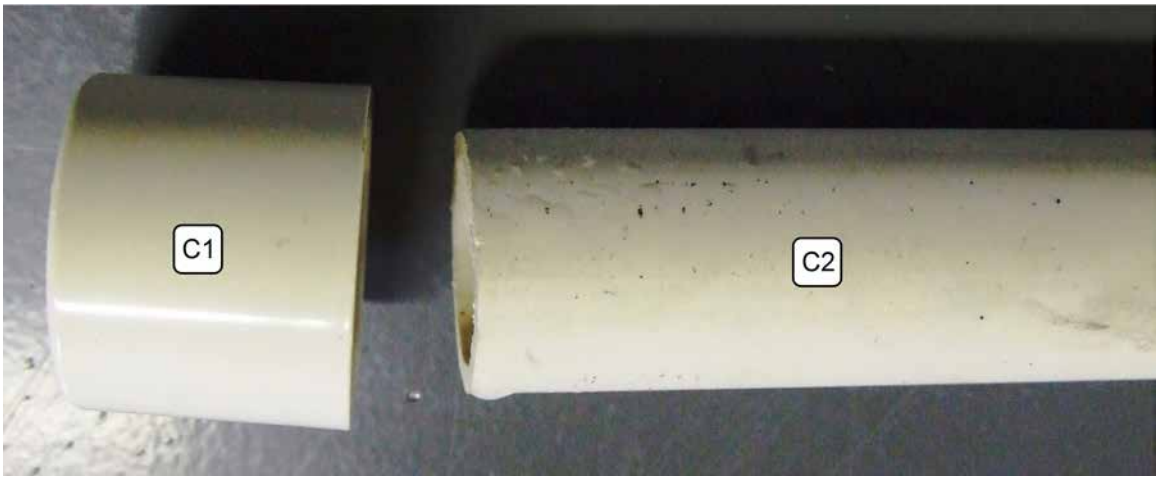
Figure 15-A Section B, B5 and B6

The CPVC valve is a safety measure to be used to depressurize the launcher in the event of a misfire or for pressure testing the bottle clamp and release system.

Section C

Apply CPVC Cement and join:

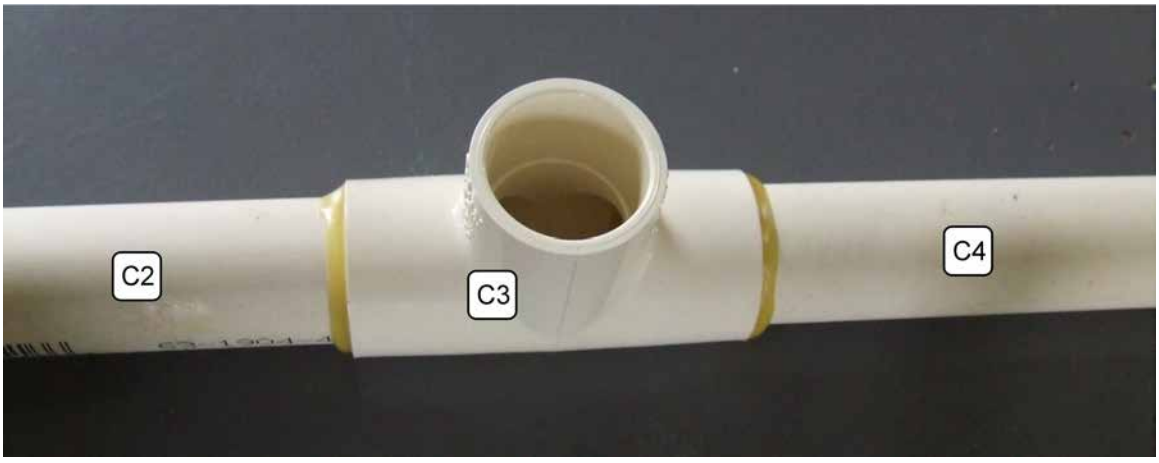
- C1 (¾-inch CPVC end cap) to C2 (24 inches of ¾-inch CPVC tube);



Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 16-A Section C, C1 and C2

- C2 (24 inches of ¾-inch CPVC tube) to C3 (¾-inch CPVC T-joint); and
- C3 (¾-inch CPVC T-joint) to C4 (7 inches of ¾-inch CPVC tube).



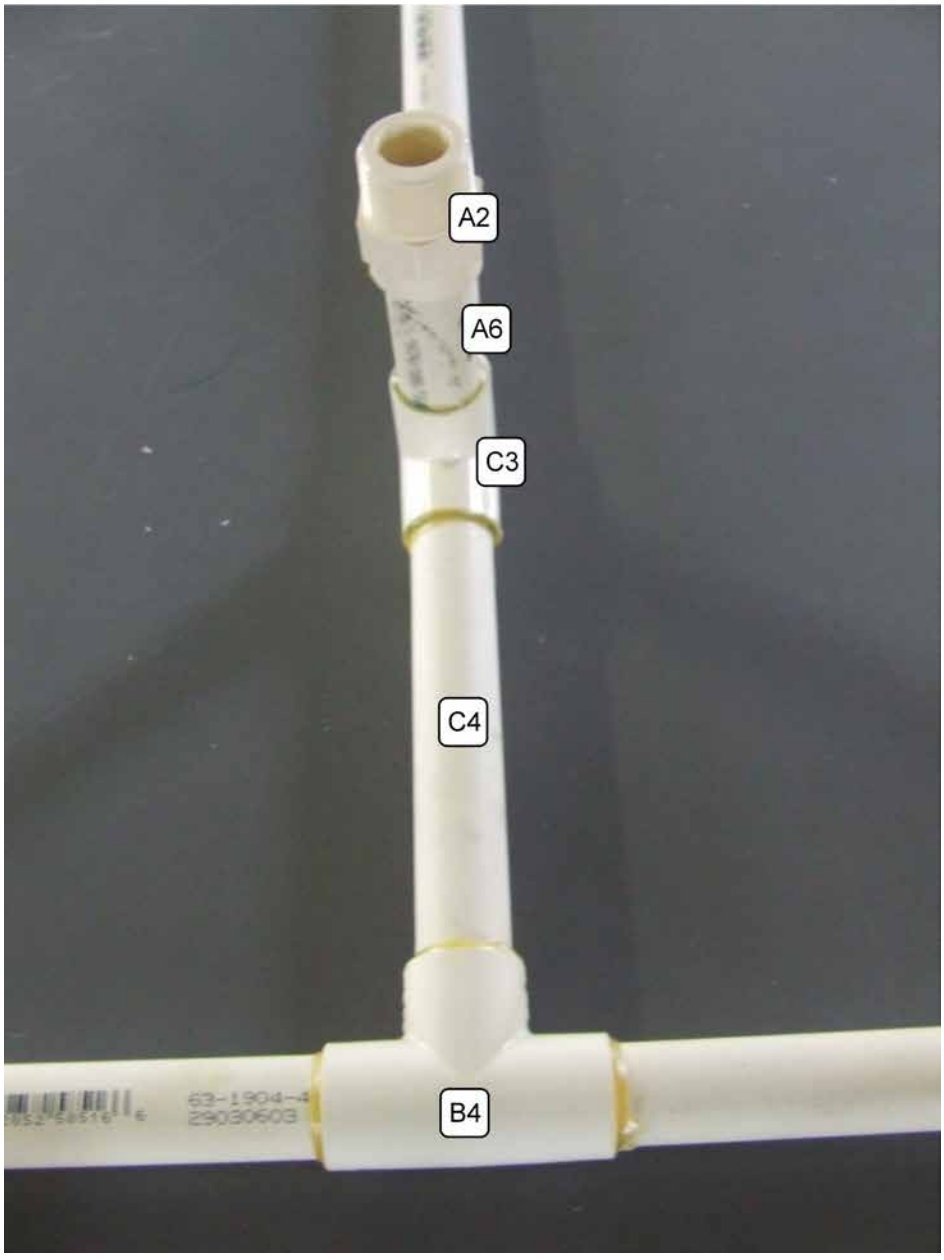
Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 17 Section C, C2, C3 and C4

Base Assembly

To build the base, apply CPVC Cement and join:

- A6 (3 inches of ¾-inch CPVC tube) of section A to C3 (¾-inch CPVC T-joint) of section C.
- B4 of section B to C4 of section C, make sure that section A is perpendicular to section B; and

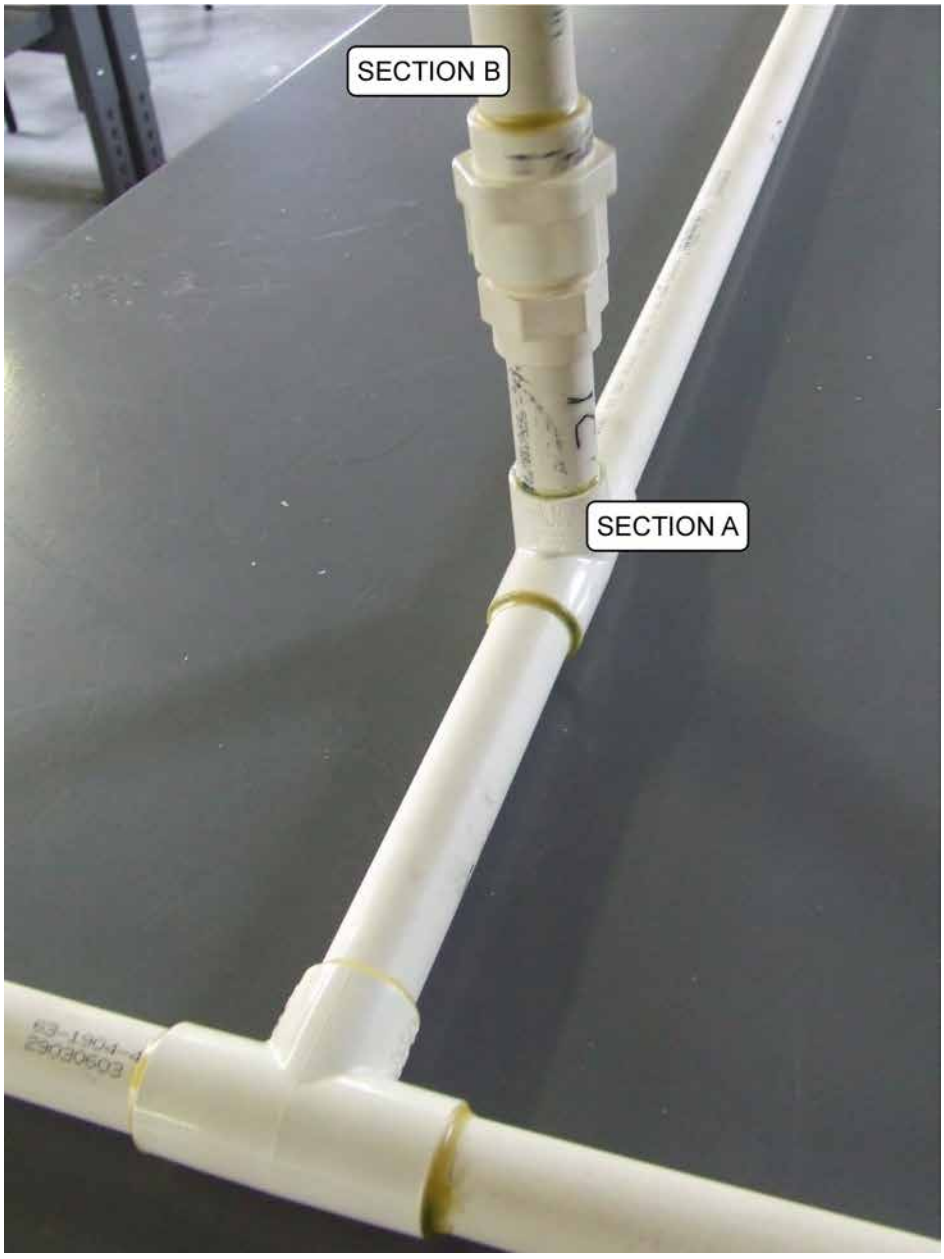


Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 18-A Sections A, B and C Joined Together

To assemble the water rocket launcher, join section A with section B.

If during the glue process the parts fail to align properly because the glue has set too fast, cut off the misaligned part, purchase and glue a ¾ to ¾ CPVC coupler between the two parts and realign.



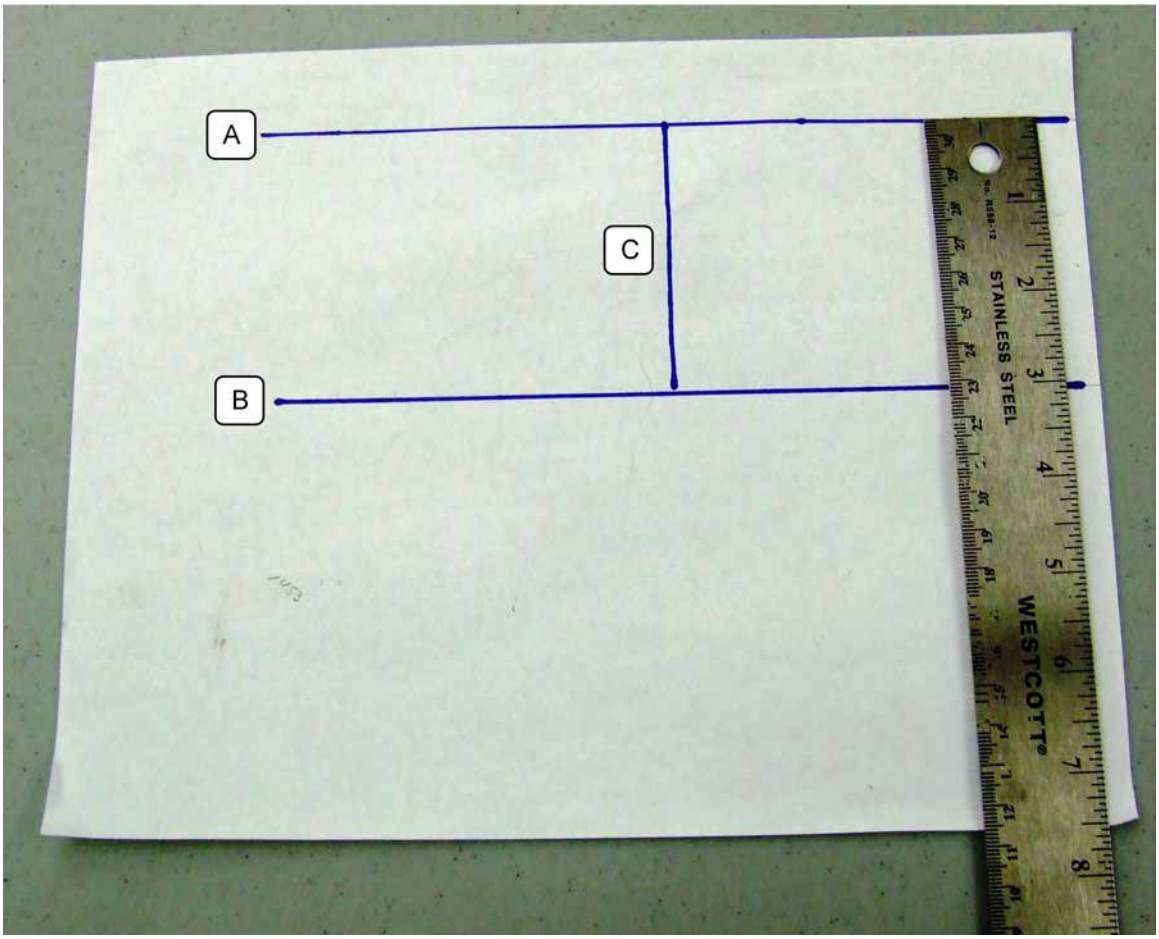
Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 19-A Section A joined with Section B.

Bottle Clamp and Release System

To assemble the Bottle Clamp Release System

- Draw two parallel lines, six inches long on a piece of 8½" x 11" paper. Line A is one inch below the top edge of the paper and line B is three inches below line A. Use the corner of a second sheet of 8½ "x 11" paper as a square to mark a perpendicular line, line C, between lines A and B.

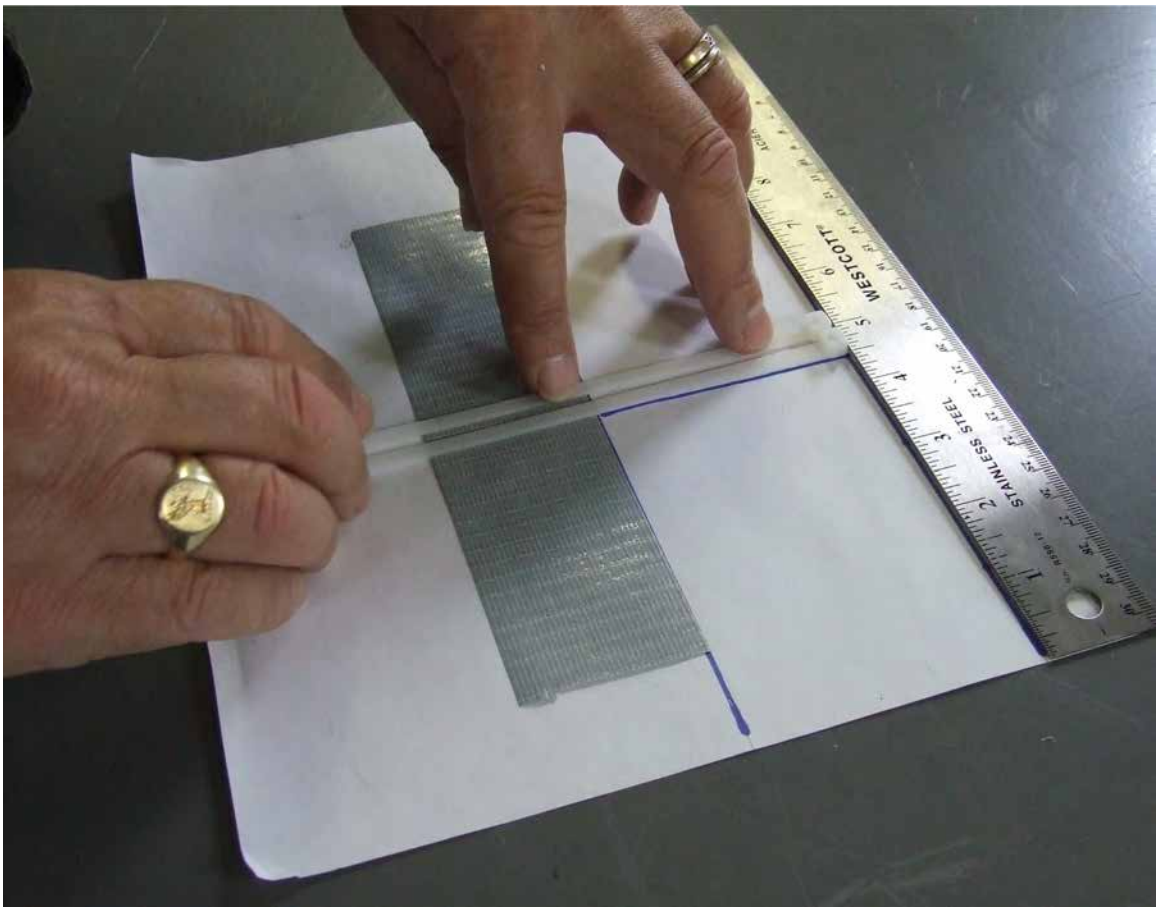


Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 20-A Laying Out the Cable Tie Position

- Lay the ruler along line A and lay the tape, sticky side up along line B. Ensure the ruler will not move off of line A by using tape or a weight. Place the ties across the tape with the head touching the ruler and

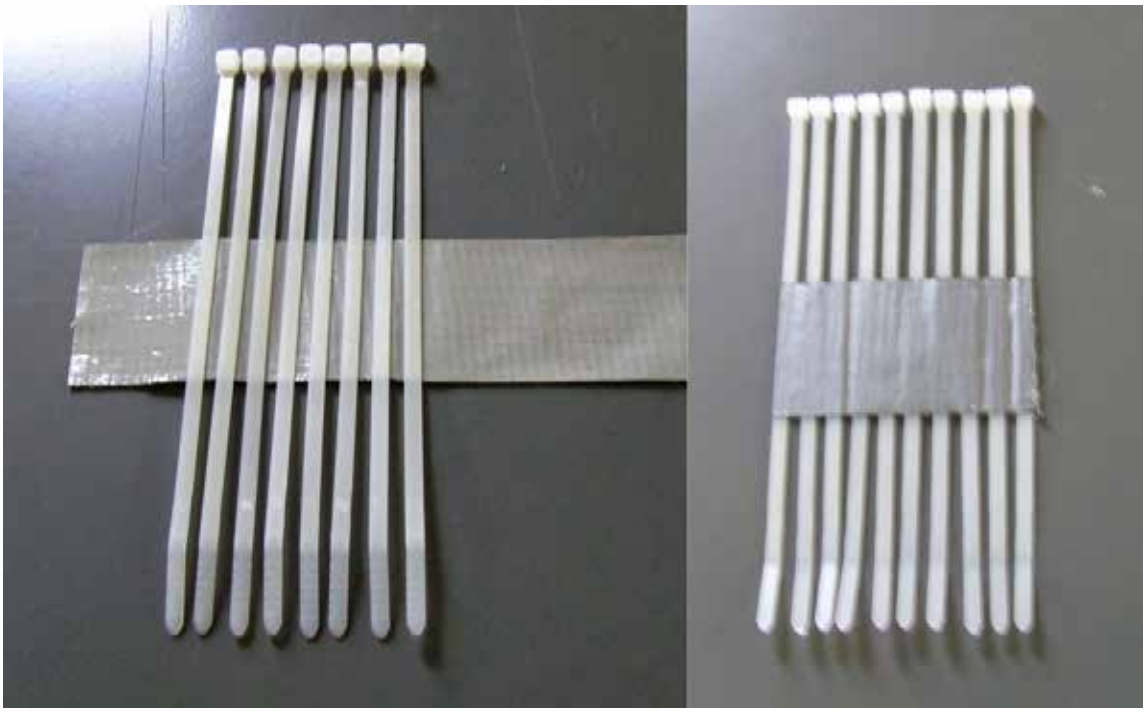
check that the cable ties are perpendicular to lines A and B. Start at line C laying the cable ties 2 mm between each tie.



Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 21-A Placing the Cable Ties on the Duct Tape

- Fold the tape ends over the exposed portion of the ties so that no adhesive is showing.



Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 22-A Cables Ties Adhered to the Duct Tape

- Place the O-ring or hose washer over the ½-inch side of A2 (¾" x ½" coupler) until it rests on the shoulder of A2. The O-ring or hose washer may have to be stretched to fit onto the shoulder of A2.

Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 23-A Position of the O-Ring or Hose Washer on A2

- Place the 2 hose clamps on A (3¾-inch CPVC tube). Slide the bottle over the end of A1 (½-inch CPVC tube) and seat it against the O-ring or hose washer. Wrap the cable ties around the pipe so that the head of each cable tie faces inward and catches the lip of the bottle, holding the bottle tight to the O-ring or hose washer. Place the hose clamps over the cable ties and tape and tighten them so that the heads of

the cable ties exert equal pressure around the ridge on the bottle. This makes an airtight seal between the bottle and the O-ring or hose washer.

Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 24-A Cable Ties Holding the Soda Bottle

If the bottle leaks at the O-ring or hose washer, adjust the cable ties up or down on A3 (¾-inch CPVC tube) so the lip of the bottle is securely and evenly seated on the O-ring or hose washer. Lock the cable ties in this position by tightening the hose clamps around the duct tape.

Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 25-A Tie Cables Clamped to A3

Bottle Release Mechanism

- Drill two 1/8-inch holes on opposite sides of the 1¼-inch ABS coupler.

Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 26-A Drilling 1/8-inch Holes in the ABS Coupler

- Use scissors to cut the top and bottom off a 2-litre soda bottle. Use the centre section to make a plastic spring. Flatten the bottle section without creasing it and cut a 1¼ inch hole centered through both sides. Drill 1/8-inch holes on either side of the 1¼-inch holes through both sides.

Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

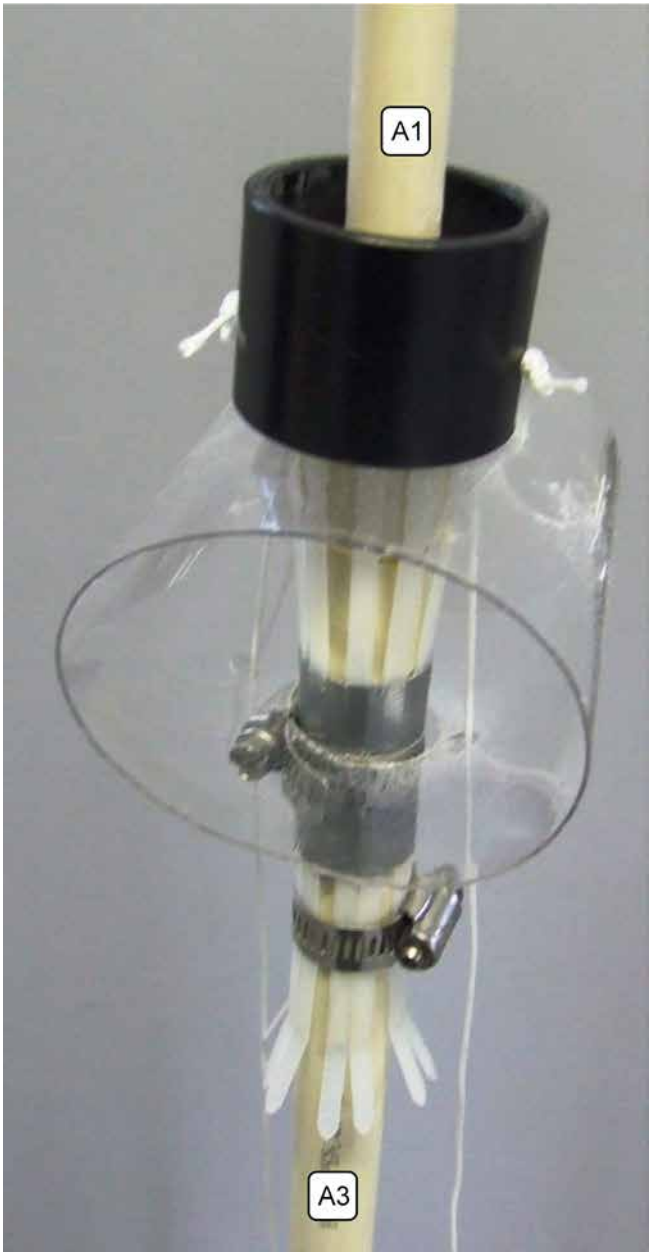
Figure 27-A Cutting the Hole in the Plastic Spring for Section A

- Slide the plastic spring over the end of pipe A1 (½-inch CPVC tube), over the cable ties and up against the hose clamps.

Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 28-A Sliding the Spring over the Cable Ties

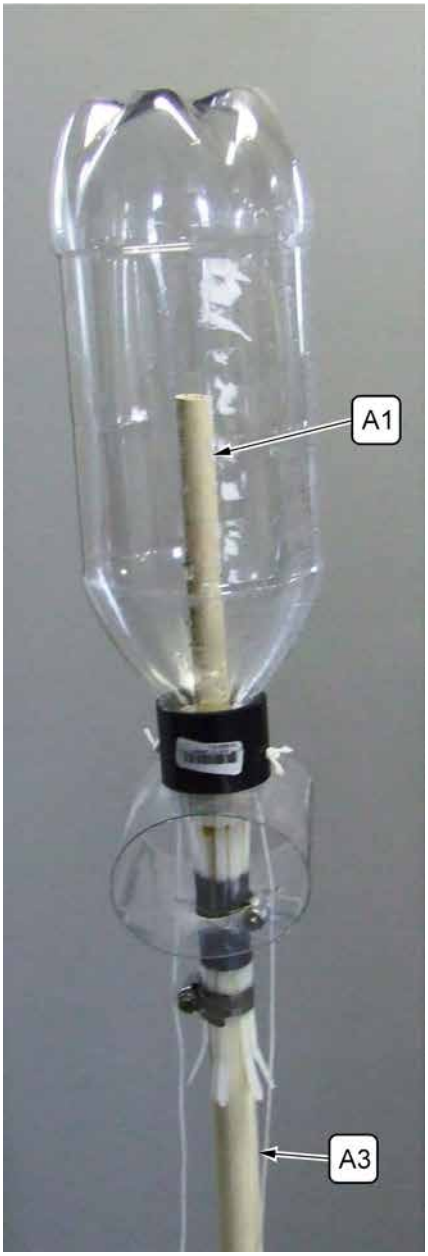
- Slide the 1¼-inch ABS coupler over A1 (½-inch CPVC tube), over the cable ties and up against the plastic spring. Thread the braided string through the holes of the plastic spring and tie the ends to the holes drilled in the 1¼-inch ABS coupler.



Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 29-A Couple Installed over Cable Ties and Against the Plastic Spring

- Place a bottle in position on the launch tower. Pull the launch cords to lower the coupler and press the bottle neck onto the O-ring or hose washer. Then release the cord allowing the coupler to slide up, pressing the cable tie ends over the collar on the bottle, locking the bottle in place.



Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 30-A Soda Bottle Installed on Launch System

Add a small amount of air pressure to test the bottle seal for leakage then depressurize the launcher. If air escapes around the lip of the bottle, gently rock the bottle on the tower. If the bottle continues to leak, the height of the cable ties on the upright A3 may need to be adjusted by loosening the clamps, and moving the cable ties up or down A3 to seal the bottle properly. The O-ring or hose washer should be compressed enough to seal the bottle to approximately 70 Psi.

- Test the release mechanism by pulling on the string to ensure the ABS coupler drops allowing the cable ties to open. When the string is released, the spring should push the coupler up and over the cable ties.

Launch Preparation

- Fill a bottle 1/3 full with water.

Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 31-A Loading the Soda Bottle onto the Launch System

- Lay the launcher on its side and slide the bottle onto the end of the A1 (½-inch CPVC tube). Pull down on the trigger so that the bottle can seal against the O-ring or hose washer and the cable ties catch the lip of the bottle. Release the string and let the coupler slide back over the cable ties to hold the bottle in place. Sit the launcher upright and adjust the bottle to stop any leaking.

Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 32-A Soda Bottle Ready for Launch

Place a weighted object (sand bag) on the launcher to hold it in an upright position.

- Run the launch cord under the tubing of the launcher so that when pulled, the cord pulls downwards on the collar of the launch tower.

- Attach the selected method for inflating air into the bottle to part B1 (tire valve stem). Method for inflating up to 70 Psi of air can include:
    - a foot air pump,
    - a bicycle air pump, or
    - a compressor.

Do not exceed 70 Psi.

When inflating air into the bottle launcher, the faster the air is added, the less amount of water leakage.

Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 33-A Assembled Water Rocket Launch System

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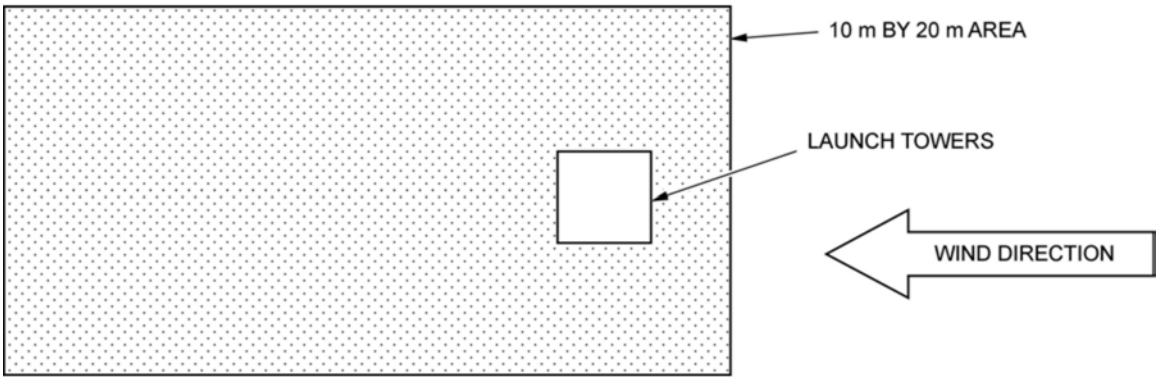
LAUNCH SITE SET-UP

1. Have the cadets participate in a safety briefing before the launch site is set up, covering the following points:

   - All launch systems will be placed in “safe” mode between each flight.
   - When a rocket is descending out of control, launch site personnel will point at the rocket and repeat the phrase “heads up” until the rocket has landed.
   - No horseplay will be tolerated.
   - A safe rendezvous point will be clearly indicated. In the event of an emergency, launch site staff will move all cadets and staff to this point.
   - The area required for launching model rockets should be at least 10 m by 20 m. The spectators should be located in an area at least 20 m from the launch tower. Bleachers at a baseball field or soccer field are suitable.
   - The rocket can reach a height of 60 m (200 feet) at apogee and can be flown safely from the suggested field size.

2. Set up rocket launch site as per Figure 5A-1. Wind direction should be accounted for by placing the tower closer to the windward side of the field.



Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 1-B Layout for a Water Rocket Launch Site

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WATER ROCKET SAFETY ORDERS

1. **Definitions.** For the purposes of this safety order, a 'Water Rocket' is defined as any rocket whose thrust is generated by expansion of a compressed air. An inert fluid such as water is used for thrust augmentation. A soda bottle refers to a Polyethylene Terephthalate (PET) soda bottle between 500 ml and 2 l.

2. **Scope.** This order applies to water rockets used in cadet activities having a pressure chamber volume greater than 500 ml or a launch pressure exceeding 35 psi.

3. **Materials.** The pressure chamber of the rocket shall be a PET plastic soda bottle between 500ml and 2l. Only lightweight, non-metal parts shall be used for the nose, body, and fins.

4. **Compressed Gas Safety.** A safe distance shall be maintained at all times between persons and pressurized water rockets or launchers. The recommended safe distance is as follows:

Launch Pressure	With Eye Protection	Without Eye Protection
Up to 60 psi	10'	20'
Above 60 psi	20'	40'

5. **Pressurization System.** A small portable compressor, 12 volt tire inflator or bicycle pump is used to pressurize the launch system. The pressure shall not exceed 70 pounds per square inch.

6. **Launcher.** The launcher shall hold the rocket to within 30 degrees of vertical to ensure that it flies nearly straight up. It shall provide a stable support platform against wind and any triggering forces, and allow the rocket to be pressurized and depressurized from a safe distance. Launchers shall be constructed from materials rated for at least 3 times the intended launch pressure.

7. **Launch Safety.** A countdown prior to launch ensures that spectators are paying attention and are a safe distance away. If the rocket does not launch when triggered, all persons shall stay at a safe distance from the launch tower until it has been depressurized by launch staff.

8. **Size and Weight.** A water rocket whose mass (excluding water) exceeds 454 grams (1 lb) shall be considered a "Large Model Rocket" for the purpose of compliance with Federal Aviation Administration regulations. Rockets used in cadet activities shall exceed 454 grams (1 lb), or be longer than the length of two soda bottles.

9. **Flight Safety.** Water rockets shall not be directed at targets, into clouds, or near airplanes or other vehicles. Water rocket payloads shall not include flammable, explosive, dangerous (metal, rock, or other potentially hazardous objects) or live vertebrae.

10. **Launch Site.** Water rockets shall be launched outdoors, in an open area at least 100 feet on a side (for rockets with using a launch pressure of 60 psi or less), or 500 feet on a side (for rockets using higher pressure).

11. **Recovery System.** A recovery system such as a streamer, parachute, or tumble recovery can be used for rockets launched with over 60 psi, with the intent to return it safely to earth without damage.

12. **Recovery Safety.** Recovery shall not be attempted from power lines, tall trees, or other dangerous places.

13. **Load Fraction.** Water rockets shall be launched with a load fraction not exceeding .33. Load Fraction is the ratio of the water volume to the total volume of the motor. For example, 0.66 litres of water in a 2-liter soda bottle, one third full, the load fraction is 0.33.

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 2

EO C140.01 – LAUNCH A FOAM ROCKET

Total Time: 60 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Make photocopies of the handouts located at Attachments A and B for each group of four cadets.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A practical activity was chosen for TPs 1 and 2 as it is an interactive way to demonstrate rocket propulsion to cadets. This activity contributes to the understanding of rocketry in a fun and challenging setting.

A group discussion was chosen for TP 3 as it allows the cadets to interact with their peers and share their knowledge, opinions, and feelings about their experiences launching foam rockets.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have constructed and launched a foam rocket.

IMPORTANCE

It is important for cadets to build and launch foam rockets to understand rocket propulsion, and learn rocket construction techniques in a group setting.

Teaching Point 1 **Have the cadets, in groups of four, construct a foam rocket.**

Time: 25 min Method: In-Class Activity

Ballistics is the study of the flight of projectiles after the power phase has terminated, moving under their own momentum and the external forces of gravity and air resistance. The effects of gravity and air resistance cause the projectile to move in an arc, as gravity pulls it towards the centre of the Earth and air resistance slows the projectiles velocity. To obtain orbit, the projectile must balance its speed to counteract the effects of gravity.

The foam rocket flies ballistically and receives its entire thrust from the force produced by the elastic rubber band. When the rubber band is stretched and released, the rubber band quickly returns to its original length, launching the foam rocket in the process.

Once in flight, the foam rocket coasts. The mass of the foam rocket does not change in flight. Rockets used in space exploration consume propellants and their total mass diminishes.

Gravity and drag or friction, affect the projectiles' motion and course within the atmosphere.

The launch of a foam rocket is a good demonstration of Newton's Third Law of motion.

The contraction of the rubber band produces an action force that propels the rocket forward while exerting an opposite and equal force on the launcher.

For this activity, the launcher is a meter stick.

Be sure the range-measuring cadet measures where the rocket touches down and not where the rocket ends up after sliding or bouncing along the floor / ground.

During flight, the fins stabilize the foam rocket. The fins, like feathers on an arrow, keep the rocket pointed in the desired direction.

If launched straight up, the foam rocket points upward until it reaches the top of its flight. Both gravity and air drag act as brakes. At the very top of the flight, the rocket momentarily becomes unstable. The momentum slows and gravity overcomes the velocity of the rocket. At apogee, the rocket begins its downward phase returning to Earth, and stabilizes as its velocity increases and air flows over the fins.

When launched at an angle of less than 90 degrees, the foam rocket is remains stable through the entire flight. Its path is an arc whose shape is determined by the launch angle. For high launch angles, the arc is steep, and for low angles, it is broad.

A launch angle of less than 90 degrees will cause the rocket to land a distance from the launch site. Gravity, launch angle, initial velocity, and atmospheric drag affect how far the rocket will land from the launch site.

Gravity causes the foam rocket to decelerate as it climbs upward and then causes it to accelerate as it falls back to the ground. The launch angle works with gravity to shape the flight path. Initial velocity and drag affects the flight time.

After launching, cadets are to compare the launch angle to the range or distance the foam rocket lands from the launch site. Launch angle is the independent variable. Gravity can be ignored because the acceleration of gravity remains the same for all flight tests.

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets construct a foam rocket.

RESOURCES

Each team will construct one foam rocket and one launcher

- 30-cm long piece of polyethylene foam pipe insulation (for ½ inch pipe),
- Rubber band size 64,
- Bristol board,
- 3-7 to 8 inch cable ties,
- 75-cm string,
- 25-cm string,
- Scissors,
- Meter stick,
- Metal washer, nut or other small weight that can be attached to a string,
- Quadrant plan,
- Masking tape,
- Rocket construction instructions located at Attachment A,
- Launcher Quadrant Pattern located at Attachment B, and
- Launch record sheet located at Attachment C.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

Construct the Rocket

1. Using scissors cut one 30-cm piece of foam tubing for each team.
2. Have the cadets cut four equally spaced slits at on end of the foam tubing. Ensure the slits are perpendicular to the centre of the foam tube and longitudinally straight along the foam tube. The slits should be 8 to 10-cm long. The fins will be mounted through these slits.
3. Have the cadets tie the 75-cm string into a 30-cm long loop.
4. Have the cadets using the cable tie, attach the rubber band to the string by passing it through the centre of the rubber band and string. Pull the cable tie until the loop holding the string and rubber band is approximately one to two-cm.
5. Have the cadets pass the rubber band, cable tie and string assembly through the foam tube so the string is at the end with the slits (tail of the rocket) and the rubber band is at the other end (the nose of the

rocket). The cable tie that attaches the rubber band to the string should be approximately 3-cm from the end of the foam tube.

Note. From Foam Rockets Educator Guide, by NASA, 2008. Retrieved December 7, 2011, from http://www.nasa.gov/pdf/280754main_Rockets.Guide.pdf

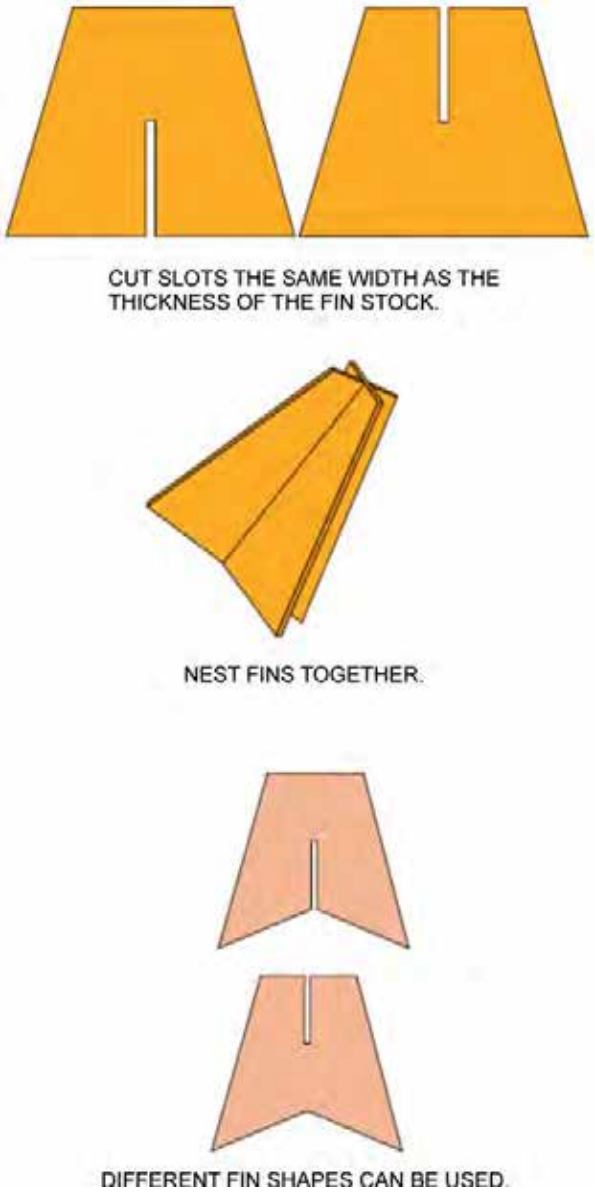
Figure 1 Exploded View of the Foam Rocket

6. Have the cadets place a cable tie around the nose of the rocket and cinch it tight. It should be over the cable tie that attaches the string to the rubber band. This cable tie should prevent the string rubber band and cable tie that is in the rocket from being pulled out. Trim the outer cable tie excess.

Remind the cadets to NOT pull on the string or the rubber band unless the rocket is on the launch system. If the string or rubber band is pulled out of the foam rocket, remove the cable ties at the nose and tail of the rocket, reinsert the string, cable tie and rubber band, and place new cable ties at the nose and tail of the rocket.

7. Cut out fins from a sheet of Bristol board according to the pattern located at Attachment A. Allow some leeway in design but constrain the fins to 10-cm long and 12-cm wide total. Notch both fins as indicated on the Foam Rocket Instruction Sheet, so one fin can slide over the other fin. Slide the assembled fins into the slits cut into the tail of the foam rocket. Make sure the string hangs out the end of the rocket after the fins are in place.

8. Place a cable tie around the foam tube after the fins and cinch it tight, holding the fins in place. Trim the cable tie flush.



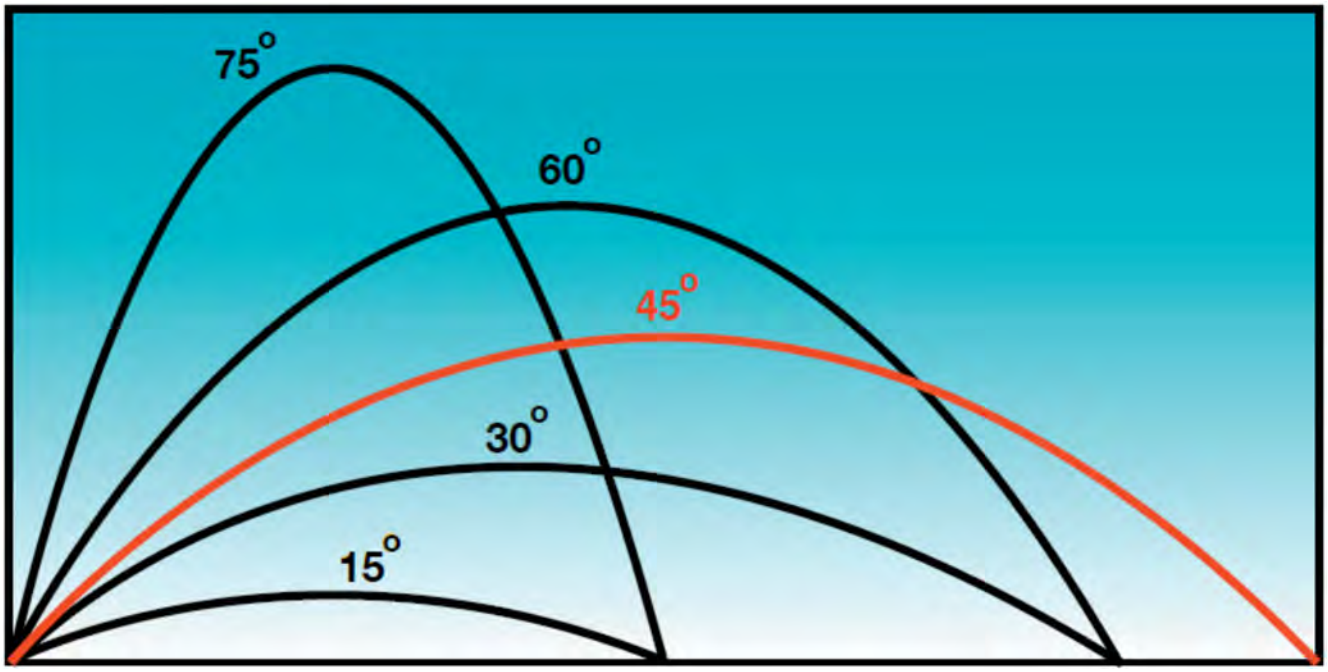
Note. From Foam Rockets Educator Guide, by NASA, 2008. Retrieved December 7, 2011, from http://www.nasa.gov/pdf/280754main_Rockets.Guide.pdf

Figure 2 Fin Construction Details

Construct the Launcher

1. Have the cadets cut out the quadrant pattern and fold along the dashed line.

2. Have the cadets tape the quadrant pattern to the metre stick so the black dot is 60-cm from the end of the stick. Have the cadets tape the 25cm string to the quadrant pattern so the string hangs freely from the black dot. Have the cadets attach a small weight (wash, nut or other small weight) to the free end of the 25-cm string.



Note. From Foam Rockets Educator Guide, by NASA, 2008. Retrieved December 7, 2011, from http://www.nasa.gov/pdf/280754main_Rockets.Guide.pdf

Figure 3 Rocket Trajectories

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. What is ballistics?

Q2. What stabilizes the foam rocket during flight?

Q3. What are the four forces that affect a foam rocket during flight?

ANTICIPATED ANSWERS:

A1. Ballistics is the study of the flight of projectiles after the power phase has terminated, moving under their own momentum and the external forces of gravity and air resistance.

A2. During flight, the fins stabilize the foam rocket. The fins, like feathers on an arrow, keep the rocket pointed in the desired direction.

A3. Gravity, launch angle, initial velocity, and atmospheric drag affect how far the rocket will land from the launch site.

Teaching Point 2 **Have the cadets, in groups of 4, launch the foam rockets and record the launch data.**

Time: 25 min Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets launch foam rockets and record the launch data.

RESOURCES

- Foam rocket launcher, one per group,
- Experiment data sheet located at Attachment B, one per group,
- Launch record sheet located at Attachment C, one per group, and
- Foam rocket. one per team,

ACTIVITY LAYOUT

Select a large room with a high ceiling for the launch range, such as a cafeteria or gymnasium or set up the activity out of doors.

Place masking tape markers on the floor / ground at 1 meter intervals starting at 5 meters and going to 20 meters.

If it is a calm day, the investigation can be conducted outside. Although the rockets can be launched outside on windy days, the wind becomes an uncontrollable variable that will invalidate the results.

ACTIVITY INSTRUCTIONS

In this activity, control will be how much the rubber band is stretched when launching the rockets. The rocket must be launched with exactly the same amount of force each launch in order to acquire accurate data.

The experimental variable will be the angle of launch. Cadets will compare the launch angle with the distance the rocket travels.

The cadets will each be given a title and responsibility for the experiment. The experiment will be conducted in four series of four launches.

1. Launch Officer – will attach the rocket to the launcher by placing the rubber band over the end of the launcher and pull the string back until the tail of the rocket reaches the 60-cm mark on the launcher. Tilt the launcher until it is pointing upwards at an angle of between 10 and 80 degrees. The launch officer will stand at the start mark and release the rocket when the launch command is given.
2. Launch Director – Record the angle on a copy of Attachment B. Give the launch command. Record the distance the rocket travels.
3. Range Officer – Measure the distance from the launcher to where the rocket hit the floor (not where it slid or bounced to). Report the distance to the launch director.

4. Recovery Officer – Return the rocket to the launcher for the next launch.
5. Repeat the launch procedure three more times changing the angle for each launch and record the distance for each launch.
6. Conduct the activity three more times switching the team members' jobs for each launch.

Assuming cadet groups are careful in their control of launch angles and in the stretching of the launch band, they will observe that their farthest flights will come from launches with an angle of 45 degrees. They will also observe that launches of 30 degrees, for example, will produce the same range as launches of 60 degrees. Twenty degrees will produce the same result as 70 degrees, etc. (Note: Range distances will not be exact because of slight differences in launching even when teams are very careful to be consistent. However, repeated launches can be averaged so that the ranges more closely agree with the illustration.)

The countdown is a warning that a rocket is about to be launched. When counting down, do so in a loud voice so everyone can hear.

SAFETY

Each step during a pre-launch and launch sequence is important. Personnel at a launch must always be aware of what is happening.

Teaching Point 3 **Conduct an activity debriefing.**

Time: 5 min Method: Group Discussion

BACKGROUND KNOWLEDGE

The point of the group discussion is to draw the following information from the group using the tips for answering / facilitating discussion and the suggested questions provided.

The foam rocket experiment has demonstrated the effects of gravity and air resistance on flight. The launch angle determines the distance the rocket will travel from the launch tower. With an increase in power, a rocket can be launched and accelerated with enough force to continuously fall toward Earth. This is a basic orbit. If the rocket is outside the atmosphere, air resistance is removed from the equation and gravity will continue to pull the rocket towards the Earth. Force must be applied periodically to ensure the speed is maintained allowing the rocket to remain in orbit.

GROUP DISCUSSION

TIPS FOR ANSWERING / FACILITATING DISCUSSION:

- Establish ground rules for discussion, eg, everyone should listen respectfully; don't interrupt; only one person speaks at a time; no one's ideas should be made fun of; you can disagree with ideas but not with the person; try to understand others as much as you hope they understand you; etc.
- Sit the group in a circle, making sure all cadets can be seen by everyone else.
- Ask questions that will provoke thought; in other words avoid questions with yes or no answers.
- Manage time by ensuring the cadets stay on topic.
- Listen and respond in a way that indicates you have heard and understood the cadet. This can be done by paraphrasing their ideas.
- Give the cadets time to respond to your questions.
- Ensure every cadet has an opportunity to participate. One option is to go around the group and have each cadet answer the question with a short answer. Cadets must also have the option to pass if they wish.
- Additional questions should be prepared ahead of time.

SUGGESTED QUESTIONS:

Q1. What launch angle gave the longest distance?

Q2. Why is it important to use the same amount of force for each launch?

Q3. What would happen if the amount of launch force is increased?

Q4. How can ballistics be used to achieve orbit?

Other questions and answers will develop throughout the group discussion. The group discussion should not be limited to only those suggested.

Reinforce those answers given and comments made during the group discussion, ensuring the teaching point has been covered.

END OF LESSON CONFIRMATION

The cadets' launch of a foam rocket will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

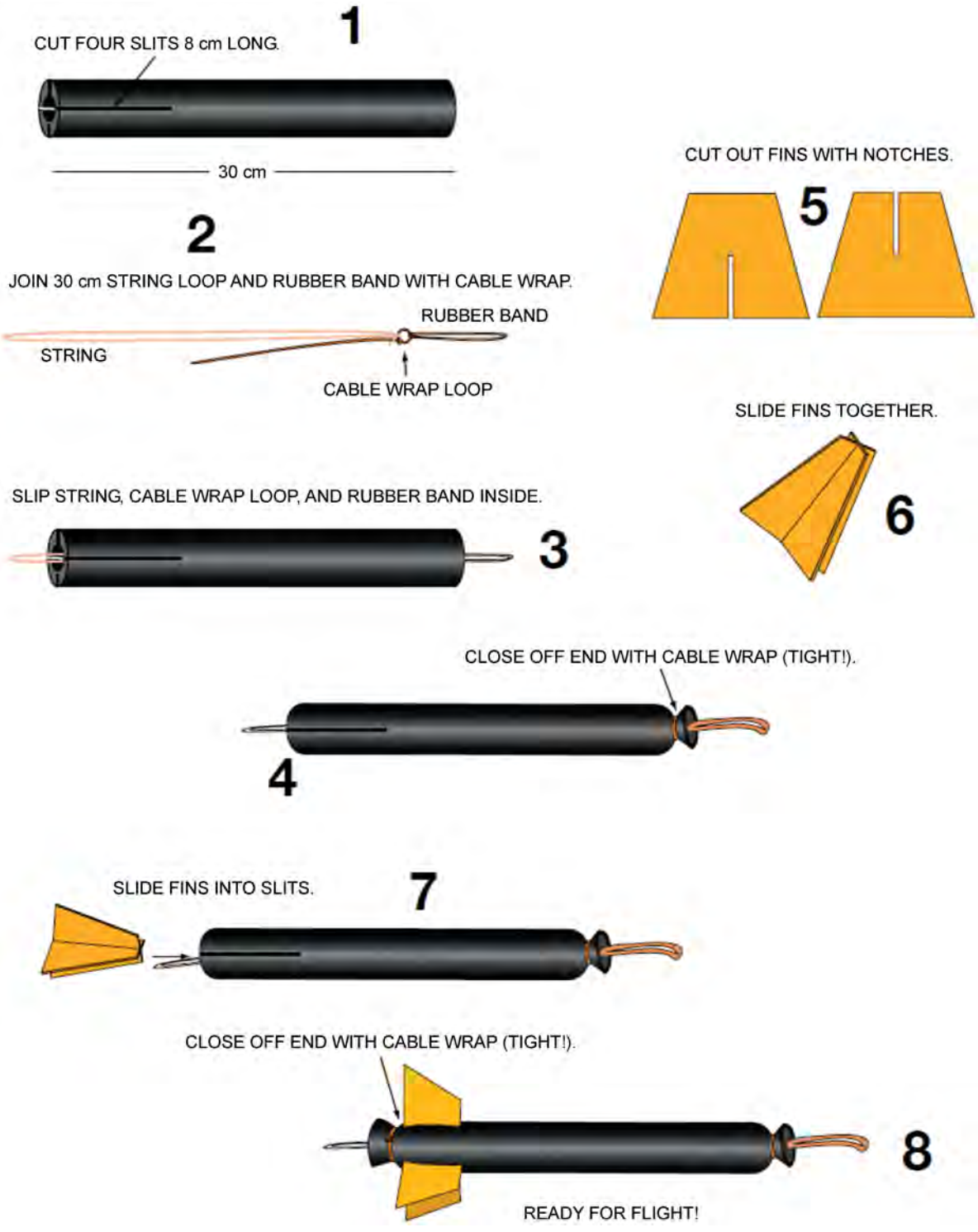
This is a dynamic way to demonstrate rocket propulsion and ballistics.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

C3-349 *Rocket Activity, Foam Rocket*. Retrieved October 1, 2008, from http://www.nasa.gov/pdf/295787main_Rockets_Foam_Rocket.pdf



Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure A-1 Foam Rocket Instruction Sheet

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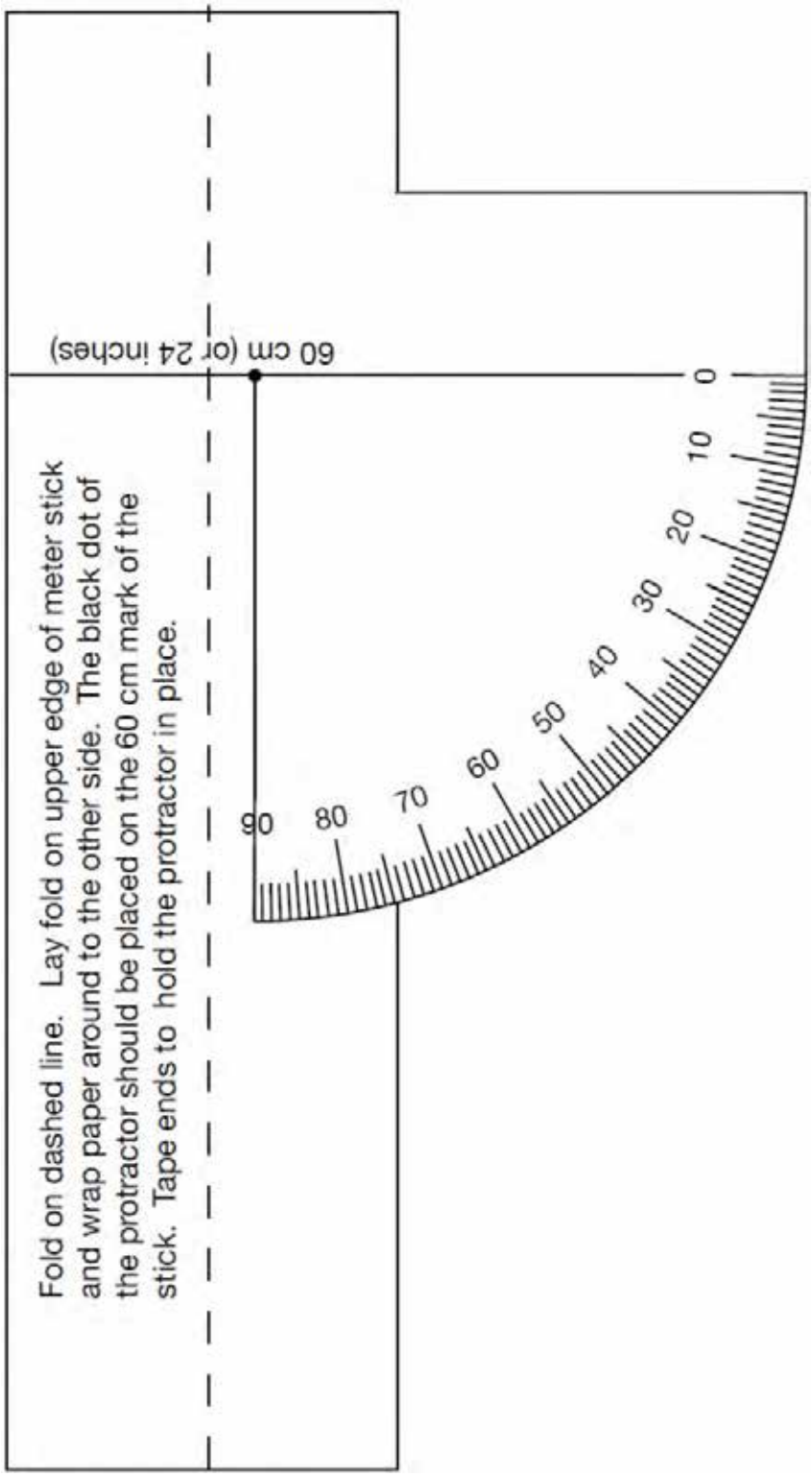
LAUNCHER QUADRANT PATTERN



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Rocket Range Experiment

Assign duties to team members. You will need the following positions (team members switch positions after each series of launches):

Launch Director

Launch Officer

Range Officer

Recovery Officer

TEAM NAME

_____

TEAM MEMBERS

_____

_____

_____

_____

_____

First Launch:

Launch Officer – attach the rocket to the launcher by placing the rubber band over the end of the launcher and pull the string back until the tail of the rocket reaches the 60-cm mark on the launcher. Tilt the launcher until it is pointing upwards at an angle of between 10 and 80 degrees. Release the rocket when the launch command is given.

Launch Director – Record the angle on the data table. Give the launch command. Record the distance the rocket travels.

Range Officer – Measure the distance from the launcher to where the rocket hit the floor (not where it slid or bounced to). Report the distance to the launch director.

Recovery Officer – Return the rocket to the launcher for the next launch.

Repeat the launch procedure three more times changing the angle for each launch.

Conduct the activity three more times switching the team members' jobs for each launch.

Compare the data for the four experiments.

LAUNCH EXPERIMENT 1	
LAUNCH ANGLE	DISTANCE

LAUNCH EXPERIMENT 2	
LAUNCH ANGLE	DISTANCE

LAUNCH EXPERIMENT 3	
LAUNCH ANGLE	DISTANCE

LAUNCH EXPERIMENT 4	
LAUNCH ANGLE	DISTANCE

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 3

EO C140.02 – DISCUSS SLEEP PATTERNS IN SPACE

Total Time: 60 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001 *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

The activities in this lesson take place over a two week period.

Photocopy the Reaction Time Sheet located at Attachment A, two copies for each cadet.

Photocopy the Multiple Rulers Sheet located at Attachment B and cut into individual rulers for each cadet.

Photocopy the Sleep Log Sheet located at Attachment C for each cadet.

Photocopy the Fraction Wheel for 24 Hours located at Attachment D for each cadet.

Photocopy the Fraction Wheel for One Complete Day located at Attachment E for each cadet (copy onto a sheet coloured differently from Attachment D).

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TP1 to orient the cadets to the problems astronauts face sleeping in space.

An in-class activity was chosen for TPs 2 and 3 to allow the cadets to experience some of the factors facing astronauts sleeping in space.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have discussed sleep patterns in space.

IMPORTANCE

This lesson will introduce the cadets to sleep patterns and how stressors affect astronauts sleeping in space.

Teaching Point 1 **Explain sleep patterns in space.**

Time: 10 min Method: Interactive Lecture

SLEEP PATTERNS

Sleep for humans is a recurring state that is characterized by a lack of consciousness, lack of sensory activity and all voluntary muscles are inactive. It is not the same as resting, and awakening is possible, unlike hibernation or a coma. It is also a time that the body rejuvenates its immune, nervous, skeletal and muscular systems.

Sleep has a major impact on overall quality of life and affects how a person looks, feels and performs on a daily basis.

The Effects of Lack of Sleep

Lack of sleep may cause fatigue, daytime sleepiness, clumsiness, weight loss or weight gain and most importantly, deficits in attention and working memory. This can lead to errors in daily routine that can range from forgetting an ingredient while preparing a meal to falling asleep while driving.

For sleep to be effective, the length and soundness of the sleep are critical. To rejuvenate the body, a teenager needs at least 8½ hours, and on average 9¼ hours, a night of uninterrupted sleep. If sleep is interrupted, there is not enough time for the body to complete all of the phases needed for muscle repair, memory consolidation and release of hormones regulating growth and appetite. This affects concentration, decision making, and impedes the ability to participate successfully in school and social activities.

Types of Sleep

Sleep follows a pattern of alternating between REM (rapid eye movement) and NREM (non-rapid eye movement) sleep throughout a typical night in a 90-minute cycle that repeats itself.

NREM sleep takes place during three quarters of the sleep period and is the first step in falling asleep. NREM sleep is the body preparing for REM sleep and in its final stages it starts the body’s restoration process. During NREM sleep, the body stabilizes and lowers blood pressure, breathing slows, temperature drops, muscles relax, and hormones are released that are essential for growth and development.

REM sleep takes place approximately 90 minutes after falling asleep and recurs every 90 minutes, getting longer later in the night. It provides energy to the brain, induces rapid eye movement and turns off voluntary muscles. It is the dream state.

Astronauts must sleep while on missions in space, but the excitement of a space mission, the inevitable motion sickness and a zero gravity environment can play havoc with an astronaut's sleep patterns. Without the effects of gravity, an astronaut can sleep in any position as long as they do not move around. Tossing and turning would send an unrestrained astronaut careening all around the cabin.

Astronauts aboard the space station use sleeping bags to restrain their movement when they need to sleep. The sleeping bags are attached to the walls of the space station. Sleep stations are spread throughout the space station.

Due to the cramped living conditions in space, the astronauts are packed into a small area where they can hear each other. Snoring has been documented on one of the missions when a medical doctor was wired to record his sleep patterns.

A circadian rhythm is a daily cycle of biological activity based on a 24-hour period and influenced by regular variations in the environment, such as the alternation of night and day. Circadian rhythms include sleeping and waking in animals, flower closing and opening in angiosperms, and tissue growth and differentiation in fungi.

We are accustomed to the circadian rhythms here on earth with the 24 hour day and night cycle. The International Space Station (ISS) orbits the Earth every 90 minutes so the sun setting cannot be used as an indicator of when to sleep. Astronauts can use a sleep blindfold, but may still be disturbed by the artificial light where they are sleeping. To overcome all of the problems of sleeping in space, astronauts may use sleeping pills to ensure they get an appropriate amount of sleep.

Note: From CSA (2011). CSA Astronaut Robert Thirsk Sleeping in the Japanese Module of the ISS. Retrieved December 7, 2011 from http://www.asc-csa.gc.ca/eng/astronauts/living_sleeping.asp

Figure 1 CSA Astronaut Robert Thirsk sleeping in the Japanese module of the ISS

The astronauts are scheduled for an 8 hour sleep period when each mission "day" comes to an end. The waking and sleeping cycle is an artificial substitute for the day night cycle on earth

Teaching Point 2 **Have the cadets participate in an activity where they measure their current state of alertness.**

Time: 15 min Method: In-Class Activity

ACTIVITY

Time: 15 min

OBJECTIVE

The objective of this activity is to have the cadets test their reaction time when well rested and after a lack of sleep and discuss their findings.

RESOURCES

- Reaction Time Sheet located at Attachment A, and
- Individual ruler located at Attachment B.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Have each cadet assess, on a scale of one to ten, how sleepy they are—with “one” being not sleepy, “five” being somewhat sleepy and “ten” being ready to fall asleep instantly.
2. Divide the cadets into pairs.
3. Distribute copy of Attachment A and a ruler from Attachment B to each cadet.
4. Within each pair, have the first cadet hold a ruler with centimetres (between the thumb and forefinger) vertically at the 30 mark with the 0 mark toward the floor.
5. Have the second cadet position their forefinger and thumb at the 0 end of the ruler without touching it, so that they will be able to grab the ruler easily by closing their finger and thumb together.
6. Have the second cadet observe the ruler carefully and then have the first cadet release the ruler.
7. Have the second cadet close their thumb onto the ruler to stop it as soon as it moves.
8. Have the cadet mark the place where the partner’s fingers were when they stopped the ruler. The cadet should discard the first result if the ruler moved less than five centimetres.
9. Have the cadets repeat the release / catch process 20 times and record and average the results the Reaction Time Sheet.
10. Have the cadets change places and repeat the test.
11. Have the cadets as a class review the average values of the reaction times. Have cadets think about what really is being measured in the activity, and how distance in centimetres reflects reaction times.
12. Have cadets calculate the average value of their reaction times and the average value of their sleepiness scores.

To calculate the average, add the values together and divide the sum by the number of values.

Example: If sleepiness score is a “3” and the average reaction time is ___, add 3 + ___ and divide the sum by ___ (number of values.) Discuss reaction time variance and alertness level.

13. Ask the cadets to identify the normal range of reaction times in their class population.

The cadets will take the ruler and data sheet home for the next two weeks and record their reaction time and calculate their average reaction times during each trial (night and morning).

14. Inform cadets that they will need to ask someone at home to help them with this activity, and suggest that the cadets perform this activity on a Friday or Saturday night so as not to disrupt their weekly routines.

15. Have cadets ask their parent(s) / guardian(s) for permission to stay up one or two hours beyond their normal bed time.

16. Instruct cadets to perform 20 trials of reaction times tests before they go to bed. Inform them that they must be feeling tired and ready to go to bed before doing this exercise. (Ask cadets to evaluate how sleepy they feel using the same scale as in the previous activity.)

17. Direct the cadets to repeat the activity after they have each had a good night’s sleep. (Again, ask them to evaluate how sleepy they feel using the same scale as in the previous activity.)

18. Have the cadets take home a copy of Attachment C Sleep Log Sheet and fill it in over the next 14 days. They will record how many hours they slept by filling in the columns for each day.

Teaching Point 3 **Conduct an activity where the cadets discuss their sleep patterns from the proceeding two weeks.**

Time: 25 min Method: In-Class Activity

This activity takes place 14 days after the previous TP.

ACTIVITY

Time: 25 min

OBJECTIVE

The objective of this activity is to have the cadets use the data recorded over the previous two weeks to assemble graphs and a fraction wheel to be used when discussing their sleep patterns.

RESOURCES

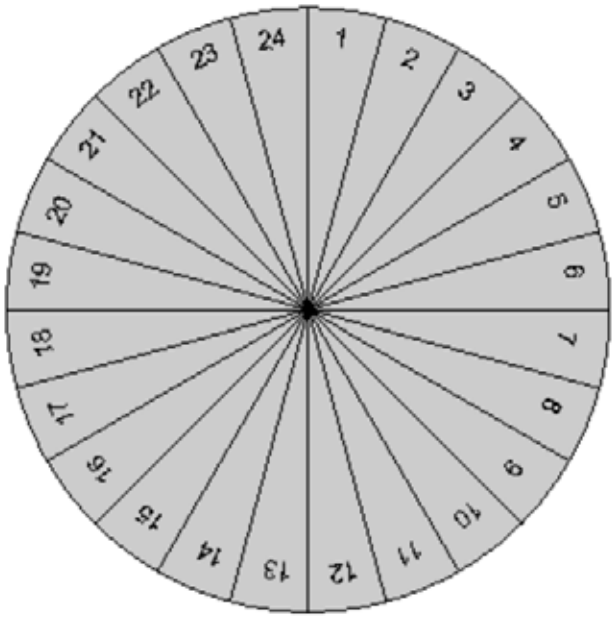
- Sleeping pattern graph,
- Sheet of white paper,
- Sheet of light coloured paper,
- Drawing compass,
- Protractor,
- Different coloured felt tip markers,
- Pair of scissors, and
- Pencil.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Have the cadets discuss their sleep patterns they have recorded on the Reaction Time Sheet located at Attachment A.
2. Have the cadets, cut out the 16 cm diameter circle located at Attachment D out of a piece of white paper. Have them cut one radius line from the edge to the centre.
3. Have the cadets, using felt tip markers, indicate the 24 hours in a day by writing each hour in each segment.

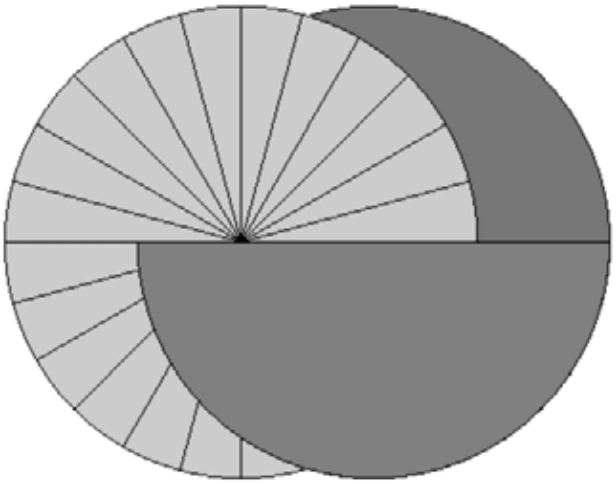


Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 2 Hours Indicated on Fraction Wheel

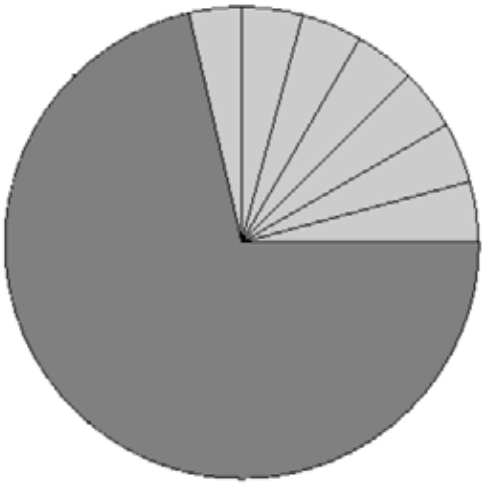
4. Have the cadets cut out the circle located at Attachment E out of a piece different coloured paper. Have them cut the 24 / 1 radius line from the edge to the centre.

5. Have the cadets slide the radius cuts of Attachment D and E together, with the lower numbers on Attachment D visible, so the two pieces make one circle.



Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 3 Fraction Wheel Assembly



Note. Created by Director Cadets 3, 2011, Ottawa, ON: Department of National Defence.

Figure 4 Fraction Wheel Assembled

6. The Fraction Wheel is used to indicate the fraction of hours slept in a 24 hour period. Rotating circle E will show different amounts of circle D. If circle E represents one, as in the whole of one, then any parts of C showing will be a fraction of E. The circles are based on a 24 hour period, with D representing the 24 hours in one day and E demonstrating one day. Any part of D showing will be the indicated number of hours as a fraction of one day.

7. Ask the cadets to set their Fraction Wheel to the average number of hours of daylight within Earths light dark cycle (12 hours). Write the number as a fraction, 12/24. Have the cadets move their fraction wheels to the average number of hours they slept over the last 14 days.

8. Have the cadets calculate the fraction of the day that they slept on average, on the least amount of sleep day and on the most amount of sleep day.

9. Ask the cadets to compare their fractions and see how many cadets are getting enough sleep.

10. Have the cadets discuss the findings of the experiment.

Use the following questions to stimulate discussion.

Q1. What are some of the environmental constraints that can prevent sleep?

Q2. What can an astronaut do in space to ensure adequate sleep?

Q3. What can lack of sleep cause?

Q4. Where do astronauts sleep on the space station?

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadets' participation in the activity will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Sleep is an important factor in maintaining a healthy and efficient lifestyle. Lack of sleep causes many accidents and slows our day to day efficiency. Astronauts need to adjust to the challenges of sleeping while in space.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

C3-350 The science of Sleep and Daily Rhythms. (2009). *Sleep Patterns*. Retrieved December 13, 2011, from http://www.nsbri.org/default/Documents/EducationAndTraining/MiddleSchool/Sleep/TSO_Sleep.pdf

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REACTION TIME SHEET

CENTIMETRES WHEN CAUGHT	NAME									DATE										
	25																			
	24																			
	23																			
	22																			
	21																			
	20																			
	19																			
	18																			
	17																			
	16																			
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	7																			
	6																			
	5																			
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	3																			
	2																			
	1																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
		ATTEMPTS AT CATCHING THE RULER																			

TIREDNESS	1	2	3	4	5	6	7	8	9	10

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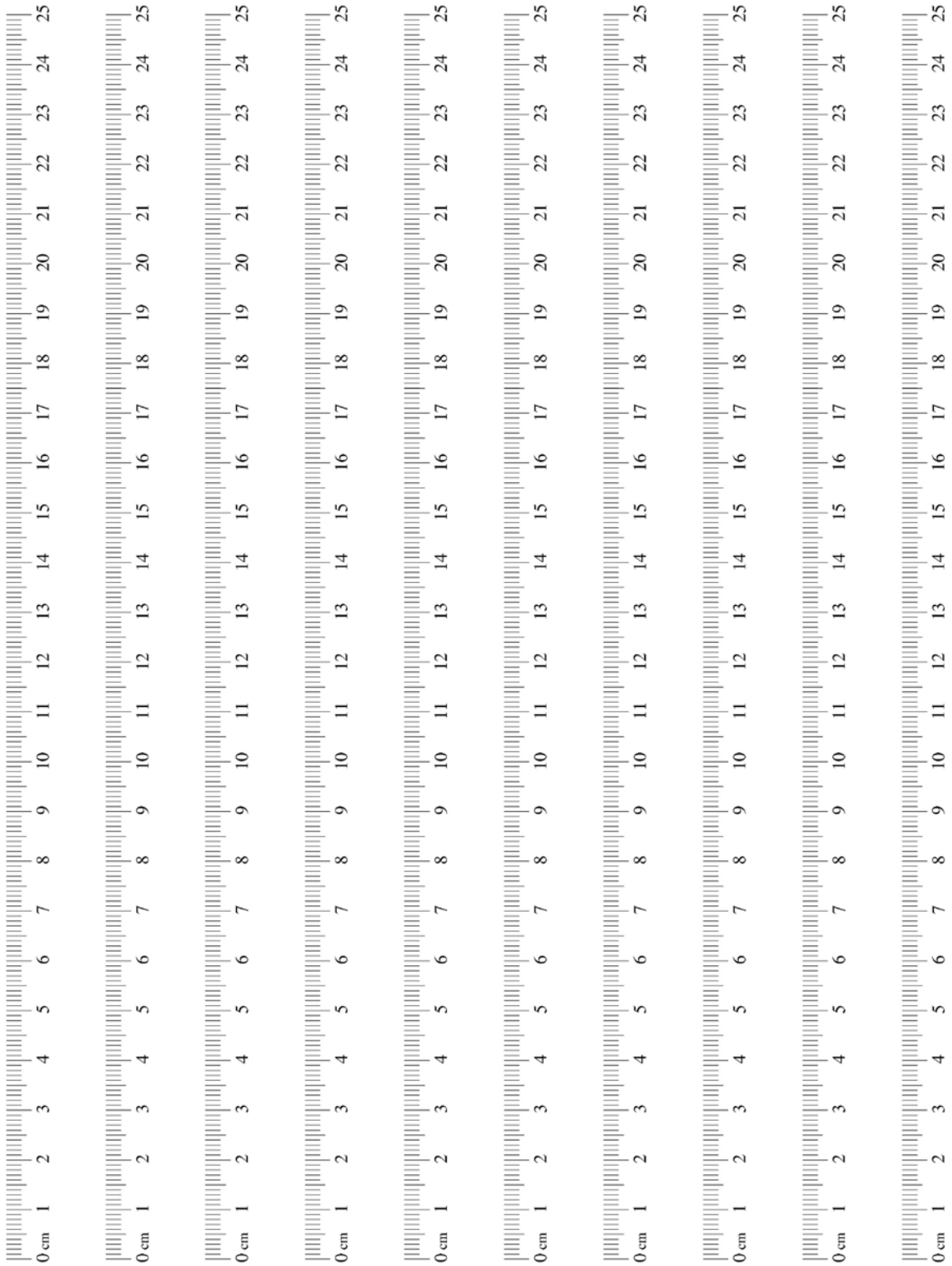
0 cm 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

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SLEEP LOG SHEET

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
DATE →														
1200A														
0100														
0200														
0300														
0400														
0500														
0600														
0700														
0800														
0900														
1000														
1100														
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1500														
1600														
1700														
1800														
1900														
2000														
2100														
2200														
2300														
TOTAL →														

Using the Sleep Log

Colour in the square representing the time you went to sleep and the time you woke up. Only count the hours.

With another colour, fill in the squares between the time you went to sleep and the time you awoke. Fill in any squares where you took a nap. Record the number of hours you slept for each 24 hour period in the TOTAL line.

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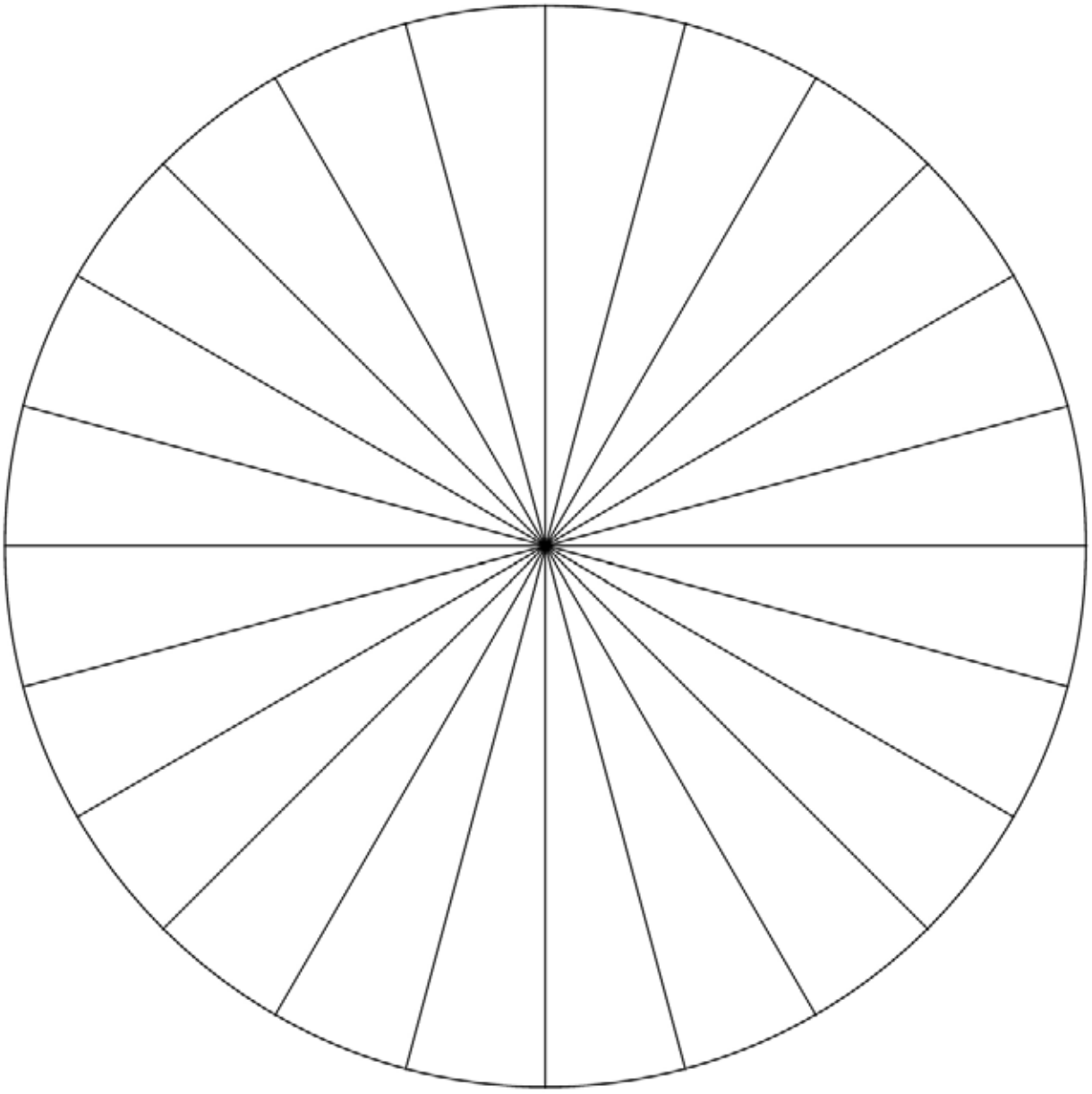
FRACTION WHEEL FOR 24 HOURS



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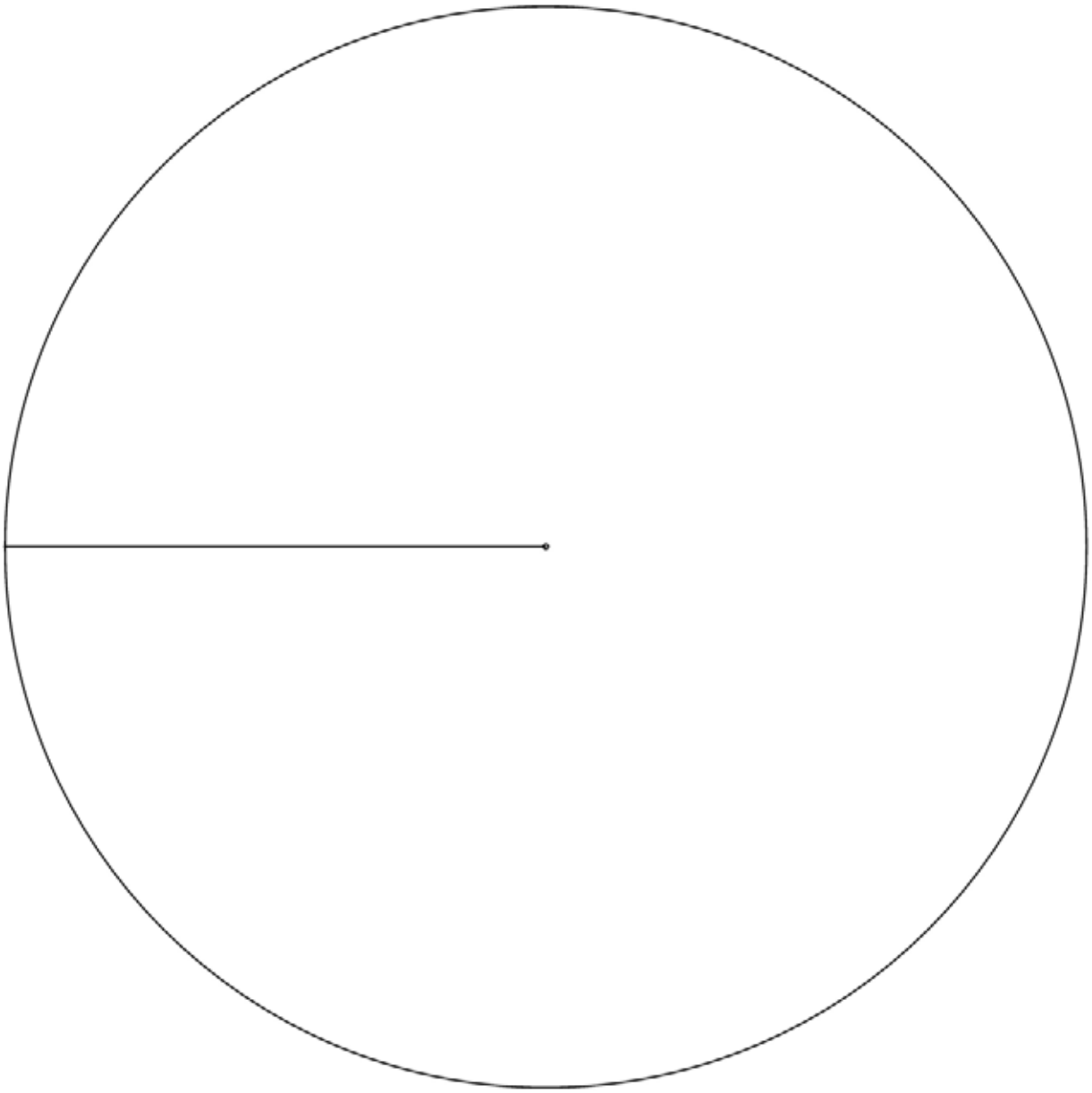
FRACTION WHEEL FOR ONE COMPLETE DAY



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CHAPTER 15

PO 160 – PARTICIPATE IN AERODROME OPERATIONS ACTIVITIES

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 1

EO M160.01 – IDENTIFY MAJOR AERODROME COMPONENTS

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instruction guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Photocopy and cut the game pieces located at Attachment B.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TPs 1–3 as it allows the instructor to introduce basic information to the cadets.

An in-class activity was selected for TP 4 as it is an interactive way to confirm the cadets' comprehension of the material.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall identified the major components of an aerodrome.

IMPORTANCE

Knowing the various components of an aerodrome will assist cadets in identifying them during aviation and aerodrome operations activities.

Teaching Point 1 **Define the terms aerodrome and airport.**

Time: 5 min Method: Interactive Lecture

AERODROME

Around the world there is an intricate system of aeronautical facilities designed to facilitate the efficient movement of air traffic, called aerodrome. Many aerodromes vary widely in the facilities and the services they offer. However, there are certain standard features that apply to every aerodrome.

“An aerodrome is any area of land or water designed for the arrival, departure and movement of aircraft” (Macdonald, 2000).

AIRPORT

“An airport is a licensed aerodrome, which possesses a certificate stating it has met all airport safety standards” (Macdonald, 2000).

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. What is the definition of an aerodrome?

Q2. What makes an airport different from an aerodrome?

ANTICIPATED ANSWERS:

A1. An aerodrome is any area of land or water, designed for the arrival, departure and movement of aircraft.

A2. An airport possesses a certificate stating it has met all airport safety standards.

Teaching Point 2 **Explain components of the airside of an aerodrome.**

Time: 5 min Method: Interactive Lecture

Images of the various parts of an aerodrome are located at Attachment A.

This section refers to runway, taxiway and apron.

RUNWAY

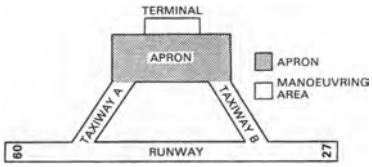
The runway is the area where aircraft take off and land. A runway may be made of pavement, grass, gravel, dirt or snow among other materials. Runways are identified by numbers and by the white lights that run along each side.

TAXIWAY

The taxiway is the area used by an aircraft to manoeuvre around the aerodrome between aprons and runways. Letters normally designates taxiways. At aerodromes with lighting, taxiways are defined by blue lights along each side.

APRON

The apron, also known as the tarmac or ramp area, is the part of an aerodrome intended to accommodate the loading and unloading of passengers and cargo. It is also the area used for refuelling, servicing and parking of aircraft.



Note. From Royal Canadian Air Cadet Manual, Proficiency Level One Handbook, Cadets Canada, 1998.

Figure 1 Aerodrome Movement Areas

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. What colour lights identify the sides of the runway?

Q2. What is the purpose of a taxiway?

Q3. What other names are used to refer to the apron?

ANTICIPATED ANSWERS:

A1. White lights.

A2. The taxiway is the area used by an aircraft to move from the apron to the runway.

A3. The apron can be referred to as the tarmac or the ramp area.

Teaching Point 3 **Explain components of an aerodrome.**

Time: 10 min Method: Interactive Lecture

Images of the various parts of the aerodrome are located at Attachment A.

This section refers to control tower, terminal buildings, windsock, flying school and hangars.

CONTROL TOWER

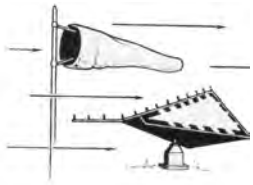
Some aerodromes have a control tower to ensure the safe and efficient movement of aircraft. The air traffic controllers in the tower are responsible for a number of procedures. These include take off and landing procedures, circuit procedures and ground manoeuvring of aircraft.

TERMINAL BUILDINGS

Terminal buildings are used for passengers arriving and departing. They are also used for baggage and cargo handling. Terminal buildings are located on the apron.

WINDSOCK

All aerodromes have at least one windsock or wind-t. The windsock is used by pilots to determine wind direction and speed. The approximate wind speed is indicated by the amount the windsock is extended. The wind-t is designed like an arrow whose small end points into the wind. They are found on the airfield, beside the runway.



Note. From The Ground Up: Millennium Edition, A.F. MacDonald, 2000.

Figure 2 Windsock and Wind-T

FLYING SCHOOL

Flying schools are used as training facilities for current pilots and those that want to learn how to fly.

HANGARS

Hangars are used to store aircraft to protect them from weather conditions that might damage their components. Hangars are also used to facilitate work while conducting maintenance tasks on the aircrafts.

CONFIRMATION OF TEACHING POINT 3

QUESTIONS:

Q1. What is the purpose of the control tower?

Q2. What does a windsock indicate?

Q3. What is the importance of flying schools?

ANTICIPATED ANSWERS:

A1. The purpose of the control tower is ensuring the safe and efficient movement of aircraft, through use of the air traffic controllers working within the tower.

A2. A windsock indicates wind direction and speed.

A3. Flying schools are used as training facilities for current pilots and those that wish to learn how to fly.

Teaching Point 4 **Have the cadets identify components of an aerodrome.**

Time: 5 min Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to confirm that the cadets are able to correctly identify various components of an aerodrome.

RESOURCES

Nil.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Divide the cadets into groups of four.
2. Distribute to the cadets the games pieces located at Attachment B.
3. Have the cadets match the different components of the aerodrome with their names and short definition.
4. Supervise the cadets as they are completing the activity.
5. Once the cadets have completed the activity, confirm the matches made by the cadets using the answer key located at Attachment C.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 4

The cadets' participation in the activity will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the activity will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

The various areas of an aerodrome serve different purposes. As cadets, knowing the various components of an aerodrome will assist in identifying the components during aviation and airport operations activities.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A3-001 A-CR-CCP-263/PT-001*From the ground up: Millennium edition* (2000). Ottawa, ON: Aviation Publishers Co. Limited.

C3-022 ISBN 0-19-541731-3 *The Canadian Oxford dictionary* (2001). Don Mills, ON: Oxford University Press.

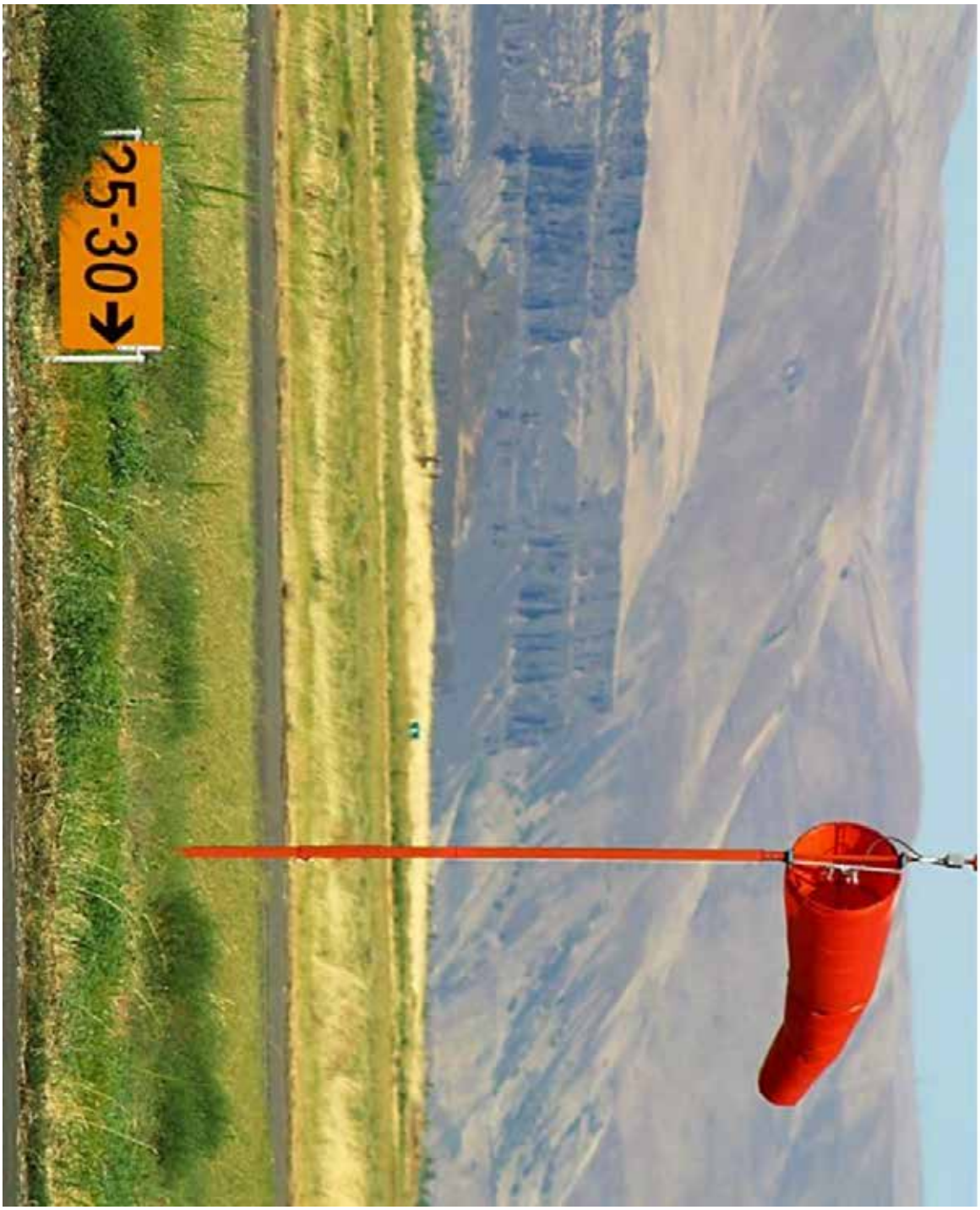

Runway

Taxiway

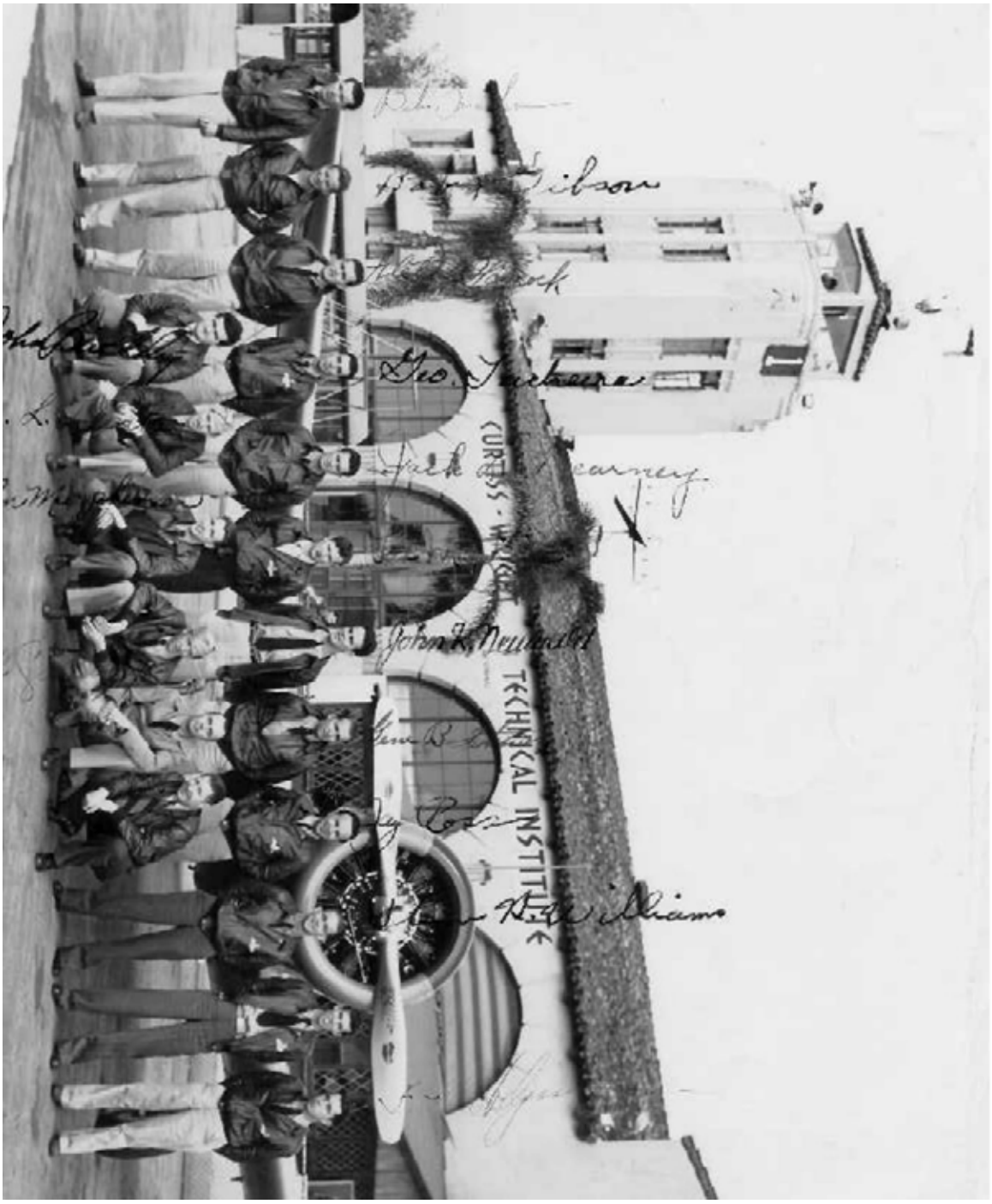
Apron

Control Tower

Terminal Building

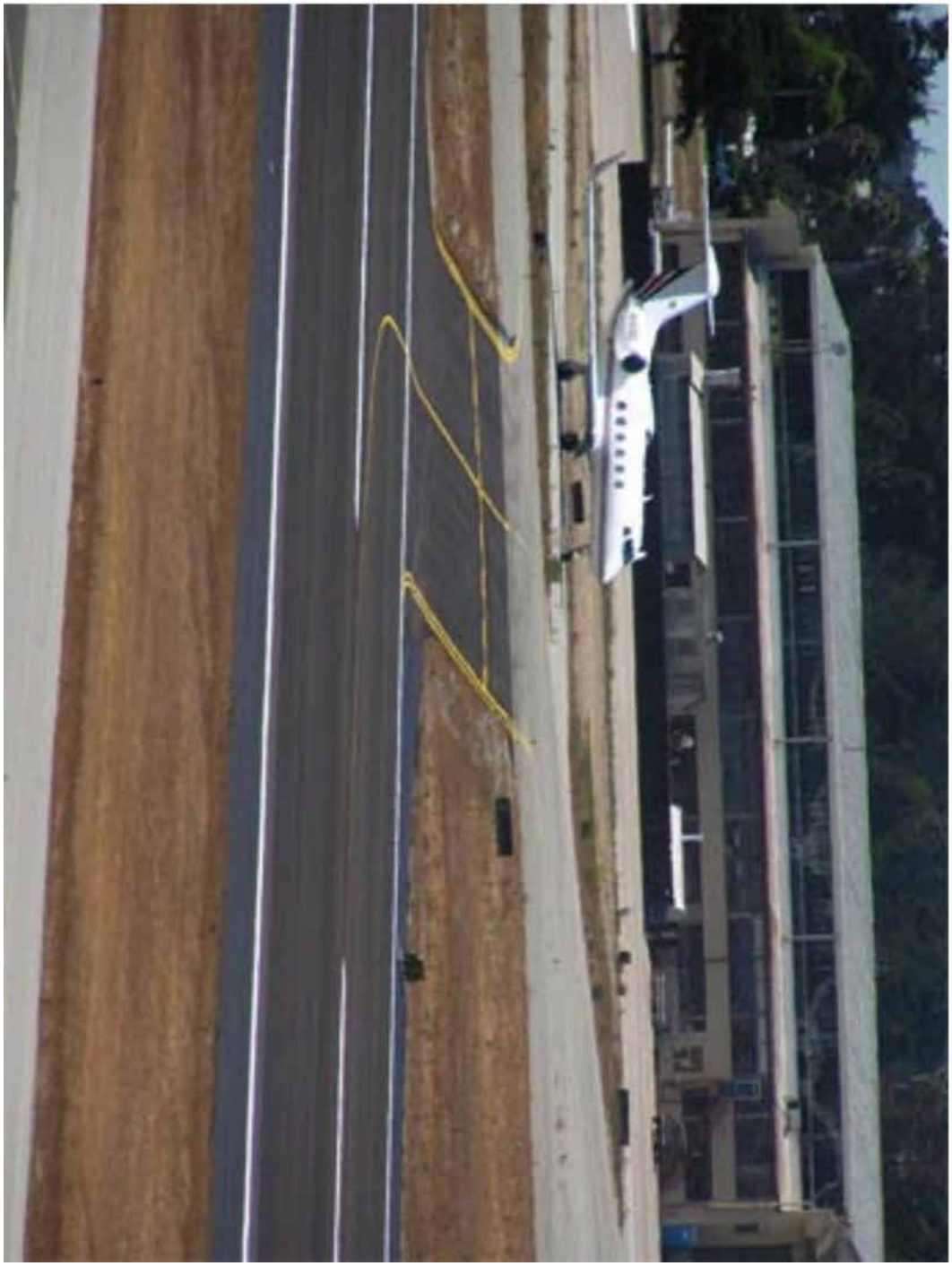


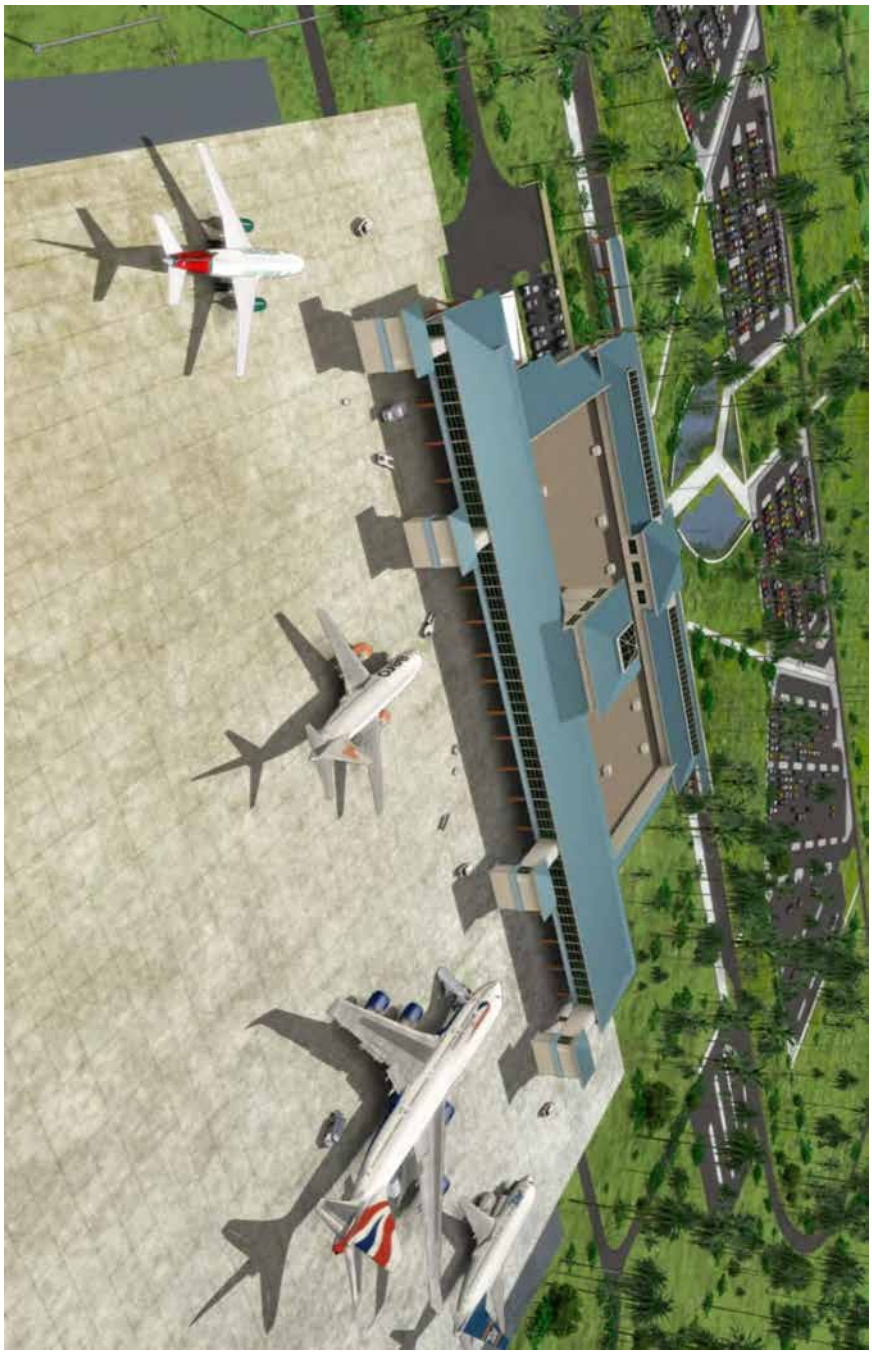
Windsock



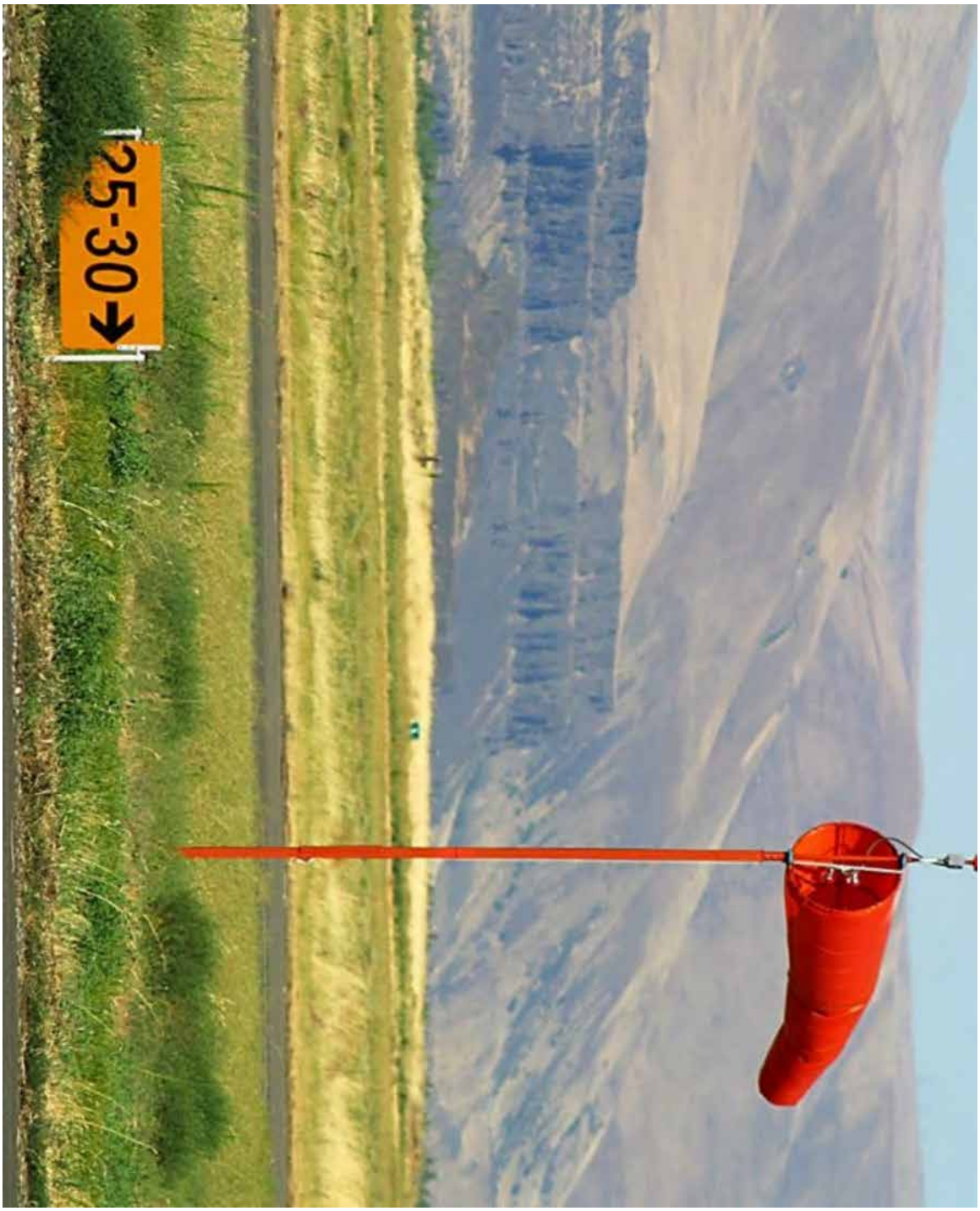
Flying School

Hangar






WORLD'S BUSIEST CONTROL TOWER
WORLD'S BUSIEST CONTROL TOWER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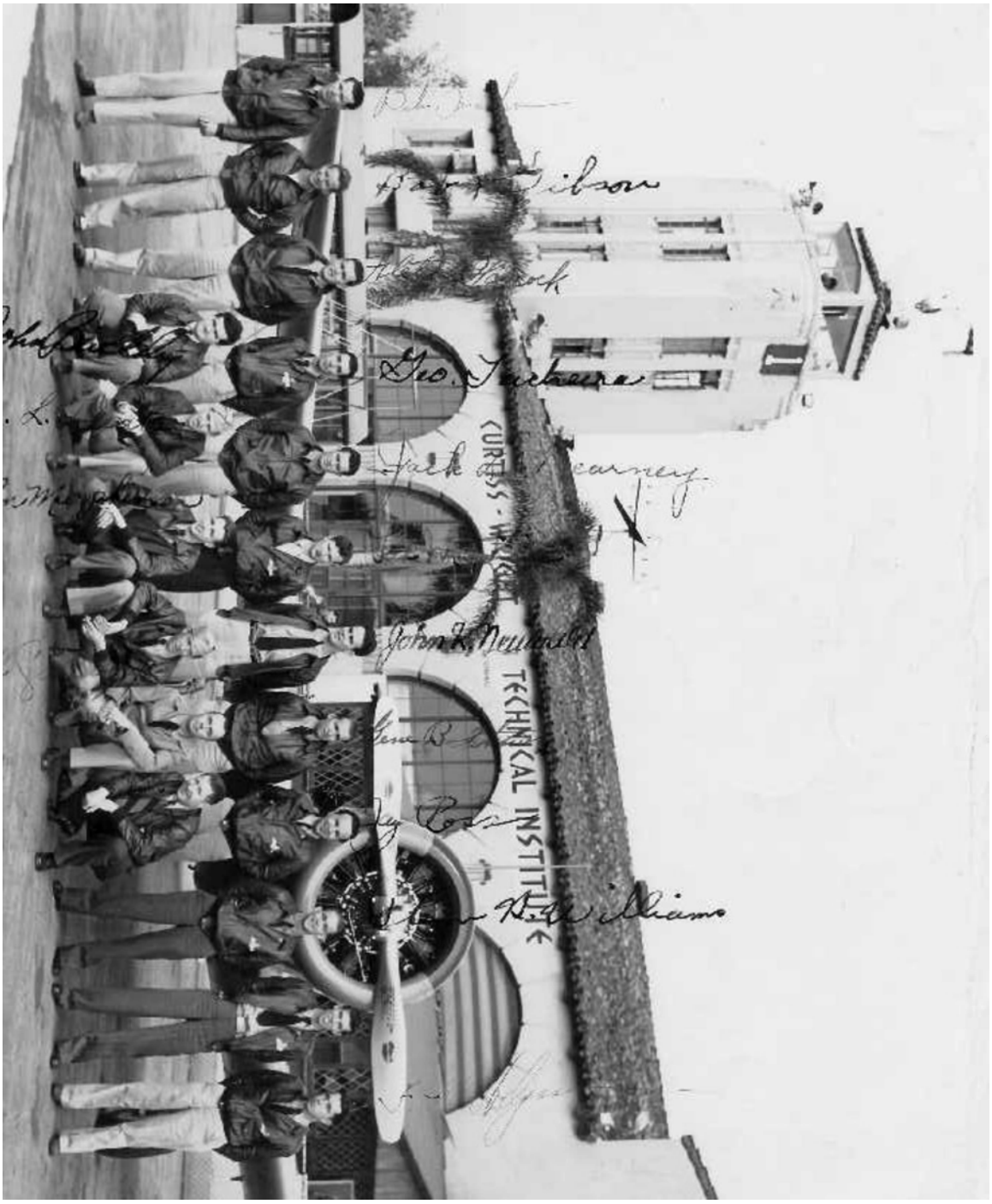

CURTISS - WRIGHT TECHNICAL INSTITUTE

RUNWAY

APRON

TAXIWAY

FLYING SCHOOL

WINDSOCK

HANGAR

TERMINAL

CONTROL TOWER

Where the aircraft lands and takes off.
Designated by letters.
Used for refuelling, servicing and parking.
Used for passenger arrivals and departures.
Indicates the direction and speed of the wind.
Where to learn how to fly.
Used to protect the aircraft from the elements.
Location of those responsible for a number of procedures on the ground and in the air.

ANSWER KEY

Runway

Where the aircraft lands and takes off.

Taxiway

Designated by letters

Apron

Used for refuelling, servicing and parking.

Control Tower

Location of those responsible for a number of procedures on the ground and in the air.

Terminal

Used for passenger arrivals and departures.

Windsock

Indicates the direction and speed of the wind.

Flying school

Where to learn how to fly.

Hangar

Used to protect the aircraft from the elements.

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 2

EO M160.02 – IDENTIFY FEATURES OF A RUNWAY

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located at A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

The training aids for this EO can be presented a number of ways, depending on the resources available at the squadron. A model runway can be constructed out of construction paper or Bristol board. If desired, Attachment A can be photocopied and distributed to the cadets.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture method was chosen for TP 1–3 as it allows the instructor to present basic information to the cadets.

An in-class activity was selected for TP4 as it is an interactive way to confirm the cadets' comprehension of the material.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have identified features of a runway.

IMPORTANCE

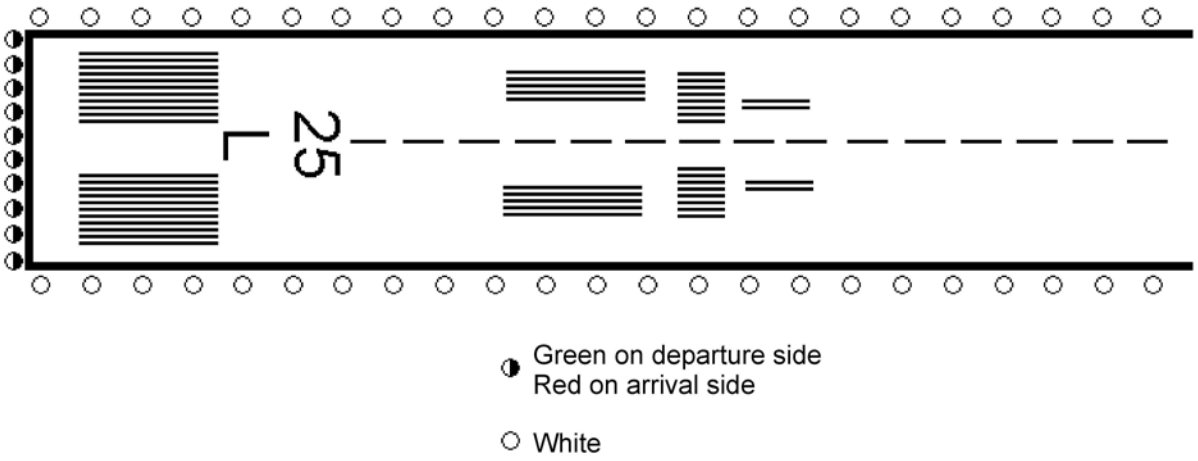
Understanding the features of a runway will be helpful during tours and familiarization flights. In the aviation industry, pilots and air traffic controllers require this information to perform their jobs.

Teaching Point 1 **Discuss runway lights.**

Time: 5 min Method: Interactive Lecture

RUNWAY LIGHTS

Both sides of a runway are marked by white lights. These lights are used to indicate the borders of the runway. They also contain red / green lights at the ends of the runway. These lights are double-sided with red on one side and green on the other. The red side of the lights faces toward the runway, or departure side, and indicates the end of the runway. The green side faces away from the runway, or arrival side, and indicates the start of the runway to aircraft that are landing.



Note. Director Cadets 3, 2011, Ottawa, ON: Department of National Defence

Figure 1 Runway Lights

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. What colour lights define the runway on each side?

Q2. What is the importance of the red / green lights?

ANTICIPATED ANSWERS:

A1. White lights.

A2. They indicate the end of the runway (red side) and the start of the runway for the aircraft preparing to land (green side).

Teaching Point 2 **Discuss runway numbering.**

Time: 10 min Method: Interactive Lecture

RUNWAY NUMBERING

The runway number is indicated in large print as a two-digit number at the end of the runway. Runways are numbered according to their magnetic direction and are rounded off to the nearest ten degrees. Once rounded, the hundreds and tens digits are used to number the runway. For example, a runway that points in the direction of 266 degrees magnetic would be numbered 27. The highest runway number possible is 36 (360 degrees).

If two runways run parallel to each other they are identified as left or right by adding an L or an R next to the runway number. Two parallel runways heading north / south would be numbered 36L (left) and 36R (right).

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. How are runways numbered?

Q2. If a runway points in the direction of 176 degrees magnetic, how would it be numbered?

Q3. How are parallel runways numbered?

ANTICIPATED ANSWERS:

A1. Magnetic direction.

A2. 18 (Round 176 to 180, and use only the hundreds and tens digits).

A3. By adding L and R next to the runway number.

Teaching Point 3 **Discuss runway markings and lights.**

Time: 5 min Method: Interactive Lecture

RUNWAY MARKINGS

Runways have other important markings that have specific purposes.

Centreline. White dashed lines designate the centre of the runway. Pilots use these markings to line up the aircraft to the middle of the runway during landing.

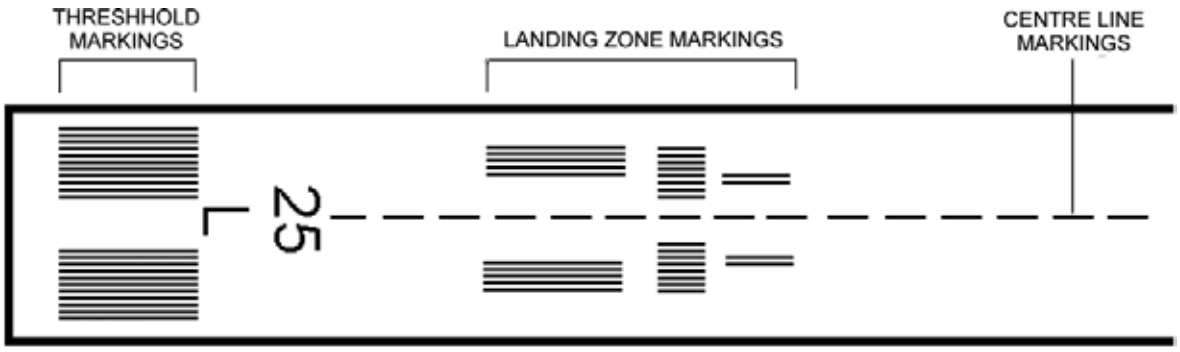
Landing zone markings. Provide the pilot with a general area where it is desirable to touch down.

Threshold markings. Indicate the beginning and the end of the runway using white lines at the threshold.

Danger Markings. Indicate areas that may be dangerous or unserviceable. These areas are signified by large white Xs on the unserviceable runways or taxiways.

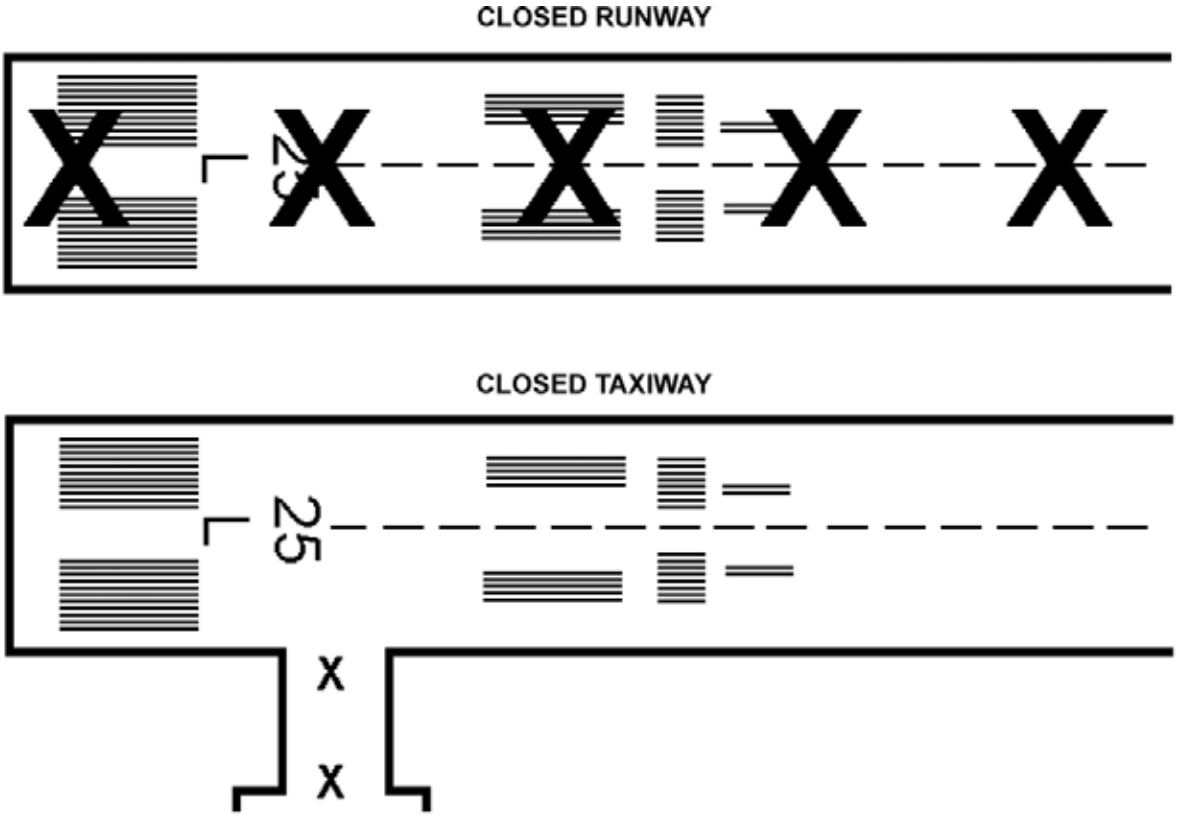
Obstruction lights. Identify possible structures that may obstruct a plane while attempting to take off / land.

Windsocks: Lit so pilots can use them at night.



Note. Director Cadets 3, 2011, Ottawa, ON: Department of National Defence

Figure 2 Runway Markings



Note. Director Cadets 3, 2011, Ottawa, ON: Department of National Defence

Figure 3 Runway Danger Markings

CONFIRMATION OF TEACHING POINT 3

QUESTIONS:

Q1. What are the markings that indicate the beginning and the end of the runway?

Q2. What does a large white X signify on a runway or a taxiway?

Q3. What is the purpose of obstruction lights?

ANTICIPATED ANSWERS:

A1. Threshold markings.

A2. Areas which may be dangerous or unserviceable.

A3. Obstruction lights are used to identify structures that may obstruct a plane while attempting to take off or land.

Teaching Point 4 **Have the cadets identify various features of a runway.**

Time: 5 min Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of the activity is to confirm the cadets can identify the features of a runway.

RESOURCES

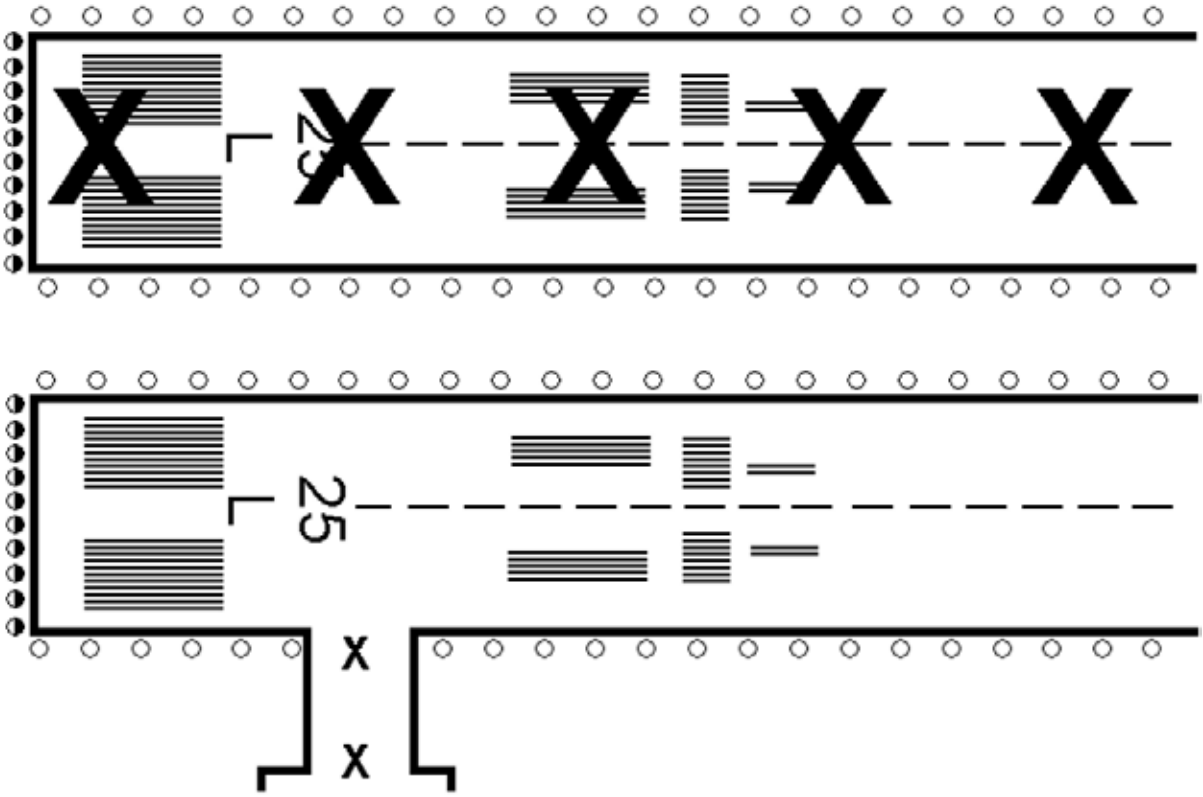
- Flipchart paper, and
- Flipchart markers.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Divide the cadets into groups of four.
2. Give each group a sheet of flipchart paper and flipchart markers.
3. Have each group create a runway using the materials provided. The runways must include:
   (a) threshold markings,
   (b) red / green lights,
   (c) runway numbers,
   (d) centre line,
   (e) aerodrome landing markings,
   (f) danger markings, and
   (g) white lights.



Note. Director Cadets 3, 2011, Ottawa, ON: Department of National Defence

Figure 4 Complete runway markings

4. The groups have five minutes to complete the assignment.

5. Confirm that each group included all the features.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 4

The cadets' participation in the activity will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the activity will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Being familiar with the various features of runways can assist cadets in a number of areas of training. Understanding the features of a runway enhances cadet knowledge of aerodrome components and gives further insight into the runways' role in take off and landing procedures.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A3-001 A-CR-CCP-263/PT-001*From the ground up: Millennium edition* (2000). Ottawa, ON: Aviation Publishers Co. Limited

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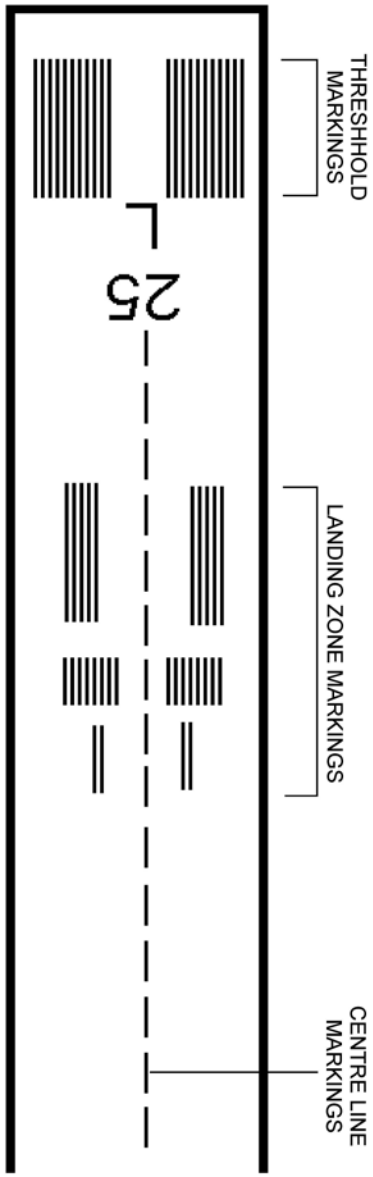
RUNWAY LIGHTS
25
Green on departure side
Red on arrival side
White

RUNWAY MARKINGS



DANGER MARKINGS
CLOSED RUNWAY
25
CLOSED TAXIWAY
25

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 3

EO M160.03 – CONSTRUCT A MODEL AERODROME

Total Time: 60 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located at A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An in-class activity was selected for this lesson as it is a fun and interactive way to confirm the cadets' comprehension of the material.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have constructed a model aerodrome.

IMPORTANCE

Cadets will visit aerodromes as part of participating in various aircraft and aerodrome operations activities. This lesson will help them identify the major features of the aerodrome.

Teaching Point 1 **Have the cadets construct a model aerodrome.**

Time: 50 min Method: In-Class Activity

OBJECTIVE

The objective of this activity is to confirm the information taught during the previous two lessons on aerodrome operations.

RESOURCES

The materials recommended for the construction of the model aerodromes are:

- Bristol board,
- construction paper,
- cardboard,
- small boxes (shoe box size),
- white chalk,
- stick pins,
- colour markers,
- scissors,
- glue, and
- masking tape.

Other materials may be used beyond this list if available at the squadron.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Place the cadets into groups of four to five.
2. Distribute the materials to each group.
3. Have each group start with four pieces of Bristol board (two by two taped together) to form the base of their aerodrome.
4. Show the cadets the diagram located at Attachment A for the ideal placement of the components of an aerodrome.
5. Have each group construct a model aerodrome.
6. Have each group tour each aerodrome and compare ideas on how they were constructed.

While cadets are encouraged to be creative with the materials provided, the instructor may recommend the following uses for the resources listed above:

- cardboard, poster board and small boxes – can be used for the construction of small buildings;
- white chalk – can be used for runway numbering and markings on Bristol board;
- multi-coloured markers – can be used for labelling the various components and adding specific details to them;
- construction paper – can be used with cardboard/small boxes if a specific colour for the building/component is required;
- stick pins – can be used for the lighting at an aerodrome (taxiway and runway lights); and
- glue and masking tape – can be used to hold the various components together.

SAFETY

Nil.

INSTRUCTOR GUIDELINES

- Ensure the cadets share the supplies when creating model aerodromes.
- Assist groups in getting started if they are having difficulty.
- Supervise the cadets' work to ensure that they are following the instructions listed above.
- Once the activity has been completed, the instructor should examine the model aerodromes to ensure that all of the components are labelled properly and in their proper locations.
- After this activity has been completed, the instructor should carry on with the reflection/questioning stage.

Make use of all teachable moments throughout the model construction process. Make sure to cover material from M160.01 and M160.02.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in the activity will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the activity will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Cadets will have an opportunity to visit various aerodromes during aviation and aerodrome activities. They will now be familiar with major aerodrome components.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A3-001 A-CR-CCP-263/PT-001 *From the Ground Up: Millennium Edition* (2000). Ottawa, ON: Aviation Publishers Co. Limited.

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 4

EO C160.01 – TOUR A LOCAL AERODROME

Total Time:	90 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO

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CHAPTER 16

PO 170 – DISCUSS AIRCRAFT MAINTENANCE AND MANUFACTURING

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 1

EO C170.01 – WATCH *HOW IT'S MADE* SEGMENTS

Total Time: 60 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instruction guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering of the lesson.

Review the *How It's Made* segments and select seven segments to show during the lesson.

Prepare a suitable classroom area with an available media.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An in-class activity was chosen for this lesson as it is an interactive way to provoke thought and stimulate interest among cadets.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have watched *How It's Made* segments.

IMPORTANCE

Discovering the aircraft maintenance and manufacturing industry will give the cadets a better understanding of how aircraft are prepared for and serviced for flight, including different career opportunities.

BACKGROUND KNOWLEDGE

SEGMENT: AIRCRAFT ENGINES

See how aircraft engines are built.

Length (00:05:05)

SEGMENT: AIRCRAFT PROPELLERS

See how aircraft propellers are made.

Length (00:04:59)

SEGMENT: AIRCRAFT WOODEN PROPELLERS

See how aircraft wooden propellers are built.

Length (00:06:00)

SEGMENT: AIRPLANE CONSTRUCTION

See how the construction of a small airplane is done.

Length (00:04:45)

SEGMENT: AIRPLANE LANDING GEAR

See how the construction and assembly of an airplane landing gear is done.

Length (00:04:46)

SEGMENT: HELICOPTERS

See how the construction and assembly of a helicopter is done.

Length (00:04:42)

SEGMENT: GLIDERS

See how the construction and assembly of a glider is done.

Length (00:05:01)

SEGMENT: JET TURBINE BLADES

See how the production of jet turbine blades is done.

Length (00:04:53)

Teaching Point 1 **Discuss major components of the aircraft maintenance and manufacturing industry.**

Time: 5 min Method: Interactive Lecture

The terms maintenance and manufacturing refer to very clearly defined fields.

MAINTENANCE

Aircraft maintenance refers to any work being done on an aeronautical product after the issuance of a certificate of airworthiness, to include:

- overhaul,
- repairs,
- required inspection or modification, and
- removal or installation of components.

This does not include elementary work or servicing.

MANUFACTURING

Aircraft manufacturing refers to any work being done on an aeronautical product before the issuance of a certificate of airworthiness, to include:

- making,
- assembly, and
- fabrication.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. What is considered aircraft manufacturing?

Q2. What kind of work is included in aircraft maintenance?

ANTICIPATED ANSWERS:

A1. Any work done on an aeronautical product before the issuance of a certificate of airworthiness.

A2. Overhaul, repair, required inspection or modification, and removal or installation of components on an aeronautical product.

Teaching Point 2 **Watch and discuss *How It's Made* segments.**

Time: 40 min Method: In-Class Activity

Before the start of the lesson review the *How It's Made* segments. This will facilitate the discussion after each segment and will enable an optimal use of the time allotted for this TP.

After each segment, using the questions and answers provided below, confirm the cadets' comprehension of the segment.

SEGMENT: AIRCRAFT ENGINES

Q1. Why is redundancy built in an aircraft engine?

Q2. Why is a testing propeller attached to engine during testing?

Q3. What is checked in the oil filter after testing?

A1. To ensure that each system as a backup to maximise safety.

A2. To keep the engine cool during the testing phase.

A3. The oil filter is checked for foreign debris.

SEGMENT: AIRCRAFT PROPELLERS

Q1. Why are propellers made of aluminum?

Q2. What happens to defective pieces during the manufacturing process?

Q3. Why are the back of the blades painted black?

A1. Because aluminum is a light-weight and durable material.

A2. The defective pieces are either repaired or scrapped if they cannot be repaired.

A3. To prevent the sun from reflecting off the propeller and blinding the pilot.

SEGMENT: AIRCRAFT WOODEN PROPELLERS

Q1. What are wooden propellers made of?

Q2. What is the airfoil on a propeller?

Q3. What are the two sides of a propeller blade?

A1. The propellers are made of laminated maple.

A2. The airfoil is the side of the propeller blade that is shaped like aircraft wing.

A3. The pitch and the airfoil.

SEGMENT: AIRPLANE CONSTRUCTION

Q1. What are the airplanes made of and why?

Q2. What is the process called curing?

Q3. What is used to cut holes in the planes fuselage?

A1. An airplane can be made out of fiber glass and Carbone fiber.

A2. Curing refers to the process of cooking the different materials at very high temperature in order to solidify the glue.

A3. The holes in the airplanes fuselage are cut using a very high pressure jet of water and sand.

SEGMENT: AIRPLANE LANDING GEAR

Q1. What is the oil used for during the machining process?

Q2. What is recycled during the manufacturing of the landing gear?

Q3. What is used to protect the landing gear from corrosion?

A1. Oil is used to reduce the heat produce by friction during the machining process.

A2. Metal chips created during the machining process.

A3. The different parts of the landing gear are plated with Cadmium in order to protect them from corrosion.

SEGMENT: HELICOPTERS

Q1. How many hours of work are required to build a helicopter?

Q2. What is the body of the aircraft made of?

Q3. What is brake cable used for?

A1. The construction of a helicopter requires about 700 hours or 110 days.

A2. The fuselage of the helicopter is made out of carbon fibre.

A3. Brake cable is used to prevent bolts from loosening due to vibrations.

SEGMENT: GLIDERS

Q1. What created the bases for the fuselage of the glider?

Q2. What kind of glue is used to bond the wings together?

Q3. Why is the wing cut in two after its assembly?

A1. The bases for the fuselage is created using Kevlar fibre.

A2. The wings are bonded together using epoxy resin.

A3. The wing is cut in two in order to facilitate transportation.

SEGMENT: JET TURBINE BLADES

Q1. What are the blades of a jet engine used for?

Q2. Are the blades machined or moulded?

Q3. What indicates imperfections during the inspection process?

A1. The turbine blades are used to generate air pressure inside the jet engine in order to create a mixture of air and gas that will be ignited to create thrust.

A2. The blades are moulded using a dye.

A3. The imperfections will show up as little fluorescent spots under a black light.

CONFIRMATION OF TEACHING POINT 2

The cadets' participation in the in-class activity will serve as the confirmation for this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the activity in will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

The field of aircraft manufacturing and maintenance is ripe with exciting careers in building and maintaining aircraft. The *How It's Made* segments introduce you to some of the possibilities. You will explore these areas more in other proficiency level and summer training activities.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

C3-288 Production MAJ, *How It's Made* capsules, Canada.

C3-345 Transport Canada. (2011). *Canadian Aviation Regulations 2011-1*. Retrieved October 25, 2011, from http://www.tc.gc.ca/eng/civilaviation/regserv/cars/part1-subpart1-1104.htm

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 2

EO C170.02 – TOUR A LOCAL AVIATION MAINTENANCE FACILITY

Total Time:	90 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO

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CHAPTER 17

PO 190 – PARTICIPATE IN AN AIRCREW SURVIVAL EXERCISE

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 1

EO M190.01 – PACK PERSONAL EQUIPMENT FOR AN AIRCREW SURVIVAL EXERCISE

Total Time: 60 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Prepare a properly packed rucksack or backpack IAW the principles outlined in this lesson.

Ensure the rucksack or backpack includes all of the materials discussed in this lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture method was chosen for TP 1 to orient the cadets on how to select field clothing and generate an interest in the subject.

A demonstration and performance method was chosen for TP 2 as it allows the instructor to explain and demonstrate packing personal equipment skills the cadet is expected to acquire while providing an opportunity for the cadets to practice the skill under supervision.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall be expected to select and pack appropriate personal equipment for field training.

IMPORTANCE

Selecting and packing the appropriate clothing is a key element of field training. Weather can be a large factor in a survival situation. Selecting the right clothing can help prevent unnecessary injury and weather-related illnesses. Improper packing techniques can cause discomfort and possible injury.

Teaching Point 1 **Explain how to select field clothing.**

Time: 30 min Method: Interactive Lecture

THE LAYERING PRINCIPLE

The Core Layer (Upper Body)

This layer lies next to the skin. It should consist of a wool or synthetic undershirt or a long-sleeved thermal top. The garment should be close fitting but not tight. It should be made of a material that absorbs perspiration and moves it away from the skin. This layer must be kept as clean as possible to prevent dirt from clogging the pores of the fabric.

The Second Layer

The second layer should be loose fitting and should keep the blood vessels of the neck and wrists protected and warm. It could consist of a zip-up top with a high neck or a shirt with a collar. Sleeves should be able to be rolled up and cuffs should be able to be buttoned. In hot weather, this layer may be used as an outer layer.

The Outer Layer

The outer layer should be a jacket that is both wind resistant and waterproof depending on the climate. For example, in the Arctic, a padded, windproof parka is required for protection against cutting winds and extreme cold. It must be able to vent to avoid overheating. In temperate areas, rain is the most common cause of cold or discomfort. Waterproof outerwear should be worn.

Underwear (Lower Body)

Long thermal underwear is only necessary in temperatures below freezing. In the Arctic a “groin patch” of impermeable material prevents wind chill in that area. If underwear gets wet, it eventually dries. However, this problem can be avoided by wearing waterproof pants. In mild weather this layer may consist of cotton shorts.

PANTS

Pants should allow freedom of movement and should be able to dry quickly. In very wet conditions, using a belt helps to prevent chaffing at the waist. Waterproof pants can be worn to help protect legs from rain, but may cause overheating. In very cold conditions, quilted over-trousers should be zipped over pants and boots for added protection.

Show examples of each piece of clothing during the explanation if available.

ADVANTAGES AND DISADVANTAGES OF FABRICS

Wool

Advantages. Wool has insulating properties even when wet. It remains comfortable until it is soaked and smolders rather than melts when exposed to excessive heat.

Disadvantages. It is heavy when wet and takes time to dry. When it is worn next to skin, it may cause itching, and may shrink when washed.

COTTON

Advantages. Cotton is durable, breathable and absorbs moisture. It is a good fabric for underwear and items worn next to the skin in warm climates.

Disadvantages. It may be heavy when wet and can shrink if it is dried at high temperatures. It may tear and burn easily. Also, it is not windproof.

Fleece or Pile

Advantages. As an outer layer, fleece forces moisture away from the body while keeping it warm. It is lightweight, hardwearing and does not absorb moisture.

Disadvantages. Fleece is not windproof and does not compress easily. It can collect balls of fluff on the outside after long use.

Synthetic Fabrics

Advantages. These fabrics allow sweat to evaporate while keeping rain and other moisture out. They are usually windproof and an excellent choice for an outer layer.

Disadvantages. The seams may come apart in water. In very wet conditions, the fabric pores may become clogged. The evaporation of sweat from the outside of the fabric may result in heat loss.

An acronym that can be used to remember the principles when selecting and wearing clothing in the field.

COLD – Keep the garment **C**lean. Avoid **O**verheating. Wear it **L**oose and **L**ayered. Keep it **D**ry.

FOOTWEAR

Thick socks made of either wool or fiber-pile cotton are vital. Socks keep feet warm, dry and prevent footwear from rubbing against skin. Rubbing can cause blisters and chafing. In cold weather two pairs of socks, an outer layer and an inner layer, should be worn. The inner layer forces moisture away from the foot and move it to the outer layer to keep the foot dry. Socks should be changed daily before bed.

BOOTS

Boots with a hard sole and good cushion are just as important as socks. Being comfortable and stable makes for a more enjoyable time in the field. Ankle support is important in the prevention of ankle injury.

WEATHER CONDITIONS

It is important to be prepared for any type of weather. Wearing a toque, scarf and mitts during cold weather prevents heat from being lost through the head. Mittens prevent injuries such as frostbite by keeping hands warm and blood circulating. During warm conditions, it is important to wear sunscreen and a hat to protect from the sun. Extended exposure to the sun can cause burns and sunstroke.

ACTIVITY

Time: 10 min

OBJECTIVE

The objective of this activity is to have the cadets dress up one of their peers in clothing for the field and the climate.

RESOURCES

- Clothes that represent the layering principle, to include:
  - a core layer,
  - a second layer,
  - an outer layer,
  - underwear, and
  - pants.
- Clothing that is made of different types of fabric, to include:
  - wool,
  - cotton,
  - fleece or pile, and
  - synthetic fabrics.
- Appropriate footwear.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Lay out the clothing according to its category prior to starting the activity.
2. Assign a cadet to be the “model”.
3. Question the cadets on what piece of clothing the cadet should put on first in accordance with the layering principle.
4. Continue until the cadet in fully clothed for the field.
5. When the cadet is dressed, question the cadets on the advantages and disadvantages of the type of clothing chosen for each layer (this might be easier when the cadet is taking each layer off).

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in the activity will serve as the confirmation of this TP.

Teaching Point 2 **Explain, demonstrate and have the cadets pack personal equipment for the field.**

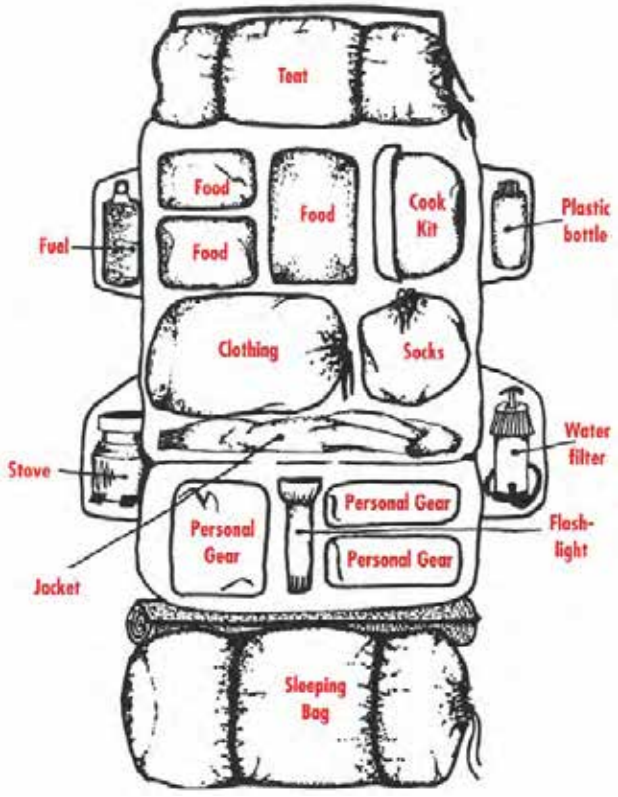
Time: 25 min Method: Demonstration and Performance

PACKING PERSONAL EQUIPMENT

While packing kit, ensure to place a large plastic bag inside the pack prior to packing it. This blocks moisture from reaching the contents. Each item should also be placed in a separate bag with the extra air removed to save space.

Place items in the pack by priority, with the most frequently used items on top or where easily accessible. The equipment needs to be placed in the pack so the weight is distributed and balanced appropriately. A poorly balanced pack can cause fatigue. The heaviest items should be placed near the bottom or the back of the pack to avoid back strain.

Ensure all items are secured to the pack to avoid losing items and having to constantly stop for adjustments.



Note. From Basic Essentials Backpacking, by Harry Roberts, 1989, Guildford, CT: The Globe Pequot Press.

Figure 1 A well-organized back pack

The tent should be placed on top of the pack with the sleeping bag and pad firmly attached under the backpack.

Food, clothing and a cooking kit are examples of what to place in the backpack itself.

Clothing should include extra socks, undergarments and polypropylene / synthetic t-shirt and pants.

Personal gear could include a first aid kit, waterproofed matches, flashlight, emergency candle and hygienic items. Items such as water bottle, stove, fuel canister, flashlight and a water filter can fit in the side pouches of the bag.

Demonstrate the packing of a backpack with the cadets performing the skill. The following activity will assist in allowing the cadets to practice the skill. Where the instructional environment does not allow for this option deliver it using the demonstration method.

ACTIVITY

Time: 15 min

OBJECTIVE

The objective of this activity is to have the cadets practice effective techniques of packing personal equipment prior to participating in an aircrew survival exercise.

RESOURCES

- Rucksack / backpack (one per cadet),
- Sleeping bag (one per cadet), and
- Materials provided by the instructor.

ACTIVITY LAYOUT

1. The cadets shall pack their own bag during this time following the instructor's example.
2. The cadets are to use all materials that are given to them to pack their rucksack / backpack.
3. The cadets are to ensure their rucksack / backpack weight is evenly distributed.

ACTIVITY INSTRUCTIONS

1. Have the cadets pack their own rucksack / backpack using the materials provided by the instructor.
2. Upon completion, the instructor is to inspect the rucksack / backpack to verify all equipment is packed properly and that the weight is evenly distributed.

SAFETY

Nil.

Supervise the cadets' packing method closely. It is advisable to have other instructors assigned to provide additional supervision and feedback to cadets during this activity.

If the cadets do not bring their own kit, ensure that an interactive demonstration of each packing step is given.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. Why should a large plastic bag be placed inside the backpack prior to packing it?

Q2. What does a poorly balanced backpack cause?

ANTICIPATED ANSWERS:

A1. This blocks the moisture from getting at the contents.

A2. A poorly balanced pack can cause fatigue.

END OF LESSON CONFIRMATION

The cadets' participation in the activities will serve as confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Cadets have identified the appropriate clothes to bring with them to the field and how to effectively pack them. Selecting and packing approximately will help prevent fatigue and cold while in the field. Weather can be a large factor influencing survival. If one selects the right clothing, unnecessary injury and weather illnesses can be prevented. Improper packing techniques can cause discomfort and possible injury. It is important to ensure that equipment is packed properly prior to leaving for an aircrew survival exercise.

INSTRUCTOR NOTES / REMARKS

This EO is to be delivered at the squadron on the training night prior to the weekend aircrew survival exercise.

REFERENCES

C3-021 ISBN 0-7715-9035-0 McManners, H. (1994). *The complete wilderness survival manual*. Toronto, ON: McMillan Canada.

C3-024 ISBN 0-7627-0476-4 Roberts, H. (1999). *Basic essentials backpacking*. Guildford, CT: The Globe Pequot Press.

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 2

EO M190.02 – MAINTAIN PERSONAL EQUIPMENT AND HYGIENE IN THE FIELD

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Prepare a packed rucksack / backpack.

Prepare resources for practicing field hygiene.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for this lesson to orient the cadets to maintaining personal equipment and personal hygiene and generate an interest in the subject.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadets shall have maintained their personal equipment and hygiene in the field.

IMPORTANCE

Caring for personal equipment and knowing how to safely use a knife prevents unnecessary injury. Practicing field hygiene principles contributes to the successful conduct of an aircrew survival exercise by preventing illness and maintaining a safe environment.

Teaching Point 1 **Explain how to care for personal equipment.**

Time: 5 min Method: Interactive Lecture

CARE FOR PERSONAL EQUIPMENT

All articles of clothing shall be kept as clean as possible. Dirt can get through some clothing and reach the skin. Sweat and dirt may cause skin irritation. The dirt may also get into the fibres of the fabric and destroy the insulation value. This potential loss of insulation is why undergarments must be changed daily.

Socks should be changed frequently. Wet or dirty socks can cause blisters and other skin irritation. Wash socks in lukewarm water. Carefully rinse out all of the soap, squeeze out the water, and stretch the socks back into shape. Socks should be kept in good repair and holes mended as soon as they appear.

Boots should be properly maintained by keeping them dry and soft. Boots should never be placed too close to the fire.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. Why must undergarments be changed daily?

Q2. What are the steps to take when laundering socks?

Q3. How are boots maintained?

ANTICIPATED ANSWERS:

A1. Dirt can get through some clothing and reach the skin. Combined with sweat, the dirt may cause considerable irritation.

A2. When laundering socks, use lukewarm water. Carefully rinse out all of the soap, squeeze out the water, and stretch the socks back into shape.

A3. By keeping them dry and soft and not to place them close to the fire.

Teaching Point 2 **Explain knife safety in the field.**

Time: 10 min Method: Interactive Lecture

CARE OF KNIVES IN THE FIELD

A knife should be kept sharp and carried in a suitable sheath. It should be returned to its sheath immediately after use and remain there when not in use. Always position the sheath on a waist belt towards the back of the hip. This positioning prevents the knife from being driven into the groin during a fall. Never angle the blade in another person's direction. Always pass a knife closed or by presenting the handle to the person receiving it. Ensure the person receiving the knife is ready to accept the knife before letting go. Ensure that the sharp side of the blade is facing up when passing the knife. Always ensure knives are put away or safely stored.

SHARPENING

Sharpen a knife as soon as it becomes dull. Use a quality sharpening stone and apply lubricant as specified for the stone. To reshape an edge use a 400 grit sharpening stone. A 1 000 grit sharpening stone and above will sharpen the edge. A honing stone is used to polish the cutting edge and is above 2 000 grit. To polish

a blade that has stains on it, use wood ash as it does not scratch the blade. Use the following steps when sharpening a knife with a sharpening stone:

1. Apply a light coating of oil (if it is whetstone or oil stone) to the stone to lubricate and protect the surface. The oil helps keep bits of stone and steel – called slurry – on the surface of the stone. The slurry helps the cutting action of the stone. Ceramic and diamond stones can be used dry or wetted with water.

2. If a combination stone is being used, start with the coarsest grit side.

A hollow ground blade will be sharpened only at the cutting edge at a combined angle 20-30 degrees.

3. To sharpen a hollow ground blade, hold the knife with the back edge of the knife off the sharpening stone at 10-15 degrees.

4. To sharpen a flat ground blade, place the bevel flat on the stone. This registers the blade at the proper angle for sharpening.

5. Start where the blade meets the handle and draw the full length of the blade across the stone while moving the blade from one end of the stone to the other. Apply steady pressure. Repeat this eight times on each side.

6. Repeat the process using the fine side of the sharpening stone.

7. Using a honing stone and honing oil, hone the blade, alternate each stroke with the opposite side of the blade for eight strokes maintaining the same angle as before.

8. If a wire edge forms – a thin wire of steel at the very edge of the blade – repeat the same motion on a piece of cardboard or honing stone until the wire edge falls off.

9. Test for sharpness by cutting something or by looking at the edge of the blade for reflections from unsharpened areas, not by drawing the fingers across the blade.

10. Clean and dry the stone following the manufactures' instructions.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. How should a knife be stored and kept?

Q2. Why is the sheath positioned on the waist belt towards the back of the hip?

Q3. When passing the knife, which way should the blade be facing?

ANTICIPATED ANSWERS:

A1. A knife should be kept sharp and carried in a suitable sheath.

A2. This positioning prevents the knife from being driven into the groin during a fall.

A3. Up.

Teaching Point 3 **Explain how to maintain hygiene in the field.**

Time: 10 min Method: Interactive Lecture

FIELD HYGIENE REQUIREMENTS

Keeping healthy is an important factor for survival in the field. Strict hygiene routines should be practiced personally and at the survival site. Garbage and latrines shall be kept away from the site to avoid the threat of insects and illness. Proper hygiene practices also ensures drinking water is not contaminated.

WASHING

To keep clean, use soap and water while in the field. Special attention should be given to the groin area, scalp and between the toes. These areas are susceptible to rash and fungus infections. A daily shower with hot water and soap is ideal. If a shower is not feasible, keep hands as clean as possible. The face, armpits, crotch and feet should be washed and dried at least once a day. If soap is unavailable, wood ash can be used as a substitute. Washing daily can prevent the growth and spread of germs.

DENTAL CARE

Teeth should be cleaned with a toothbrush and toothpaste after every meal and before bed. Table salt or baking soda can be used as a substitute for toothpaste. If a toothbrush is not available, a green twig can be chewed to a pulpy consistency. The mouth should be rinsed with water after every meal.

WASTE DISPOSAL

It is important to manage waste effectively. Wet and dry garbage shall be separated into different sealed containers. It should be stored downwind and a suitable distance from the site. Water that is used to clean dishes, bodies, teeth or clothes is called grey water. This water must be disposed of by placing it in containers located near the washstands or latrines. Solid garbage shall be packed out of the site. If it is packed in it should be able to be packed out. It is the responsibility of each member to ensure that no trace of waste is left behind.

Where appropriate, the instructor shall indicate the locations associated with this teaching point. These include but are not limited to:

- washstand,
- latrines,
- port-o-potties,
- grey water disposal area, and
- wet and dry garbage disposal area.

CONFIRMATION OF TEACHING POINT 3

QUESTIONS:

Q1. If a shower is not available, what parts of the body should one ensure to clean?

Q2. What can be used as a substitute for toothpaste?

Q3. What is grey water?

ANTICIPATED ANSWERS:

A1. Hands, faces, armpits, crotch and feet.

A2. Table salt or baking soda.

A3. Water that has been used to clean clothes, dishes, teeth, bodies etc.

END OF LESSON CONFIRMATION

QUESTIONS:

Q1. What is the proper action to take when sharpening a knife?

Q2. Where should the knife blade not be pointed?

Q3. What is grey water?

ANTICIPATED ANSWERS:

A1. Place the blade on the stone and pull it toward you in a circular motion and repeat this action many times. Ensure that this motion is completed an equal number of times on both sides.

A2. In another person's direction or at yourself.

A3. Water that has been used to clean clothes, dishes, teeth, bodies etc.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Cadets have learned how to care for their personal equipment, using a knife and maintaining personal hygiene in the field. Caring for personal equipment and safely using a knife while in the field is of the utmost importance.

INSTRUCTOR NOTES / REMARKS

This EO is to be delivered at the squadron on the training night prior to the aircrew survival exercise.

REFERENCES

C3-003 ISBN 1-896713-00-9 Tawrell, P. (1996). *Camping and wilderness survival: The ultimate outdoors book*. Green Valley, ON: Author.

C3-021 ISBN 0-7715-9035-0 McManners, H. (1994). *The complete wilderness survival manual*. Toronto, ON: McMillan Canada.

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 3

EO M190.03 – OBSERVE SITE POLICIES AND PROCEDURES

Total Time: 60 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Research animals indigenous to the aircrew survival exercise location.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for this lesson to give direction on policies and procedures of an aircrew survival exercise site.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have observed all site policies and procedures during an aircrew survival exercise.

IMPORTANCE

It is important to know and follow established site policies and procedures to ensure the site is maintained and functioning in a smooth and safe manner.

Teaching Point 1 **Describe safety issues related to field training.**

Time: 10 min Method: Interactive Lecture

GENERAL SAFETY

Cadets should be aware that running, engaging in horseplay or wandering off from the group is not acceptable behaviour during field training.

Include any other general safety concerns regarding the site.

MEDICAL PROCEDURES

In case of a medical emergency, all members need to be aware of what actions to take. Members need to know where the first aid area is located, what to do in a medical emergency, where to get medications, the muster point in case of an evacuation and who is in charge.

ENVIRONMENTAL PROCEDURES

It is extremely important that the environment is respected while conducting an aircrew survival exercise. Garbage and grey water should be disposed of in designated areas. Cutting down live trees, including breaking branches is not acceptable. Doing this may hinder the growth of the tree. In case of an environmental spill, cadets should advise staff members immediately and local authorities should be contacted.

Include any other environmental procedures regarding the site.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. What is not acceptable behaviour in the field?

Q2. What medical procedures need to be known by personnel?

Q3. Why should branches not be broken off a live tree?

ANTICIPATED ANSWERS:

A1. Running, engaging in horseplay and wandering off from the group.

A2. Where the first aid area is located, what to do if they come across a medical emergency, the muster point in case of an evacuation and who is in charge.

A3. It may hinder the growth of the tree.

Teaching Point 2 **Explain fire regulations in place at the training site.**

Time: 10 min Method: Interactive Lecture

FIRE PROCEDURES

All personnel need to be aware of what to do in case of a fire. If a member notices a fire they should shout “fire, fire, fire” and use a siren or whistle to sound an alarm. Upon hearing the alarm, all personnel should meet at the designated muster point. The member who noticed the fire should present themselves to the senior officer on site.

MUSTER POINT

The muster point is the area designated for all people at the site to gather together in case of a fire or other emergency. It should be located away from hazardous areas and near the best route out of the campsite.

FIRE FIGHTING EQUIPMENT

The fire pit location should contain basic fire fighting equipment such as fire extinguishers, fire brooms and buckets.

Show each area presented above and ensure everyone is clear on the fire regulations for the aircrew survival exercise site.

ACTIVITY

Time: 5 min

OBJECTIVE

The objective of this activity is to conduct a fire drill.

RESOURCES

Nil.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Choose a cadet to “find” the fire.
2. Have that cadet shout “fire, fire, fire.”
3. Have the rest of the group report to the muster point.
4. Debrief the cadets on the fire drill.

SAFETY

Ensure the area is free of obstacles that may cause cadets to fall or hurt themselves during the fire drill.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. What is the muster point?

Q2. What fire fighting equipment should be present at the campsite?

Q3. What should one do when noticing a fire?

ANTICIPATED ANSWERS:

A1. The muster point is the area designated for all people who are at the campsite to gather together in case of a fire or other emergency.

A2. Basic fire fighting equipment such as extinguishers, fire brooms and buckets.

A3. Shout “fire, fire, fire” and move to the muster point. The member who noticed the fire should present themself to the senior officer.

Teaching Point 3 **Give an overview of the layout of the site.**

Time: 15 min Method: Interactive Lecture

This teaching point should be presented at each of the locations listed. Have a sample exercise site completed.

COMMAND POINT / HEADQUARTERS

The command tent should be located in a centralized area and all personnel at the site should know its location.

FIRST AID AREA

The first aid area must be equipped with at least one stretcher, a well-stocked first aid kit and any additional equipment needed to treat minor injuries.

SLEEPING AREAS

Tents are usually divided into two groups, one for males and one for females. All tents should be erected at least ten feet apart with the doors opposite the prevailing winds.

FIRE PIT

Fire pits must be at least 100 meters away from the campsite and strictly in open areas. Permission to have a fire pit must be granted by local authorities and the forest fire rating must be checked prior to lighting a fire.

LATRINES

If at all possible before building a latrine, make use of an outhouse that may already be available. If a latrine must build be built, IAW local regulations, construct it as least 100 meters away from the campsite and not close to water.

PETROLEUM, OILS AND LUBRICANTS (POL) POINT

POL stands for petroleum, oils and lubricants. The storage area for these materials must be located at a reasonable distance from the bivouac site. Access to this area is limited.

WATER POINT

Drinking water should be obtained from a reliable source. Always boil water that is collected in the field to purify it. If collecting water from a fast moving stream, always get water upstream from washing and laundry areas.

WET AND DRY GARBAGE AREAS

Garbage should be bagged and removed from the bivouac site. There should be separate areas for wet and dry garbage and these areas should be marked clearly. Grey water should be disposed of in this area as well.

Identify any other areas that may be used during the exercise.

CONFIRMATION OF TEACHING POINT 3

QUESTIONS:

Q1. What does POL stand for?

Q2. Where should the fire pit be located?

Q3. If collecting water from a fast moving stream, where should it be collected?

ANTICIPATED ANSWERS:

A1. Petroleum, oils and lubricants.

A2. Fire pits must be at least 100 meters away from the campsite and strictly in open areas.

A3. Upstream from the washing and laundry areas.

Teaching Point 4 **Discuss safety measures with regards to animals.**

Time: 15 min Method: Interactive Lecture

POTENTIAL ANIMALS

There is potential to run into many different animals during an aircrew survival exercise. Some of these animals may include:

- bears,
- cougars,
- rattlesnakes,
- moose,
- bison,

- elk, and
- wolves.

With each of these animals it is important to be aware of preventive measures to avoid them and what actions to take if an encounter occurs.

BEARS

Preventive measures to avoid an encounter with a bear include:

- looking for signs that a bear may be close. Signs include tracks and scat in the area;
- have the kitchen separate from the training site. Bears are attracted to food so having the kitchen separate may deter the bear from entering the training site; and
- making noise to deter the bear from coming in the general area.

Defensive measures to take in an encounter with a bear include:

- using pepper spray;
- using a shotgun;
- grouping everyone together to expand presence; and
- playing dead versus fighting fiercely.

COUGARS

Preventive measures to avoid an encounter with a cougar include:

- hiking in groups; and
- making noise to deter the cougar from entering the general area.

Defensive measures to take in an encounter with a cougar include:

- not running;
- grouping together to expand presence;
- speaking loudly;
- providing an escape route for the animal;
- facing the cat and maintaining eye contact;
- fighting back if attacked; and
- if attacked from behind, throwing the cat overhead and forward.

RATTLESNAKES

Preventive measures to avoid an encounter with a rattlesnake include:

- watching where steps are taken;
- looking closely before parting bushes;
- using a stick, not hands, when turning over stones or rocks;
- wearing stout boots; and
- checking bedding and backpacks before using.

Defensive measures to take in an encounter with a rattlesnake include:

- do not tease or pick up;
- do not make sudden movements, back off slowly and remain calm;
- if bitten, back away immediately and immobilize the bitten area, below the heart if possible; and
- do not tie a tourniquet or attempt to suck out the venom. Report to the nearest hospital as soon as possible.

WOLVES

Preventive measures to avoid an encounter with a wolf include:

- cooking and washing dishes away from the campsite; and
- hanging food and garbage away from sleeping area.

Defensive measures to take in an encounter with a wolf include:

- looking larger, raising and waving arms;
- making noise;
- throwing objects, like sticks, rocks, pots and pans;
- backing away slowly, do not move away from the animal; and
- keeping direct eye contact.

MOOSE, ELK AND BISON

Moose, elk and bison are only likely to charge when threatened or crowded. To prevent an attack distance should be kept from the animal.

CONFIRMATION OF TEACHING POINT 4

QUESTIONS:

Q1. What are some of the animals that an individual may encounter on an aircrew survival exercise?

Q2. What defensive measures should an individual take when encountering a bear?

Q3. What preventive measures should an individual take to avoid encountering a wolf?

ANTICIPATED ANSWERS:

A1. Some of these animals may include:

- bears,
- cougars,
- rattlesnakes,
- moose,
- bison,
- elk, and
- wolves.

A2. The defensive measures to take in an encounter with a bear include:

- using pepper spray;
- using a shotgun;
- grouping everyone together to expand presence; and
- playing dead versus fighting fiercely.

A3. The preventive measures to avoid an encounter with a wolf include:

- cooking and washing dishes away from the campsite; and
- hanging food and garbage away from sleeping area.

END OF LESSON CONFIRMATION

The end of lesson confirmation consists of the class walking to each of the locations in the exercise site and explaining each of them. A different cadet should be chosen to explain each of the locations.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

It is important to know and follow established site policies and procedures to ensure the site is maintained and functioning in a smooth and safe manner. Knowing what do to do in case of a fire and knowing where the different areas of the exercise site are located ensures the weekend exercise runs as smooth as possible.

INSTRUCTOR NOTES / REMARKS

The directives outlined in CATO 11-08 *Environmental Protection and Stewardship* are to be adhered to during this training.

REFERENCES

A3-010 A-CR-CCP-121/PT-001 Cadets Canada. (2000). *Royal Canadian army cadet reference book*. Ottawa, ON: Cadets Canada.

C3-003 ISBN 1-896713-00-9 Tawrell, P. (1996). *Camping and wilderness survival: The ultimate outdoors book*. Green Valley, ON: Author.

C3-006 ISBN 0-07-135437-9 Hall, A. (2001). *The essential backpacker: A guide for the foot traveller*. Blacklick, OH: Ragged Mountain Press.

C3-007 ISBN 0-684-85909-2 Harvey, M. (1999). *The national outdoor leadership school's wilderness guide*. New York, NY: Simon & Schuster.

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 4

EO M190.04 – DISCUSS SURVIVAL PSYCHOLOGY

Total Time: 60 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Prepare the case study material for the activity in TP 3.

Prepare the role-play material for the activity in TP 4.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for this lesson to orient the cadets to survival psychology and to generate an interest in the subject.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have discussed survival psychology.

IMPORTANCE

One of the most important requirements for someone in a survival situation is the ability to accept the reality of the situation and react appropriately. Knowing how to react in a survival situation gives an individual confidence to survive. The cadets should know what they would experience physically and emotionally if they were lost and in a survival situation. Knowing the procedure when lost and how to deal with fear promotes survival in the situation.

Teaching Point 1 **Explain the role of fear in a survival situation.**

Time: 5 min Method: Interactive Lecture

The following activity is designed to get the cadets thinking about fear. Ensure the following points that produce fear are discussed during the activity: death, being alone, animals / bugs, darkness, weakness, failure, discomfort, the unknown, and unidentified sounds.

ACTIVITY

Time: 5 min

OBJECTIVE

The objective of this activity is to have the cadets think about things they could be afraid of in a survival situation.

RESOURCES

Nil.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Have the cadets brainstorm things they may be afraid of in a survival situation.
2. Discuss how equipment, knowledge, and task focus can help reduce fear.

SAFETY

Nil.

BACKGROUND KNOWLEDGE

REACTIONS TO FEAR

Fear is a normal reaction in a survival situation and it can aid or hinder individuals, depending on their reaction. It can lead to hopelessness and decreased self-confidence as well as reducing the will to survive. Fear, however, can release adrenaline, giving greater strength and stamina, reducing pain sensation, giving the ability to think clearly and helping to act purposively. Accepting fear as a natural reaction to a threatening situation leads to productive behaviour. Because of this, fear can greatly increase chances for survival.

DEALING WITH FEAR

The factors most commonly reported to help decrease or control fear are:

- having confidence in a leader if in a group or in one's self if alone;
- having confidence in the equipment; and
- concentrating on the job to be done.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in this activity serves as confirmation of this TP.

Teaching Point 2 **Explain taking action when lost: stopping, thinking, observing and planning.**

Time: 10 min Method: Interactive Lecture

THE 'STOP' ACRONYM

Taking immediate action when lost in the wilderness is critical to dealing with fear. In such a situation, the STOP acronym should be employed.

STOP

When lost, stopping prevents the person from moving further away from the area a search crew may cover. It is also important to stop, to think effectively, and not make errors due to hasty decisions.

THINK

It is critical to think about what actions should be taken once a person realizes they are lost. Consider the danger and consequences of either staying or moving on. Consider the possible dangers that could occur and analyze the weather, terrain and available resources when deciding on the actions to be taken.

OBSERVE

Conduct a self-analysis to identify symptoms of any physical ailments such as fatigue, increased heart rate, or shivering. Check for psychological ailments such as extreme stress or fear. Observe surroundings for resources, weather potential, terrain, and landmarks that may provide information on the current location.

PLAN

After thinking and observing all aspects of the situation, plan a course of action that best utilizes the available resources.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. What are the four main actions to take when lost in the wilderness?

Q2. Why is it important to stop if lost?

Q3. During the thinking portion of STOP, what are some important things to keep in mind?

ANTICIPATED ANSWERS:

A1. Stop, Think, Observe and Plan.

A2. It is important to stop to think and avoid making errors due to hasty decisions.

A3. It is important to identify any immediate and future dangers, as well as weighing the pros and cons of staying put versus continuing on.

Teaching Point 3 **Explain the survival pattern and how to employ it in a survival situation.**

Time: 15 min Method: Interactive Lecture

GENERAL

The survival pattern is a procedure used in a survival situation. It is a method of prioritizing tasks.

The pattern is presented in a particular sequence during this lesson; however, the pattern can vary depending on the situation and changes in priority. For example, if lost while hiking with a group, the first procedure in the pattern done should be to signal (blow the whistle) because there are people near by.

FIRST AID

The most important thing to address in a survival situation is any injury. Treating injuries can prevent them from worsening, reduce pain and allows for more involvement in survival activities.

FIRE

Fire serves many purposes in a survival situation. It can provide warmth, boost morale, and a sense of security. It is also a method for creating signals, purify water and cook food.

SHELTER

Shelter allows a person to be warm and dry from the elements. Even if the current weather conditions are favourable, it is not always possible to know when and how the weather conditions may change. Therefore, building a shelter early is very important. It also provides the psychological comfort of having a home base.

SIGNALS

Signals should be constructed to attract search teams and can take many different forms. Signal fires with a heavy amount of dark smoke are visible from a long distance during the day or night. Other ground to air signals should be large and stand out from the surroundings, or be placed in nearby open areas. A mirror or other reflecting object is an excellent tool for signalling.

FOOD AND WATER

Survival without water only last a few days. A lack of water can lead to dehydration, which reduces the ability to concentrate. This is dangerous as clear thinking is essential in a survival situation. Water from any ground source should be purified before drinking.

A person can live for weeks without food. Excessive hunger can cause confusion and a lack of judgement. Prolonged starvation results in loss of energy, loss of mental clarity, increased susceptibility to disease, difficulty maintaining body temperature, and eventually death. A balanced and varied diet can improve morale in a survival situation.

ACTIVITY

Time: 10 min

OBJECTIVE

The objective of this activity is to have cadets apply STOP and the survival pattern in a provided scenario.

RESOURCES

One copy of a survival scenario per group, found in Attachment A (laminated, if possible).

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Divide the cadets into two groups.
2. Provide each group with a survival scenario.
3. Give the cadets five minutes to read the scenario and answer the questions provided.
4. Have one cadet from each group share their answers with the class.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 3

The cadets' participation in this activity will serve as confirmation of this teaching point.

Teaching Point 4 **Explain the seven enemies of survival and how to combat them.**

Time: 20 min Method: Interactive Lecture

GENERAL

Pain, cold, thirst, hunger, fatigue, boredom, and loneliness are enemies of survival. In a survival situation, these feelings are more severe and more dangerous than in normal situations. Having knowledge of these feelings and their effects can assist in overcoming and controlling them.

PAIN

Pain is nature's way of identifying problems. However, pain can subside if an individual is pre-occupied. Pain may go unnoticed if an individual's mind is occupied with plans of survival. Once a person gives into pain, it weakens the drive to survive. A special effort should be made to keep an individual's hopes up and keep working.

COLD

Cold lowers the ability to think and to complete necessary tasks for survival. Focusing on being cold can interfere with the goal of survival. Cold can numb both the mind and body. It can also lead to serious medical problems. Find ways to get and stay warm, like building a fire, getting dry, layering clothes, and keeping busy.

THIRST

Water is vital for survival. Dehydration can lead to serious medical problems, and can eventually be fatal. Even when thirst is not extreme, it can dull the mind. Drink regularly, and try to find sources of water.

HUNGER

Hunger is dangerous because it can lessen the ability for rational thought. Both thirst and hunger increase a person's susceptibility to the weakening effects of cold, pain and fear. Prolonged hunger can lead to serious medical problems and can eventually be fatal. Manage food supplies, set snares, fish, and collect edible plants.

FATIGUE

Even a moderate amount of fatigue can reduce mental ability. Fatigue can make people careless as it becomes increasingly easy to adopt the feeling of just not caring. This is one of the biggest dangers in survival. While fatigue can be caused by over-exertion, it may also be caused by hopelessness, losing sight of goals, dissatisfaction, frustration or boredom. Fatigue may represent an escape from a situation that has become too difficult. Recognizing the dangers of a situation can provide the strength to go on. Watch exertion levels, set goals, and stay busy.

BOREDOM AND LONELINESS

Boredom and loneliness represent the final two enemies of survival. They are perhaps two of the toughest enemies of survival, mainly because they are unexpected. When nothing happens, when something is expected and does not happen, or when a person must stay still, quiet, and alone, these feelings develop. They can cause discouragement and a lack of will to go on. Invent games, stay active, and create projects.

ACTIVITY

Time: 5 min

OBJECTIVE

The objective of this activity is to have the cadets act out the seven enemies of survival.

RESOURCES

- Slips of paper with one of the seven enemies of survival on each.
- Container from which to draw the slips (bag, hat, etc.).

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Randomly select a cadet to draw the first slip.
2. Have the cadet silently act out the enemy of survival shown on their slip.

3. Have the rest of the cadets guess which enemy is being acted out.
4. Select another cadet, until all the enemies have been portrayed.

SAFETY

Nil.

END OF LESSON CONFIRMATION

QUESTIONS:

Q1. What factors cause fear?

Q2. What factors reduce fear?

Q3. What does STOP stand for?

ANTICIPATED ANSWERS:

A1. Hopelessness and helplessness.

A2. Confidence in equipment, person (or leader), focusing on the tasks at hand.

A3. Stop, Think, Observe, and Plan.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

One of the most important requirements for someone in a survival situation is the ability to accept the reality of the situation and react appropriately. If cadets are able to react calmly to a survival situation and develop a sensible plan, they are more likely to experience success.

INSTRUCTOR NOTES / REMARKS

The directives outlined in CATO 11-08 *Environmental Protection and Stewardship* are to be adhered to during this training.

REFERENCES

A3-016 B-GG-217-001/PT-001 Director Air Operations and Training. (1978). *Down but not out*. Ottawa, ON: Department of National Defence.

C3-005 ISBN 0-89886-814-9 Sierra Club San Diego Chapter. (1999). *Wilderness basics: The complete handbook for hikers & backpackers*. Portland, OR: The Mountaineers Books.

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Survival Scenario

You are on a camping trip with your family. It is a pleasant day in mid-October. The campsite is far from town, and your family is the only one there. At 3 pm, you decide to go on a short hike. You start off along a clearly marked trail. When you see a rabbit, you follow it off into the woods. When the rabbit finally goes down a hole, you realize you are lost. You don't know which direction the trail or the campsite is. You have been gone from the campsite for about two hours. You are lost in the woods.

In your backpack, you have:

- a one litre bottle of water,
- a sandwich bag of trail mix, and
- a bird identification book.

You are wearing jeans, a t-shirt and a light jacket. The wind is picking up, and it looks like rain.

QUESTIONS

1. What is the first thing you should do?

2. Think about the consequences of staying where you are, or wandering through the woods. What are the pros and cons of each?

3. Consider the key elements of the survival pattern – first aid, fire, shelter, signals, and food and water. What is your plan?

4. What kind of things would you want to observe about your surroundings?

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Suggested Answers for Survival Scenario – Instructor Use Only

1. What is the first thing you should do? STOP.

2. Think about the consequences of staying where you are, or wandering through the woods. What are the pros and cons of each?

Staying		**Walking**	
Pros	**Cons**	**Pros**	**Cons**
Effective use of time to develop and implement effective survival pattern. Staying in one place makes you easier to find. Prevents you from going farther away from potential search parties. Familiar with the nearby surroundings.	There may be hazards with the current location. There may be little or no resources at the current location. There is no chance of finding your way to civilization if you do not leave. Boredom could develop.	Could find your way to civilization – if you know the direction to travel. Could find better site for setting up shelter and signals.	Get more lost. Move away from a location where people can find you. End up unprepared for nightfall. Wasting energy. Increase risk of injury. Inadequate clothing or shoes.

3. What kind of things would you want to observe about your surroundings?

   - Physical dangers.
   - Flooding hazards.
   - Food and water sources.
   - Location for shelter.
   - Signs to help determine location.
   - Evidence of animals.
   - Fire resources.
   - Shelter resources.

4. What is your plan?
   First Aid. There are no injuries, so this is not a concern.
   Build a fire. This is good for signalling and warmth in the short term.
   Build a shelter. Stay dry in case it rains.
   Signals. If there is an open area, lay ground-to-air signals. Build additional signal fires.
   Water. Stay hydrated. Find additional water sources before the litre runs out.
   Food. Ration the trail mix. Find additional sources of food.

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 5

EO M190.05 – IDENTIFY TYPES OF SHELTERS

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Select two sites, as described in the activity section of teaching point one.

Survey the survival site to see if there are fallen trees or caves present to use as visual aids during the lesson.

Create an a-frame shelter and a lean-to shelter for demonstration purposes during the class.

If the materials are available, erect an arctic bell tent, modular tent section and/or civilian-pattern tent for demonstration purposes during the class.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for this lesson to orient the cadets to types of shelters.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have identified types of shelters.

IMPORTANCE

In a survival situation, it is important to be able to construct an effective shelter. A shelter protects a person from weather, animals and insects. Shelters also provide warmth, shade, comfort and is an important component of the survival pattern.

Teaching Point 1 **Explain the importance of site selection.**

Time: 10 min Method: Interactive Lecture

Before presenting the information provided below, ask the cadets what they feel is important when selecting a site for a shelter. Do not confirm or correct their responses at this time. It is simply a lead off question to get them thinking.

LAND CONSIDERATIONS

Site selection should begin before dark if possible. The shelter should be built near a source of water, building materials (trees, boughs) and fuel. Specific land considerations include:

- the area must be large enough for the type of shelter planned,
- the area should not be at the bottom of a hill because of possible water runoff,
- the area should be relatively flat, but slightly sloped to allow drainage, and
- dry river gullies should be avoided, because of possible water collection in the gully.

WATER CONSIDERATIONS

Water plays an important role in site selection. Specific water considerations include avoid building too close to:

- water, to avoid insects, and
- the drinking water source, to prevent contamination.

ANIMAL AND INSECT CONSIDERATIONS

Animals and insects can also cause problems at the site. Specific animal and insect considerations are:

- avoid setting up a shelter where there are animal trails or standing water,
- fast flowing streams will have fewer insects than still water, and
- avoid areas infested with ants or bees.

OTHER CONSIDERATIONS

Other considerations to keep in mind when selecting a site include:

- there should be an open area nearby to construct signals,
- the entrance of the shelter should face the sun to add warmth and increase morale,
- avoid collecting thick wood for creating fires because it is harder to dry,
- try to find a natural windbreak or a place that is away from strong wind currents,
- avoid swampy terrain, and
- if a fire is to be built, it should be located at the opening of the shelter, and it should be done at a distance.

ACTIVITY

Time: 5 min

OBJECTIVE

The objective of this activity is to have the cadets identify a good site for shelter construction.

RESOURCES

Nil.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

- Show the cadets the two sites; one a good site and the other a poor site.
- Ask the cadets to choose the best site and indicate why they made that choice.
- Ask them to identify faults in the poor site for shelter construction.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. Why should the site not be located at the bottom of a hill?

Q2. Why should the site not be built too close to the drinking water source?

Q3. Why should there be an open area near the shelter when selecting the site?

ANTICIPATED ANSWERS:

A1. To avoid possible water runoff.

A2. To avoid contamination of the drinking water source.

A3. To maintain an area for construct signals.

Teaching Point 2 **Describe natural shelters.**

Time: 5 min Method: Interactive Lecture

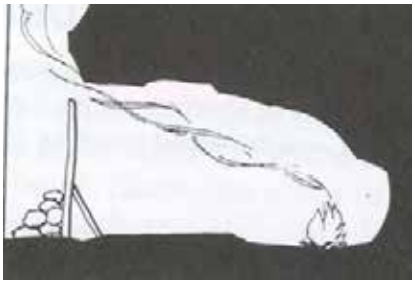
The instructor should find examples of each type of natural shelter on the training site. If possible, deliver this teaching point proximal to the shelters. The instructor should have pictures of the shelters to show the class, in case one or both of the natural shelters cannot be found in the area.

NATURAL SHELTERS

Natural shelters are effective to use in situations where there are limited resources. Different types of natural shelters can be used for short term and / or long term shelters.

CAVES

Caves may serve as long-term shelters and do not take energy to build. They are also good waterproof shelters. The entrance should be sealed off with items such as rocks, logs, or wattle (boughs and broken branches). When building a fire, ensure to place it at the back of the cave so smoke goes out the opening. If the fire is placed by the opening, the smoke blows back into the cave.



Note. From The SAS Survival Handbook, by John Wiseman, 1999, London, England: HarperCollins Publishers.

Figure 1 Cave Shelter

FALLEN TREE

A fallen tree can make a great temporary shelter. When using a fallen tree as a shelter, ensure that the tree is stable and will not fall further. Also, be aware of other falling trees in the area. Coniferous trees with pine branches are the best because of the dense branch structure. The branches can be woven for protection.

Note. From The SAS Survival Handbook, by John Wiseman, 1999, London, England: HarperCollins Publishers.

Figure 2 Fallen Tree Shelter

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. Name two types of natural shelters.

Q2. When lighting a fire inside a cave, what should be kept in mind?

ANTICIPATED ANSWERS:

A1. Cave and fallen trees.

A2. The fire should be lit towards the back of the cave so the smoke goes out the opening.

Teaching Point 3 **Describe improvised shelters.**

Time: 5 min Method: Interactive Lecture

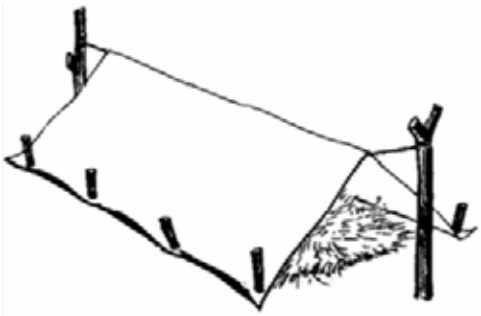
Prior to instructing the lesson, the instructor must ensure there is an a-frame shelter and a lean to shelter on site to use as visual aids to the class. Directions as to how to properly set up the shelters listed below are provided in Attachment A.

IMPROVISED SHELTERS

Improvised shelters are used in situations where immediate protection from the elements is required. They are shelters that can be constructed quickly from various materials. The a-frame and lean-to are two types of improvised shelters that are very effective in protecting against the elements. A type of a-frame shelter is the hootchie-style shelter.

A-FRAME SHELTER

An a-frame shelter is a simple shelter that can be constructed with a groundsheet or waterproof poncho. The groundsheet or poncho can be tied to two wood stakes by twine or roots found on the site. The construction of this shelter will be further detailed in an upcoming lesson.

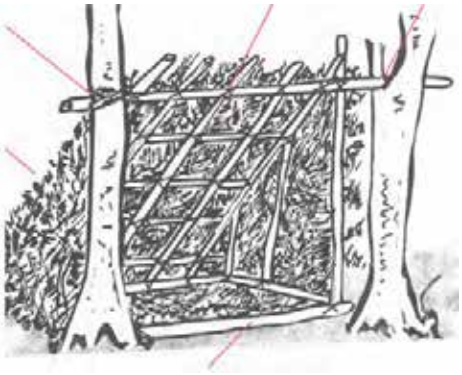


Note. From The SAS Survival Handbook, by John Wiseman, 1999, London, England: HarperCollins Publishers.

Figure 3 A-Frame Shelter

LEAN-TO SHELTER

A lean-to shelter is constructed by using a horizontal crosspiece between two trees, with a panel of boughs or saplings used as a roof.



Note. From The SAS Survival Handbook, by John Wiseman, 1999, London, England: HarperCollins Publishers.

Figure 4 Lean-to-Shelter

CONFIRMATION OF TEACHING POINT 3

QUESTIONS:

Q1. When are improvised shelters important to use?

Q2. What materials are needed to construct an A-frame shelter?

Q3. What are the main components of a lean-to shelter?

ANTICIPATED ANSWERS:

A1. When permanent shelters are not available. In situations where immediate protection from the elements are required.

A2. A ground sheet/waterproof poncho and twine/roots.

A3. A lean-to shelter is composed of a horizontal cross-piece between two trees, with a panel of boughs or saplings used as a roof.

Teaching Point 4 **Describe tentage.**

Time: 5 min Method: Interactive Lecture

TENTAGE

Tentage is a permanent type of shelter that is useful for coping with the elements.

The instructor is encouraged to emphasize certain types of tentage below, based on what types of tents are available to the squadron during this exercise. When setting up the types of tentage mentioned below to use as training aids, the instructor is encouraged to refer to Attachment A for proper directions.

ARCTIC TENT

An arctic tent is a tent that can provide adequate shelter for up to ten people. It is composed of a center pole, which goes through the top of the tent. The tent is then pegged down on all corners and tightened to provide optimal space inside.

MODULAR TENT

Modular tentage is often used as a sleeping or classroom setting for a large number of people. It is also effective in providing shade during hot days. It is erected in sections by using a combination of metal frames and canvas covering.

CIVILIAN-PATTERN TENTS

Civilian-pattern tents are a third type of tentage that can be used for sleeping quarters. Civilian-pattern tents vary in shape and size and are constructed to accommodate anywhere between 1 and 10 people.

CONFIRMATION OF TEACHING POINT 4

QUESTIONS:

Q1. For how many people can an arctic shelter provide shelter?

Q2. What are the uses of modular tents?

ANTICIPATED ANSWERS:

A1. It is composed of a center pole, which is erected through a hole in the top of the tent. The tent is then pegged down on all corners and tightened to provide optimal space inside.

A2. Modular tentage can be used as sleeping quarters, a classroom setting, and can also provide shade during hot days.

END OF LESSON CONFIRMATION

All cadets will be required to assist in the construction of various shelters during the aircrew survival exercise. This lesson leads to the construction of an A-frame style shelter and no formal end of lesson confirmation activity is required. The instructor should pose questions to the group to confirm the information presented in this EO was understood.

QUESTIONS:

Q1. What are the various types of factors that need to be remembered when selecting a site?

Q2. When are natural shelters effective to use?

Q3. What are two types of improvised shelters?

Q4. What are three types of tentage?

ANTICIPATED ANSWERS:

A1. Land considerations, water considerations, animal and insect considerations and other considerations.

A2. In a situation where limited resources are available.

A3. A-frame shelter and lean-to shelter.

A4. Arctic tents, modular tents, and civilian-pattern tents.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Constructing shelter is a key component of a successful survival pattern. In such a situation, protection against the elements and against wildlife or insects is extremely important. Knowing how to properly select a site, and furthermore how to construct a shelter effectively will significantly assist someone in such a scenario.

INSTRUCTOR NOTES / REMARKS

All shelters listed should be setup prior to the lesson being taught.

The directives outlined in CATO 11-08 *Environmental Protection and Stewardship* are to be adhered to during this training.

REFERENCES

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A3-012 B-GG-302-002/FP-001 DAD. (1982). *Basic cold weather training*. Ottawa, ON: Department of National Defence.

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C3-003 ISBN 1-896713-00-9 Tawrell, P. (1996). *Camping and wilderness survival: The ultimate outdoors book*. Green Valley, ON: Author.

C3-004 ISBN 1-85227-866-8 Davies, B. (1999). *SAS encyclopedia of survival*. London, England: Virgin Publications.

ERECT AN A-FRAME SHELTER

1. Select a level area with good drainage.
2. Ensure the area is free of hazards, (i.e., overhanging branches that may fall, too close to roadways etc).
3. Zip two shelter halves together, ensuring flap covers zipper.
4. Attach cord to the grommets at both ends near the joined zipper.
5. Suspend both ends from trees or other objects so that the centre is approximately waist high.
6. Stretch out the sides and secure them using sticks.
7. Attach cord to the middle grommets on each side and tie the cord to pull the side out and give more room to the inside.
8. When possible, dig a drainage trench on both sides.

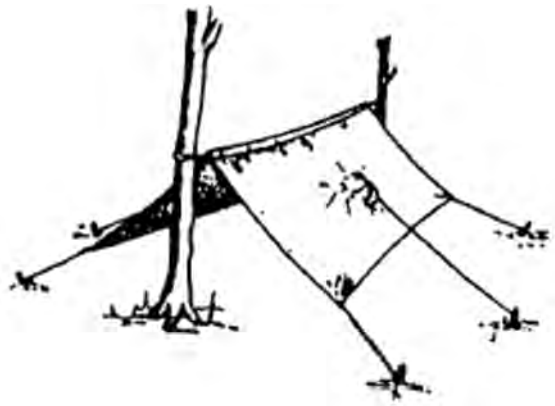


Figure A-1 A-Frame Shelter

LEAN TO SHELTER

1. To build a lean-to, two trees must be found with fairly firm, level ground between them. These trees are called the uprights. The distance between these two trees will be the opening of the lean-to.
2. Next, a ridgepole must be found. This must be a fairly thick pole, around fist size in thickness, and should be long enough to reach from one upright to the next.
3. The ridgepole should be placed behind the uprights from the viewpoint of the person facing the uprights. Natural notches in the uprights may be perfect to hold the ridgepole. If these are not available, the ridgepole will be laced onto the uprights using the square lashing. (It may be a good idea to lash the ridgepole on even when using natural notches to ensure the pole is secure). After the square lashing is completed, the ridgepole should be very secure. In fact, the people who will be using the shelter should be able to sit on it and it should not move.
4. The height of the ridgepole should be the height of the waist of the tallest person if a group will be staying in the shelter. This will make the shelter opening fairly low, which will help conserve heat inside the shelter. For a one person lean-to, the ridgepole should be placed lower, at mid thigh height.
5. Find approximately 8 poles about 5-7 cm in diameter. These will serve as the pole framework for the lean-to and will be known as the spars. They will be tied onto the ridgepole using the square lashing, and will run from the ridgepole to the ground. Spread these evenly, going from just inside one upright to the other.

6. The number and the height of the people living in the lean-to will determine the length of the spars. For a group, the spars should be slightly longer than the height of the tallest person. If the shelter will sleep one person, the spars should be about the same height as the chest of that person.

7. Find approximately 8 small flexible poles that will run horizontally across the spars. These will be known as the ribs. The length of these should be that of the distance between the two spars closest to the uprights. These ribs should be woven horizontally through the spars. If long enough ribs cannot be found shorter ones can be used. Weave the shorter ribs as far as possible and then start at the point ended with a new piece.

8. A pole around the same thickness as the ridgepole should be found and laid on top of the bottom of the spars. This is known as the foot log.

9. Vertical poles will be placed from the ground to the spars on the furthest sides of the lean-to. These do not need to be laced onto the spars. They should be tall enough to reach from the ground to the spar, and since the spar is on a slope, the vertical poles will need to be of varying heights.

10. Place boughs with the stem toward the ridgepole and the top of the bough upwards (the glossy side).

11. Make a row going right across the bottom with the boughs close together.

12. For the next layer, lay the boughs into the first layer; again with the top of the bough facing up.

13. Repeat step 12 until the top is reached and the boughs cover the lean-to like shingles cover a roof.

14. Weave the stems of more boughs into the layers that now cover the lean-to. These layers should be thick enough to be waterproof; about 15cm thick is a suggestion.

15. For the sides of the lean-to, boughs can be placed as in the steps above until the ground is reached.

16. If a fire has been made, extend boughs about a foot down the front of the lean-to to keep out rain or wind, but allow the heat from the fire to enter.

17. Boughs can also be used to cover a part of the front as described above if there is no fire. Just leave an opening for a door in case quick exit is required.

CIVILIAN-PATTERN TENTS

Civilian-pattern tents come in various sizes and forms and, therefore, have different ways to be erected. Users should read the information booklets provided with the tent in order to correctly erect it.

ARCTIC TENT ASSEMBLY AND PITCHING

1. Lay out the outer tent, flat apex in the centre and panels outwards with the inside facing upwards, and the door zipper fastened.

2. Lay out the inner tent liner on top of the outer tent, with the inside facing upwards.

3. Attach the top and bottom stovepipe toggles. By lining up the stovepipe openings of the outer and inner liner and attaching the top and bottom toggles, then the inner and outer portions are positioned properly.

4. Working either way, attach the remaining toggles. Use the corners of the tent as checkpoints to make sure no toggle was missed. Continue until all toggles are through the seam grommets of the inner liner.

5. Thread the long or the lower drying line through the drying line keepers. To get the drying line keepers through the inner seam splits, feel through the liner at the peak or centre of the doorway, follow up the seam on the panel of the outer tent, when you reach the drying line keeper, insert it through the split seam of the liner and thread the drying line on. There is a keeper on every seam. This means there are 10 keepers for the lower drying lines.

6. Thread on the short or upper drying line. Start at the door seam again and carry out the same drill as for the lower drying line. There will be a keeper on each side of this one and then one on every second seam. This means that there will be six drying line keepers on the top.

7. Insert the spike of the tent pole through the apex of the inner and outer tents and lash these three securely.

8. Attach the five bottom tie-down pegs. To do this, run a rope through the bottom wall eyelets of the outer and inner tents, tying the pegs to the outside.

9. Attach the wall guy lines to the guy line loops on the outer tents. To do this, thread the guy lines through one hole of the runner then through the guy line loop of the tent and back through the outer hole of the runner. Tie a figure of eight knot on this end of the guy line to prevent it from slipping out of the runner hole. The other end of the guy line is threaded through the eye of the peg of the line and is prevented from being pulled out of the peg by a slipknot. This method of attaching guy lines must be used as the rope will invariably freeze in the peg hole and to reverse of the above procedure will prevent tightening of guy lines. In addition, when the ground is too hard, or snow too soft and deep, the pegs can be secured by wrapping several turns of the guy line to the centre of the peg and either freeze the peg in the snow or place a large stone or log on top of the peg.

10. Attach the five top guy lines in the same manner.

11. The tent is now assembled and ready for use, however, when the tent is pitched and the doors are opened quite often the zippers become disengaged. To prevent this, close the zipper and near the top of the door, sew the track of the zipper together. This will act as a stopper, preventing the zipper from becoming disengaged. Do this to the outer and the inner tent zippers.

12. The fly screen is of no use in cold weather and should be rolled up and secured by the ties running each way from the door to the outside corners. Roll and secure this screen, only after the tent has been pitched. If done when the tent is struck, the tent will be misshapen when pitched.

13. To prevent the guy lines from being left hanging loose and becoming tangled, roll the guy rope around the tent peg and in the guy rope loop. In most cases the guy rope loops are sewn too far down and the loop is not large enough for the peg to fit in. To overcome this, thread short pieces of the rope through the guy line loops and tie with a square knot. Adjust the knot so the peg will fit securely in it.

STRIKING AN ARCTIC TENT

1. Members take positions. One person is inside at the tent pole. Three people are at the guy ropes located above the left side tie-down point, above the right side tie-down point, and above the back tie-down point. One person is supervising the procedure and giving orders.

2. The order “pull pole” is given.

3. The person inside the tent pulls the bottom of the pole towards the door and lowers the tip to the rear of the tent. That person disconnects the lower section or telescopes the pole, depending on which pole is being used.

4. The member at the back guy rope grasps the apex of the tent.

5. The person at the pole backs out of the door, carrying the pole sections and base plate, and zippers the door closed.

6. The two persons at the right and left side guy ropes roll up the guys and secure them to the tent. They pull out the remaining pegs, roll up the guys and secure them to the tent.

7. The members pull the tent to the rear and spread it out on the ground.

8. The order “shake out” is given. Members spread around the tent, shake the snow/ice/sand/etc. out and fold the tent p for stowing.

FOLDING AN ARCTIC TENT FOR STORAGE

1. Lay out the tent with the tent door up and in the centre and with zippers closed.

2. Make sure there are no double folds on the underside.

3. Hold the apex securely: the first long fold is made by folding the wings to the centre, with the pegs straight up and down.

4. Straighten and flatten out.

5. Fold in snow flaps across the base.

6. Make the second long fold, repeating the action as for the first long fold.

7. Straighten and flatten out.

8. Make the third long fold.

9. Straighten and flatten out;

10. Fourth long fold – flip folds one on top of the other.

11. Make the first cross fold: fold in base at the top of wall.

12. Make the second cross fold by folding the apex into the base of the inserted pole section allowing approximately 4 inches of loose fold at the base of the pole section to avoid wear and tear: top of pole should be offset.

13. Third cross fold – place the folds one on top of the other.

14. Insert in the bag (base plate and spare pegs have already been placed in the bag).

15. Place the remaining two pole sections in the bag alongside the tent.

16. Tie up the top of the tent bag.

PITCHING AND ANCHORING A MODULAR TENT

The key stages for pitching and anchoring a modular tent are as follows:

1. Lay the frame parts on the ground and erect the arch frames (A frames), leaving the uprights folded and placed at equal distances one from the other.

Figure A-2 A Frame

2. Join the tie beams (purloins) to each of the arches at the summit and roof edges, locking them into place.

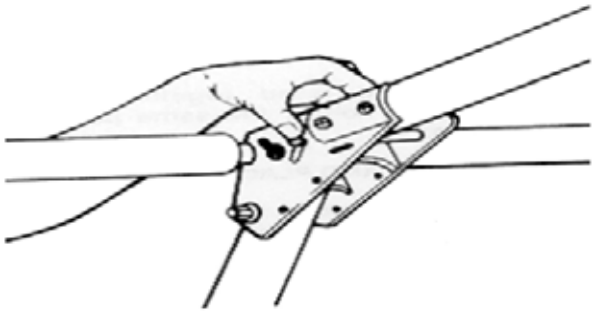


Figure A-3 Joining of the Tie Beams

3. Generally using one person per arch, raise one side of the frame.

Figure A-4 Raising One Side

4. Before lacing the tent canvas together, close all doors. Lace the tent canvas together, placing them on the frame and attaching them at the top of the arches.

Figure A-5 Lacing the Tent Canvas

Figure A-6 Half of the Tent Is Laced

5. Raise the other side of the frame.
6. Attach the stays without tensioning them and lace the rest of the canvas.
7. Using straps, attach the canvas and lining to the ties on the edges of the roof.
8. Align the arches and adjust the canvas.
9. Raise the tent completely.
10. Drive pickets in each foot from the outside.
11. Tension the stays.
12. Attach the ground canvas using sandbags or earth.
13. Dig drainage trenches as required.

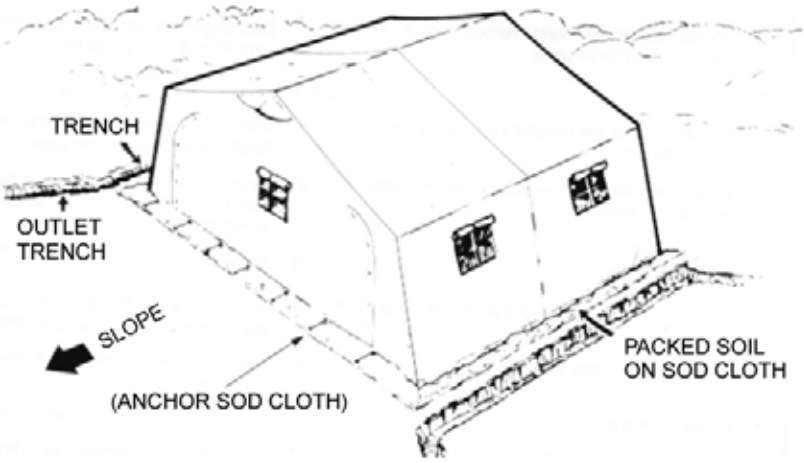


Figure A-7 Modular Tent

STRIKING A MODULAR TENT

1. Release cables and anchors and remove them if the wind is not too strong. Otherwise, leave them in place until the tent has been disassembled.
2. Remove earth or sandbags covering the ground sheet.
3. Undo adjusting stays from the edge of the roof.
4. Unlace the sides of the tent and lower one side.
5. Remove the lining strapped to the frame, and fold it.
6. Lower the other side of the tent, unlace tent parts, remove them from the frame and fold them.
7. Disassemble the frame and pack the components.
8. Take necessary steps to clean and dry components as required, with the shortest possible delay.

FOLDING THE CENTRE CANVAS

1. After having removed the canvas from the frame, close the windows and doors.
2. Stretch the canvas inside a building on the floor, on a dry and clean surface.
3. Clean the canvas and ground sheet using a broom.
4. Fold the ground sheet towards the centre.
5. Fold the canvas on its length towards the centre of the sheet, until the canvas is long and narrow.
6. Fold the canvas in the other direction towards the centre.

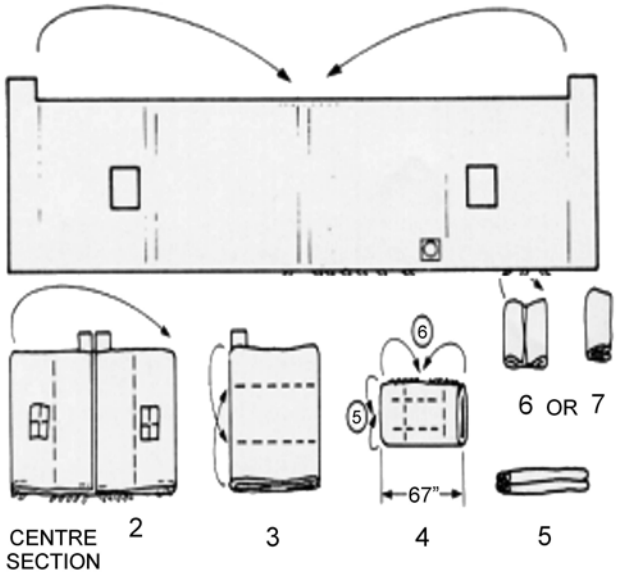


Figure A-8 Folding of the Centre Section

FOLDING THE OUTSIDE WALLS (DOORS)

1. As for the central canvas, clean the canvas and fold the ground sheet towards the inside.
2. Fold the point towards the inside part.
3. Fold the canvas towards the centre and secure it.

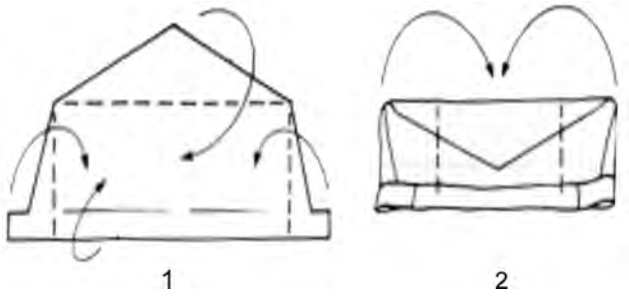


Figure A-9 Folding The Outside Walls

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 6

EO M190.06 – LIGHT, MAINTAIN AND EXTINGUISH A FIRE

Total Time: 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Prepare a fire ready to be lit.

Prepare examples of types of fires.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TPs 1, 3 and 4 to illustrate the application of rules, principles and concepts of fire safety, elements of fire and types of fires.

A demonstration and performance was chosen for TPs 2 and 5 as it allows the instructor to explain and demonstrate site location and layout, lighting, maintaining and extinguishing a fire.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall be expected to apply fire safety principles and light, maintain and extinguish a fire.

IMPORTANCE

Safety is a key concern when dealing with fire. Cadets must understand and apply principles of fire safety before they begin the steps in lighting. Fire is also the second step in the survival pattern and may be the difference between living and expiring while in a survival situation.

Teaching Point 1 **Explain principles of fire safety.**

Time: 5 min Method: Interactive Lecture

OBEY FOREST FIRE DANGER RATING SYSTEM

In cooperation with various fire management agencies, the Canadian Forest Service manages the Forest Fire Danger Rating System. The system uses weather, fuel and topographic data to rate the potential for forest fire ignition and to predict forest fire behaviour. The Forest Fire Danger Rating System must be at a suitable level prior to starting a fire. Never light a fire when the rating is high, very high or extreme. The slightest spark could cause a forest fire.

Note. From "Natural Resources Canada" by Canadian Forest Service, 2009, The Atlas of Canada. Retrieved October 26, 2011, from http://atlas.nrcan.gc.ca/auth/english/maps/environment/naturalhazards/forest_fires/firedangerrating/1

Figure 1 Forest Fire Danger Rating System

STRONG WINDS

If wind speed is high, the fire will be at risk of spreading if not properly managed. Strong winds can carry sparks away from the fire pit and start an unwanted fire. The fire should be placed in a location where it is effectively sheltered from strong winds.

SIZE OF FIRE

The fire shall be a suitable size so control can be maintained at all times. Never allow a fire to get larger than four feet wide and three feet high. Fires that are too large can burn out of control, and cause forest fires or personal injury. If a fire becomes too large, stop adding fuel and let the fire cool down.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. What is the Forest Fire Danger Rating System?

Q2. What might happen if a fire is placed in an area with strong winds?

Q3. Why maintain a suitable size fire?

ANTICIPATED ANSWERS:

A1. The Forest Fire Danger Rating System uses weather, fuel and topographic data to rate the potential for forest fire ignition and to predict forest fire behaviour.

A2. It is at the risk of spreading.

A3. Fires that are too large can burn out of control, and cause forest fires or personal injury.

Teaching Point 2 **Explain, demonstrate and have the cadets determine an appropriate site location and layout for a fire.**

Time: 15 min Method: Demonstration and Performance

SITE LOCATION

Avoid windy areas because the fire can flare up and burn out of control. A reflector or a windbreak can be built out of green wood or rocks. The advantage of a reflector is that it concentrates the heat in the desired direction. Areas near water tend to have higher winds.

Clear the ground of all inflammable material before starting the fire. The material should be raked towards the centre of the site where the dead leaves, pine needles and other debris can be burned.

Do not build the fire against an old log or tree trunk. The log may smoulder and catch fire in a breeze.

Do not build the fire below the boughs of a tree. The boughs will dry from the heat and may catch fire.

The fire should be a suitable distance from any shelter in case the wind changes direction.

SITE LAYOUT

Surround the fire with dry rocks. They will help contain the fire so it may be properly maintained. Do not use rocks that have been submerged in water. Water expands as it is heated and may cause the rocks to explode. If rocks are unavailable, dig a pit approximately one half foot deep and four feet wide. This pit helps prevent of the fire from spreading.

Appropriate fire fighting equipment shall be placed in close proximity to the fire.

Deliver this teaching point around a properly constructed fire site.

ACTIVITY

Time: 10 min

OBJECTIVE

The objective of the activity is to allow the cadet to practically apply the principles learned by constructing an effective fire site.

RESOURCES

- Suitable location for a fire site,
- Rake,
- Shovel,
- Rocks,

- Fire extinguisher,
- Gerry can,
- Water pack,
- Water,
- Bucket of sand,
- Wire broom,
- Axe, and
- Fire bell.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

- Divide cadets into small groups.
- Direct cadets to find an appropriate location for a fire by applying the site location principles.
- Provide cadets with a rake and shovel, and have them clear the ground and dig a pit that will accommodate their fire.
- Have the cadets gather dry rocks and surround their fire pit.

SAFETY

Ensure cadets safely use the equipment.

After the cadets have completed the activity they should return to the original fire site for the next portion of the lesson.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. Why is it unwise to build a fire near an old log or a tree trunk?

Q2. Why must the rocks that surround the fire not be submerged in water?

Q3. What equipment should be in close proximity to the fire site?

ANTICIPATED ANSWERS:

A1. They may smoulder and catch fire.

A2. Water expands when heated and the rock may explode.

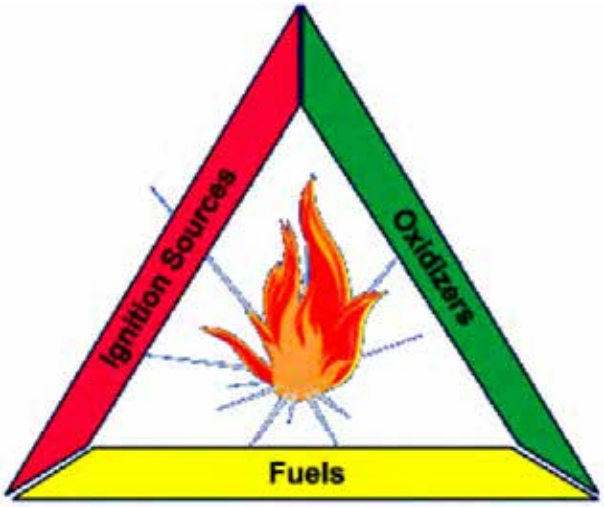
A3. Fire fighting equipment.

Teaching Point 3 **Identify the required elements of a fire.**

Time: 5 min Method: Interactive Lecture

ELEMENTS OF A FIRE

The three required elements for a fire include oxygen, spark / heat and fuel.



Note. From "Covidien Energy-based Professional Education", 2006, The Fire Triangle, 2010, by Covidien AG, October 26, 2011, from http://www.valleylabeducation.org/fire/pages/fire-12.html

Figure 2 Fire Triangle

Oxygen is required for a fire to stay lit. A spark is required to initially start the fire. The heat produced by the embers keeps the fire going. Fuel is anything that burns, such as wood.

If any one of the elements is removed, the fire will extinguish. When lighting a fire, always ensure adequate ventilation, enough fuel and a hot enough source to ignite the fuel.

Demonstrate how oxygen, heat / spark and fuel are all needed to start a fire and keep it lit.

Using a candle, a match and a large water glass, explain that without the match (spark) the candle (fuel) cannot be lit. Light the candle and place the empty water glass over the candle to prevent air (oxygen) from reaching it. The flame will extinguish.

CONFIRMATION OF TEACHING POINT 3

QUESTIONS:

Q1. What are the three required elements of a fire?

Q2. If one element is removed, what happens to the fire?

ANTICIPATED ANSWERS:

A1. Oxygen, spark / heat and fuel.

A2. The fire will go out.

Teaching Point 4 **Describe types of fires.**

Time: 15 min Method: Interactive Lecture

WARMTH AND COMFORT FIRES

Warmth and comfort fires can help to conserve body heat and save needed calories. These fires can be helpful in keeping away wild animals and insects. Warmth and comfort fires are the most practical fires, as they consume little fuel and burn slowly.

SIGNAL FIRES

Signal fires should produce heavy black smoke to attract potential rescuers. This black smoke can be generated by the addition of green branches, rubber, plastic or heavy oil to an already well-established fire.

COOKING FIRES

Cooking fires should be set flat on the ground. They can also be constructed in a pit if there is heavy wind or the surrounding ground contains a fire hazard. Cooking fires shall be a moderate size or the food burns. The hot coals can be used to start a warmth and comfort fire to heat the camping area when cooking is finished.

Examples of these fires should be built to use as training aids.

CONFIRMATION OF TEACHING POINT 4

QUESTIONS:

Q1. What are two advantages of a warmth and comfort fire?

Q2. What are some items that can be added to a fire to produce thick black smoke?

Q3. What type of ground surface should a cooking fire be on?

ANTICIPATED ANSWERS:

A1. They can help conserve body heat, help save needed calories, keep wild animals and insects away, and they are the most economical.

A2. Green branches, rubber, plastic or heavy oil.

A3. They should be on flat ground.

Teaching Point 5 **Explain, demonstrate and have the cadets practise lighting, maintaining and extinguishing fires.**

Time: 45 min Method: Demonstration and Performance

LIGHTING A FIRE

TINDER

Tinder is any kind of material that a minimum amount of heat ignites. Good tinder needs only a spark to set it ablaze. Birch bark, dry grass, fine wood shavings, bird down, waxed paper and cotton fluff from clothing all make good tinder. Tinder must be dry. It is a good idea to carry tinder in a waterproof container.

METHODS FOR OBTAINING A SPARK

Matches. Matches are the easiest way to start a fire. They produce a flame instantly when struck against a striking pad. The biggest problem with matches is that in wind or wet conditions they may not be useful. They will not ignite if the striking pad becomes worn or wet. The matches should be packed in waterproof containers so that they cannot rub or rattle together and accidentally ignite. Non-safety, strike anywhere matches are the most effective in a survival situation.

Flint and steel. Flint and steel is the best method of lighting a fire if matches are unavailable. If the flint is struck vigorously with a piece of steel it produces hot sparks that ignites the fire. The flint should be stuck downward so the sparks hits the centre of the tinder. Even if the flint is wet it still produces a spark.

Magnifying glass. Magnifying glasses focus strong direct sunlight to produce enough heat to ignite a fire. The light from the sun should be directed onto the tinder. The obvious disadvantage to the magnifying glass is that if the sun is not out, it will not produce a spark.

Battery and steel wool. Strands of steel wool can be attached to the terminals of a car battery to produce enough spark to start a fire. When the two strands of steel wool are brought close together, a spark jumps between them.

Using a nine-volt battery demonstrate this method for obtaining a spark.

KINDLING

Kindling is the wood used to raise flames from the tinder so larger less combustible materials can be burned. The best kindling consists of small, dry twigs and small pieces of soft woods. Do not collect kindling straight from the earth because it is usually damp. It should be gathered from standing deadwood.

FUEL

Fuel is anything that burns in the fire. Dry wood from standing trees should be used to get the fire going. Once the fire is established, greener and damp wood can be used. Hard woods include hickory, beech and oak. These hard woods burn well, give off heat, and last a long time as hot coals. The fire can be maintained for a long period of time using hard woods. Soft woods burn very quickly and give off sparks. They can be used when lighting the fire. These soft woods include cedar, alder, hemlock, spruce, pine, chestnut and willow. After the fire is steadily burning, add fuel that is three to four times the size of the kindling.

MAINTAINING A FIRE

A fire should never be left unattended. It takes only seconds for a fire to begin burning out of control. Immediately after a fire has been started, it requires a modest amount of wood to build up heat. The fire requires very little wood to keep it burning once a good amount of heat is built up.

VENTILATION

Ventilation allows the needed oxygen to be supplied to the fire. The more oxygen introduced, the brighter the fire. The ideal amount of ventilation results in a steady burn while only using a moderate amount of fuel. The fire suffocates if there is too much fuel.

EXTINGUISHING A FIRE

Water is the easiest way to put out a fire. Water should be dumped on the fire until it results in no heat emanating from the centre. Ensure that all of the sparks are out prior to decamping by smothering it completely with wet earth or sand and filling the fire pit.

ACTIVITY

Time: 30 min Method: Activity

OBJECTIVE

The objective of this activity is to allow the cadet to practically apply the principles learned by constructing, lighting, maintaining and extinguishing a fire.

RESOURCES

- Matches,
- Flint and steel,
- Battery and steel wool,
- Magnifying class,
- Tinder,
- Kindling,
- Fuel,
- Fire site,
- Rake,
- Shovel,

- Fire fighting equipment, and
- Water.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Divide the cadets into small groups.
2. Have the cadets in their groups, return to their fire pit.
3. Provide cadets with a rake and shovel, and firefighting equipment.
4. Have each group prepare the tinder and kindling.
5. Have each group light the fire using a match.
6. Have each group maintain the fire for three minutes.
7. Have each group extinguish their fire.
8. Ensure that the fire is completely extinguished.

SAFETY

Ensure fire-fighting equipment is near each fire site.

CONFIRMATION OF TEACHING POINT 5

QUESTIONS:

Q1. What is fuel?

Q2. What does kindling do?

Q3. Name two of the four methods of obtaining a spark mentioned in this lesson.

ANTICIPATED ANSWERS:

A1. Fuel is anything that burns (wood, gasoline etc).

A2. Kindling is the wood used to raise the flames from the tinder so that larger less combustible materials can be burned.

A3. Matches, flint and steel, magnifying glass, battery and steel wool.

END OF LESSON CONFIRMATION

The cadets' participation in the activity will serve as confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Safety is a key concern when dealing with fire. Cadets must understand and apply principles of fire safety before they begin the steps in lighting. Fire is also the second step in the survival pattern and may be the difference between living and expiring while in a survival situation.

INSTRUCTOR NOTES / REMARKS

The directives outlined in CATO 11-08 *Environmental Protection and Stewardship* are to be adhered to during this training.

REFERENCES

C3-002 ISBN 0-00-653140-7 Wiseman, J. (1999). *The SAS survival handbook*. Hammersmith, London: HarperCollins Publishers.

C3-003 ISBN 1-896713-00-9 Tawrell, P. (1996). *Camping and wilderness survival: The ultimate outdoors book*. Green Valley, ON: Author.

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 7

EO M190.07 – ERECT, TEAR DOWN AND PACK TENTS

Total Time: 120 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Additional instructors are required for this lesson to ensure TP1 is covered in the time allotted.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A demonstration and performance was chosen for TP 1 as it allows the instructor to explain and demonstrate erecting, tearing down and packing a modular tent while providing an opportunity for the cadets to practice these skills under supervision.

A demonstration was chosen for TPs 2–3 as it allows the instructor to demonstrate the skills while providing the cadets with knowledge on erecting, tearing down and packing tents.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have to erected, tore down and packed a two-section modular tent with walls.

IMPORTANCE

It is important for the cadets to be able to erect a modular tent because they are often used during survival exercises. A cadets' understanding of the erecting, tearing down and packing of tents allows them to better assist in the set-up of an aircrew survival exercise site.

Teaching Point 1 **Explain, demonstrate and have the cadets, as a member of a group, erect, tear down and pack a two-section modular tent with walls.**

Time: 60 min Method: Demonstration and Performance

For this skill lesson, it is recommended that the instruction take the following format:

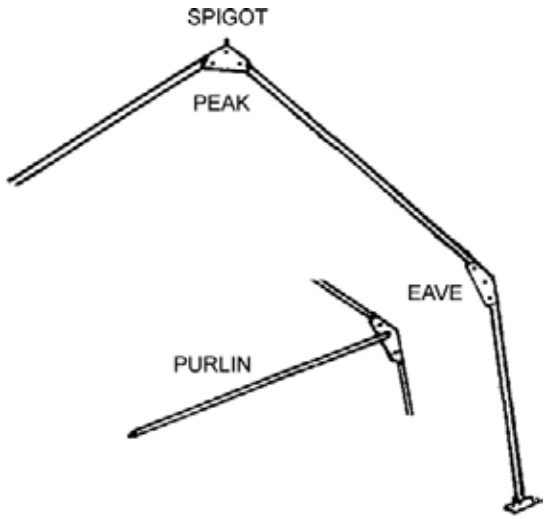
1. Divide the flight into two groups.
2. Explain and demonstrate each step in erecting, tearing down and packing a modular tent.
3. After demonstrating each step have the cadets perform the skill while monitoring their performance.

Note: Two instructors are required for this TP.

If the modular tent is going to remain erected for the duration of the exercise instruct tearing down and packing at the end of the exercise.

COMPONENTS OF A MODULAR TENT

A module of tent is comprised of a canvas section supported by tubular aluminum framework. It measures 2.5 m long by 5.5 m wide. The frame of a modular tent consists of two arch frames and three purlins (the horizontal beams along the length of the roof that support the canvas). The arch frame is hinged at the peak and the eaves. When folded the arch measures 2.75 m long. The purlins are 2.5 m long and connect two arches; one purlin at the peak and two more at each eave. They are locked into place without the use of tools. The framework is anchored with steel pegs which are inserted at the base of each arch and can be diagonally cross braced with cables or straps, between the eaves and base of the arches, to give an unobstructed inside space and an outside perimeter clear of guy wires. Guy wires are only used when the tent requires further reinforcement.



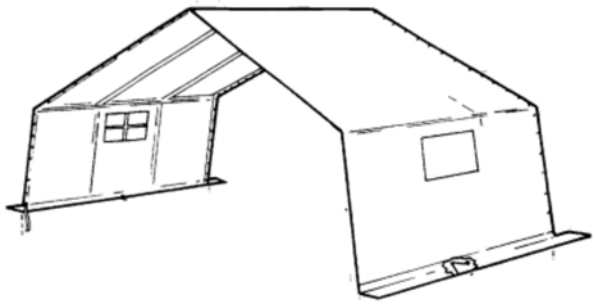
Note. Created by Director Cdts 3, 2007, Ottawa, ON: Department of National Defence.

Figure 1 Frame

TENT SECTIONS

The three tent sections are: centre sections, front walls and rear walls. The tent sections attach to one another by means of a series of cord loops and grommets known as “Dutch lacing”. The cord loops are on the opposite side of the grommets requiring all sections to be placed in the same direction. For example, all the cord loops on the right. Tent sections are made of olive green, core-spun, polyester-cotton, rip-stop woven material treated to be water-, rot- and flame-resistant. The sod cloth which extends 40 cm from the foot of each tent section is made from plastic-coated, waterproof material. The windows are screened and have blackout flaps and transparent vinyl panels which are attached with fastener tape (Velcro).

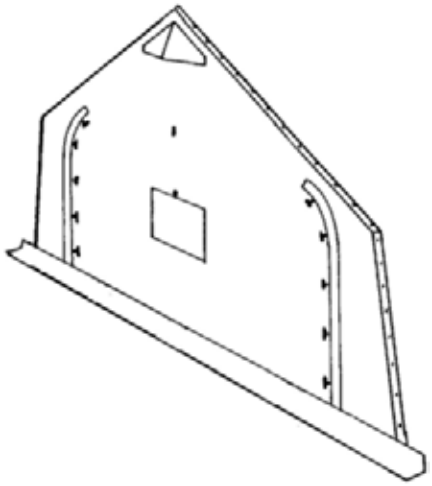
Centre section. This is the canvas roof and side wall covering of a module. It has a window in each side and a chimney opening in the roof.



Note. From Operational Support and Maintenance Manual for Tent, Main (p. 1-5), by DND Canada, 1983, Ottawa ON: Department of National Defence. Copyright 1983 by DND Canada.

Figure 2 Centre Section

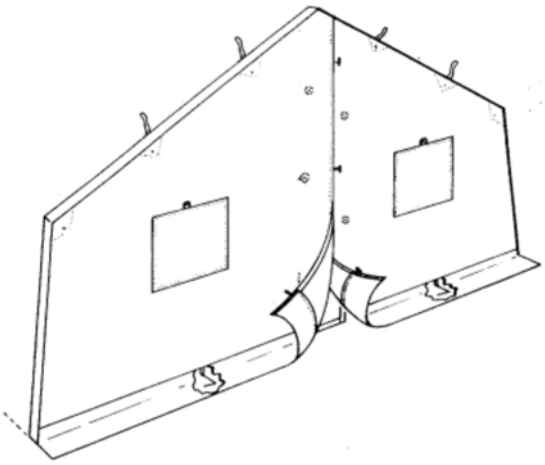
Front wall. Attaches with grommets and opens with two zippered personnel doors. The front wall includes one window and a closable air vent.



Note. From Operational Support and Maintenance Manual for Tent, Main (p. 1-5), by DND Canada, 1983, Ottawa ON: Department of National Defence. Copyright 1983 by DND Canada.

Figure 3 Front Wall

Rear wall. Attaches with cord loops and opens in the centre. The opening reaches the peak of the module and is fastened with toggles, allowing access for large equipment. The rear wall includes two windows.



Note. From Operational Support and Maintenance Manual for Tent, Main (p. 1-5), by DND Canada, 1983, Ottawa ON: Department of National Defence. Copyright 1983 by DND Canada.

Figure 4 Rear Wall

ACCESSORIES

Liners. The three common tent sections—centre section, front wall and rear wall—each have corresponding white fabric liners. These provide insulation as well as a light reflective surface, and are made from flame resistant material. The liners are suspended from inside the frame and are laced together similar to the tent sections.

Blackout hallway. Black fabric enclosure, 2.5 m long, attached inside the tent and laced to a grommet by the doorway, to prevent the entranceway from emitting light.

Lacing band. Provides the cord loops, to tie the two tent sections together when the module lacing sequence is disrupted because two grommet ends meet. It is 8.5 m long and 15 cm wide. A strap and a hooked shock cord are at each end to secure it to the frame and keep the band taut against the canvas.

Guy wires. Lines of cord that assist in securing the tent to the ground. Available for situations where the footings cannot be anchored in the ground or where the tent is subject to extreme windy conditions.

Bag tent. This is a flat canvas wrap specifically designed for containing tent sections. It includes a pocket to hold pertinent hardware.

Tools. A mallet, shovel and occasionally a stepladder. Tools are not included.

Explain tent maintenance and site selection to the cadets, but do not demonstrate or have the cadets perform.

TENT MAINTENANCE

The following precautionary measures, when followed, protect the tent components from corrosion, mildew, rot and unnecessary damage and work to prolong the life and usefulness of the tentage:

- Avoid folding or packing tent or liner sections when wet. Wet or damp tentage shall be unfolded and air dried within 48 hours.
- Protect tent and liner sections from petroleum and chemical stains. If soiling occurs, clean immediately with warm soapy water.
- Do not allow oil, mud or other foreign matter to gather or harden on frame components. Warm soapy water or cleaning solvents are recommended for cleaning. The components should not be lubricated.
- Do not leave collapsed tent sections and components in contact with the ground or exposed to the elements for more than 48 hours.
- All detected damage should be identified, reported and repaired at the earliest convenience.
- Dragging tentage on the ground, walking on tentage and general rough handling is prohibited.
- Effort shall be made to keep tentage equipment serviceable at all times and preventative maintenance practices must be employed during use.
- Erect and tear down tentage in accordance with the detailed procedures.

A site should be pre-determined when explaining these points. There is no requirement for the cadets to choose a site.

SITE SELECTION

The following considerations should be made when selecting a site for the modular tent:

- Access for vehicles is required for easy set-up and equipment transport.
- Firm level ground, high enough for natural drainage, is preferred. It is recommended to have a tough grass turf, free from projecting tree roots and rocks.
- Positioning the tent to avoid prevailing winds bearing directly in line with an end wall.

- A shady area free of underbrush is recommended in a hot climate. Doors should be accessible and trees that rub against the canvas in the wind should be removed or avoided.
- Cooking shall be conducted 100 m from tents used for sleeping personnel.

When selecting a tent site on snow-covered ground, choose an area free from crevices. Prod the surface to ensure that a flat base is selected. The snow shall be removed until a firm base is exposed. The tent shall, if possible, be positioned so that its side is located downwind to avoid drifting snow blocking the entranceway.

Explain, demonstrate and have the cadets perform each step in erecting, tearing down and packing.

ERECTING

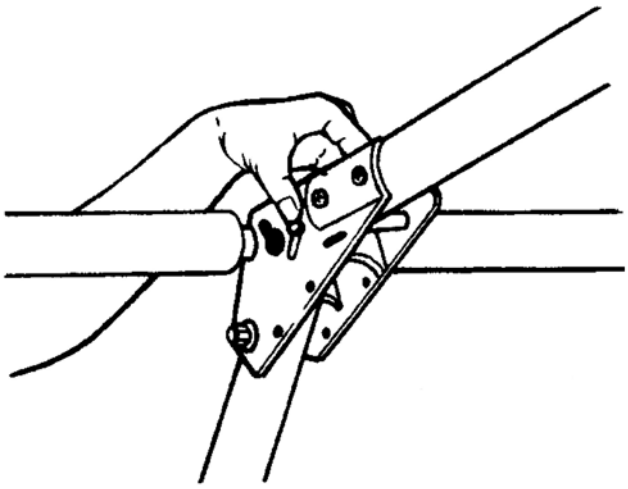
Lay out and Connect Frame

Expand all arch frames leaving the legs in a folded position and space them in module increments using a purlin as a measure. Connect the purlins to each arch at the peak and eaves.

Frame Locks

To operate the connecting, locking device on the peak bracket, first ensure the lock is released, by:

1. Placing the button head pin of the purlin into the bracket keyhole and push it upwards in the keyhole slot.
2. Moving the sliding bar up to allow the pivot lock to be swung over to hold the purlin in place.
3. Moving the sliding bar down to lock the pivot.
4. Operating the save bracket lock by lifting the sliding bar.
5. Releasing the arch frame leg from its erected state and moving down the lever lock, located inside the eave bracket.



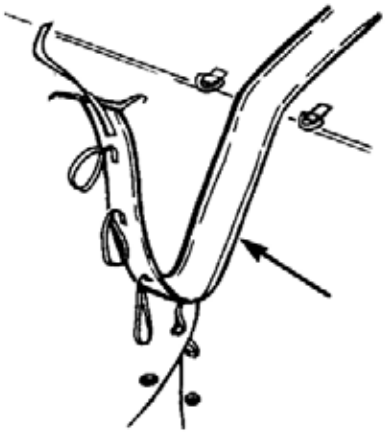
Note. From Operational Support and Maintenance Manual for Tent, Main (p. 2-5), by DND Canada, 1983, Ottawa ON: Department of National Defence. Copyright 1983 by DND Canada.

Figure 5 Frame Lock

Connect Tent Sections

Identify the tent sections and position them so the front-rear sequence of lacing corresponds to the front and rear wall location. Lace the centre sections together using the dutch lace as follows:

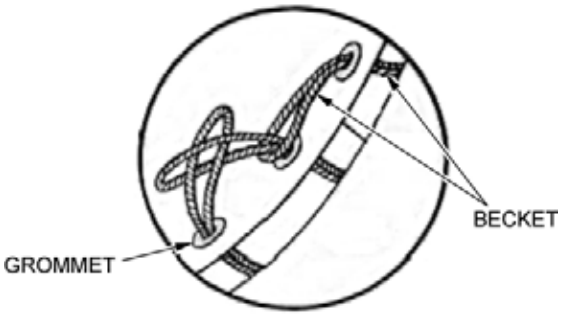
1. Sandwich the grommet side between the flaps on the lacing side.



Note. From Operational Support and Maintenance Manual for Tent, Main (p. 2-8), by DND Canada, 1983, Ottawa ON: Department of National Defence. Copyright 1983 by DND Canada.

Figure 6 Canvas Lacing

2. Pass the cord loops through the corresponding grommet holes and then through the next loop working from the centre outwards.
3. Tie off the last loop.



Note. From Operational Support and Maintenance Manual for Tent, Main (p. 1-8), by DND Canada, 1983, Ottawa ON: Department of National Defence. Copyright 1983 by DND Canada.

Figure 7 Canvas Lacing

Raise Side and Place Canvas

The following steps outline the procedure for raising the modular tent structure and placing the canvas:

1. Ensure the doors on the front and rear walls are closed. If the doors are left open they will be difficult to close after the modular tent is erected.
2. Raise one side of the frame with one person assigned to each arch frame. In windy conditions temporarily secure the upright section to the ground with the tent pegs.

Note. From Operational Support and Maintenance Manual for Tent, Main (p. 2-8), by DND Canada, 1983, Ottawa ON: Department of National Defence. Copyright 1983 by DND Canada.

Figure 8 Erect One Side

3. Place the previously folded canvas on the sloped side of the frame, positioning the master grommets (large holes at the peak of the canvas) over the frame spigots (large point at the peak of the frame), and then unfold the canvas onto the raised side.

Note. From Operational Support and Maintenance Manual for Tent, Main (p. 2-8), by DND Canada, 1983, Ottawa ON: Department of National Defence. Copyright 1983 by DND Canada.

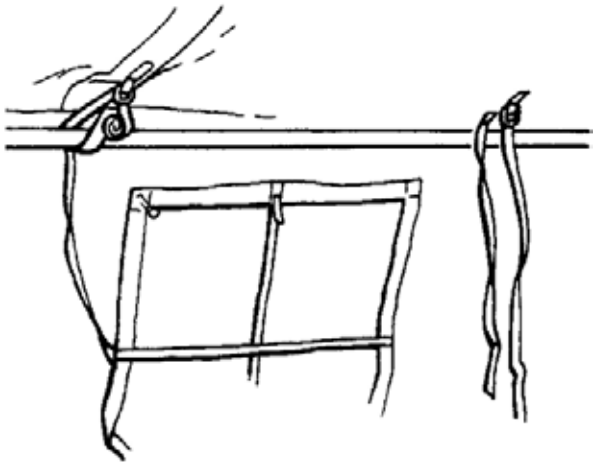
Figure 9 Place Canvas

4. Secure eave and foot straps on the raised side.

5. Attach the front and rear walls to the centre sections along the roof line only.

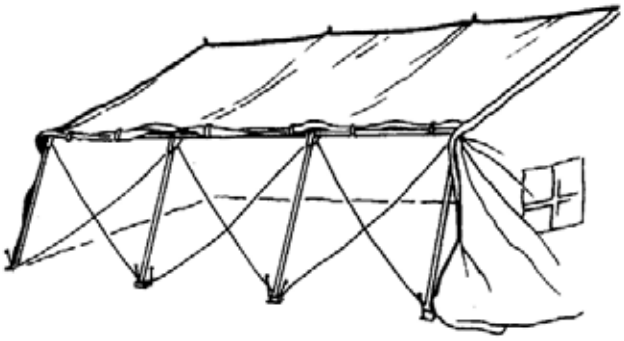
6. Raise the other side of the tent and align legs.

7. Attach save straps (straps on the underside of the canvas that attach to the purlins as illustrated in Figure 10) and bracing cables (support cables as illustrated in Figure 11) but do not tighten.



Note. From Operational Support and Maintenance Manual for Tent, Main (p. 2-8), by DND Canada, 1983, Ottawa ON: Department of National Defence. Copyright 1983 by DND Canada.

Figure 10 Save Straps



Note. From Operational Support and Maintenance Manual for Tent, Main (p. 2-8), by DND Canada, 1983, Ottawa ON: Department of National Defence. Copyright 1983 by DND Canada.

Figure 11 Bracing Cables

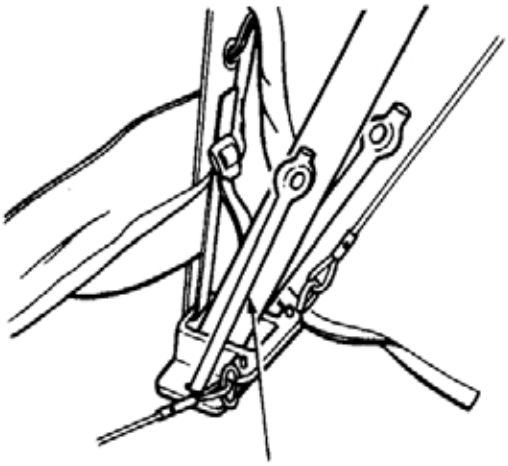
8. Complete lacing the end walls to the centre sections.

9. Raise the other side and adjust the positioning and alignment of the arch legs to achieve a smooth canvas fit.

ANCHOR

The following steps outline the procedure for anchoring the modular tent to the ground:

1. Secure the frame to the ground. Hammer in the steel pegs (two per foot), working from the outside of the tent, so that the pegs are angled inwards (to prevent frame lifting as illustrated in Figure 12).



Note. From Operational Support and Maintenance Manual for Tent, Main (p. 2-8), by DND Canada, 1983, Ottawa ON: Department of National Defence. Copyright 1983 by DND Canada.

Figure 12 Drive in Pegs

2. Tighten bracing cables or bracing straps to maximum tension.
3. Attach the foot strap, cinching to the maximum.
4. When using bracing cables, connect the vertical hold anchors with the corresponding D rings at the anchor points along the ground line of the canvas.
5. Drive the pegs into the ground under the sod cloth so that the side wall canvas is taut.
6. Connect the sod cloth flaps with the toggles and loops at the corners and along the sides. Place sod, snow or other suitable material on the sod cloths to prevent the wind from getting underneath them.

A trench is sometimes required when the tent is pitched on poor draining ground such as a flat, clay or heavy soil surfaces or shallow soil over bed rock. Sandy soils or areas which slope off normally do not require drainage trenches. The trench should be 20 cm wide by 15 cm deep. Slope the trench so that it drains away from the tent. Dig outlet drains at the lowest points of the trench, ensuring that they do not interfere with pedestrian or vehicular movement.

Only dig a trench if the situation requires.

TEARING DOWN

The reverse order for erecting is used to tear down a modular tent. The steps are:

1. Loosen cables and ground anchors and remove (if wind is not too strong), otherwise leave until the tent is lowered.
2. Remove material from the sod cloth.
3. Release all straps and lacing up to the eave purlins.

4. Lower the tent one side at a time.

5. Unlace tent walls and sections and remove from frame.

6. Dismantle frame (reverse procedure).

Ensure that arrangements are made to clean and dry the equipment, if required, at the earliest opportunity.

PACKING

Lay out the canvas with the outer surface facing the ground, for ease of cleaning. A diagram of the packing procedure is located at Attachment A. There are different methods for folding modular tent canvas; check with the local supply section when signing out the tentage.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in this activity will serve as the confirmation of this TP.

Teaching Point 2 **Explain and demonstrate erecting, tearing down and packing a 5- or 10-person Arctic tent.**

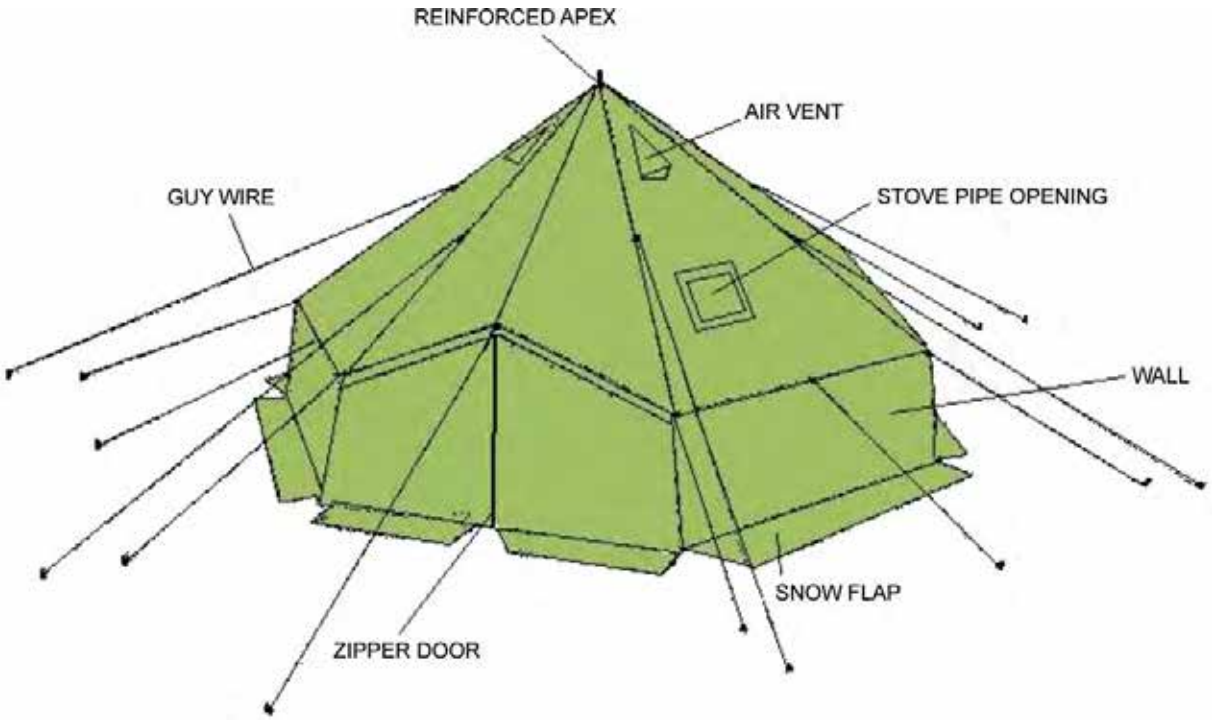
Time: 30 min Method: Demonstration

These descriptions and instructions will be given as the tent is being erected, torn down and packed.

If the Arctic tent is going to remain erected for the duration of the exercise instruct tearing down and packing at the end of the exercise.

COMPONENTS OF A 5- OR 10-PERSON ARCTIC TENT

The 5- and 10-person Arctic tents are bell-shaped with a pentagonal base. Each wall section of the pentagon has a snow flap attached to the bottom portion of its panel. The tent consists of an inner and an outer portion. The inner portion is most commonly used for cadet training and consists of a zipper door, base tie-down points, air vents, stove pipe openings and a reinforced apex for pole insertion. The tent is supported by a single telescopic centre pole and 16 (10-person) or 10 (5-person) guy wires. The guy wires are pegged down with lightweight alloy or plastic pegs.

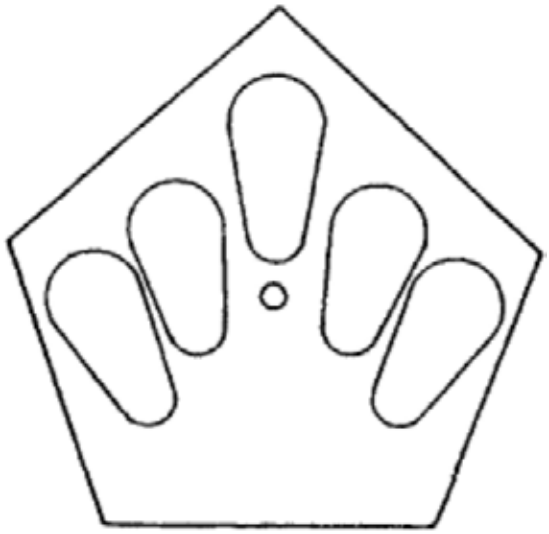


Note. Created by D Cdts 3, 2007, Ottawa, ON: Department of National Defence.

Figure 13 10-Person Arctic Tent Parts

Note. From Hero Army Surplus, Army Tents, by heroarmysurplus.com, 2007. Copyright 2007 by heroarmysurplus.com. Retrieved December 2, 2007, from http://heroarmysurplus.com/index.php/cPath/116?osCsid=jncvpsk59lech7i4chhja975q6

Figure 14 5-Person Arctic Tent

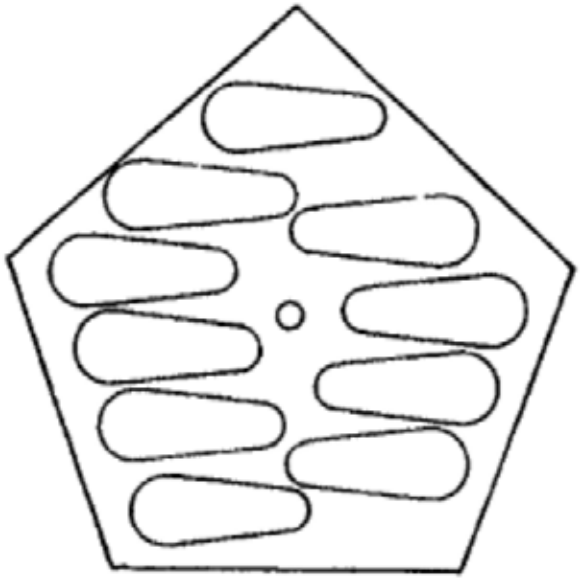


Note. From Arctic and Sub-Arctic Operations, Part 1 (p. 3-11), by DND Canada, 1974, Ottawa ON: Department of National Defence. Copyright 1974 by DND Canada.

Figure 15 5-Person Arctic Tent Sleeping Arrangement

Note. From Hero Army Surplus, Army Tents, by heroarmysurplus.com, 2007. Copyright 2007 by heroarmysurplus.com. Retrieved December 2, 2007, from http://heroarmysurplus.com/index.php/cPath/116?osCsid=jncvpsk59lech7i4chhja975q6

Figure 16 10-Person Arctic Tent



Note. From Arctic and Sub-Arctic Operations, Part 1 (p. 3-12), by DND Canada, 1974, Ottawa ON: Department of National Defence. Copyright 1974 by DND Canada.

Figure 17 10-Person Arctic Tent Sleeping Arrangement

ARCTIC TENT INSPECTION

The tent must be inspected to ensure the following faults are not present:

- Reinforced ring on apex damaged or torn.
- Air vents are stuck closed or damaged.
- Panels have tears, holes, broken threads or seams.
- Guy wires or loops are either damaged or missing.
- Broken or frayed guy wires or guy wire loops.
- Stove pipe opening is damaged or missing.
- Zipper on the outer door is broken.
- Snow flaps with eyelets are torn away from the walls.
- Drying line keepers are torn away from the seams.
- Toggles are missing.
- Telescopic pole (10-person tent) sections have bends or splits or the pole keeper pin is missing.
- Tent pole (5-person tent) has bends or splits and do not fit together properly.
- Base plate has cracks and, in the case of the 5-person tent, the base plate keep pin is missing.
- Pegs have broken points or bends.

ERECTING

Explain and demonstrate the following. Have the cadets assist as required.

The only difference in erecting these two tents is the number of guy wires. On a 5-person Arctic tent there are 5 wires and on a 10-person Arctic tent there are 16. The following outlines the steps to take for erecting a 5- or 10-person Arctic tent:

1. Choose a site for the tent.
2. Spread the tent out on the ground with the outside facing up.
3. Ensure the zipper is closed on the front door.
4. Check if the liner is in place; usually it is not in place in a new tent.
5. If the liner is not in place, follow these steps:
   (a) Spread out the liner above the tent with the inside of the tent facing up.
   (b) Attach the top and bottom stove pipe toggles of the liner to the tent.
   (c) Attach the remaining toggles of the liner to the tent. Use the corners of the tent as check points to make sure a toggle was not missed.
   (d) Thread the lower drying line through the drying line keepers.
6. Peg the corners of the Arctic tent.
7. The tent pole will be folded in two. Straighten and lock it into position.
8. Take the pole and base plate under the canvas, going through the door and inserting it into the centre eye (reinforced apex) of the tent.
9. Secure the base of the pole onto the base plate and have the pole person hold the pole upright.
10. Drive the corner pegs into the ground before erecting the pole.
11. Have the pole person extend the pole until the skirt and snow flaps are level with the ground. Use the pegs as a guide; they should be pulled out during this step.
12. Lift the shackle and extend the pole. Be careful of the shackle pinching the pole person's fingers.
13. Lock the shackle into place to secure the height of the tent.
14. Pull on each of the lower guy wires and extend them in line with the seams of the tent.
15. Set each guy wire will have an adjuster on it; adjuster to the middle position.
16. Peg the guy wires to the ground using heavy duty pegs.
17. Adjust the guy wires to remove any sag in the lower portion of the tent. The tent should be even in height all the way around.
18. Repeat steps 14–16 with the upper guy wires. The tent guy wires should never cross with other tents.

19. Adjust and tighten all wires and prop up the door wire if necessary.

20. The two door eave wires can be propped up by placing the wire over an improvised pole, tree branch or other object higher than the door entrance. This keeps the doors from sagging and makes it easier to get in and out of the tent and gives the tent greater stability.

TEARING DOWN

Use the following steps to tear down an Arctic tent:

1. Have the pole person enter the tent and hold the pole.
2. Pull out the pegs one at a time and roll up the guy wires and tie them off.
3. Have the pole person lower and remove the pole.

PACKING

Use the following steps to pack an Arctic tent:

1. Lay out the tent with the tent door up and in the centre with zippers closed and remove any debris.
2. Ensure there are no double folds on the underside.
3. Hold the apex securely. The first long fold is made by folding the wings to the centre, with the pegs straight up and down.
4. Straighten and flatten out the Arctic tent.
5. Fold in snow flaps across the base.
6. Make the second long fold, repeating the action for the first long fold.
7. Straighten and flatten out the Arctic tent.
8. Make the third long fold, repeating the action for the first long fold.
9. Straighten and flatten out the Arctic tent.
10. Make the forth long fold by flipping the folds one on top of the other.
11. Make the first cross-fold; fold in the base to the top of the wall.
12. Make the second cross-fold by folding the apex into the base of the inserted pole section, allowing approximately 10 cm of loose fold at the base of the pole section to avoid wear and tear. The top of the pole should be offset.
13. Make the third cross-fold by placing the previous two folds one on top of the other.
14. Insert the tent, base plate and pegs into the bag.
15. Place the remaining two pole sections in the bag beside the tent.
16. Tie up the top of the tent bag.

CONFIRMATION OF TEACHING POINT 2

The cadets' observation of the demonstrations will serve as the confirmation of this TP.

Teaching Point 3 **Explain and demonstrate erecting, tearing down and packing a civilian-pattern tent.**

Time: 20 min Method: Demonstration

These descriptions and instructions will be given as the tent is being erected, torn down and packed.

If the civilian-pattern tent is going to remain erected for the duration of the exercise instruct tearing down and packing at the end of the exercise.

SELECTING A CIVILIAN-PATTERN TENT

To select a suitable civilian-pattern tent, consider the number of people it needs to accommodate, seasons during which it is being used, weather conditions that may be encountered, the weight of the tent and required features.

Seasons and Conditions

Three-season tents. Designed to offer good ventilation in the spring, summer, and fall, and provide sturdy weather protection in everything but heavy snowfalls and very high winds. Many three-season tents have mesh inner bodies, which reduce condensation, and can often be used without the fly for a cool, bug-proof shelter on hot nights. Three-season tents are airier, less expensive, lighter, more compact and roomier than four-season tents. Their versatility makes them popular with backpackers, paddlers, and cyclists.

Note. From MEC Funhouse 4 Tent, by MEC.ca, 2007, Copyright 2007 by MEC.ca. Retrieved December 2, 2007, from http://www.mec.ca/Products/product_listing.jsp?FOLDER%3C%3Efolder_id=2534374302702837&bmUID=1196614958520

Figure 18 Three-Season Tent

Four-season tents. Built to protect in extreme weather. They usually come with many poles and have low, curved shapes to shield high winds and reduce snow build-up. Extra guy wires provide more staking options. Fabrics tend to be heavier, with thicker waterproof coatings that make them more weatherproof, but less ventilated, and more susceptible to interior condensation. This additional protection means greater weight and packed size, and may be inappropriate for anything other than ski touring, winter camping, or mountaineering.

Note. From MEC Mondarack Tent, by MEC.ca, 2007, Copyright 2007 by MEC.ca. Retrieved December 2, 2007, from http://www.mec.ca/Products/product_listing.jsp?FOLDER%3C%3Efolder_id=2534374302702837&bmUID=1196614958520

Figure 19 Four-Season Tent

WEIGHT

Tent weights are described as “minimum weight” and “packaged weight”. The minimum weight includes the tent and frame, and the fewest pegs and guy wires necessary to properly set up the tent. Packaged weight includes the full tent, instructions, stuff sacks, repair swatches, all guy wires and pegs. Conditions permitting, weight can be saved by leaving some pegs and components at home, and improvising with materials available at the site.

FEATURES

Tent footprints. These are groundsheets that are custom-fit to the tent. Groundsheets protect tent floors from abrasions, increase waterproofness, and help insulate from the cool ground. Most tents have pre-made footprints, which are sold separately.

Vestibules. This is an excellent way to increase the liveability of a tent. They are useful for storing gear, to peel off wet clothing or put on boots. A pole-supported vestibule will be heavier, but generally larger and more storm-proof.

Explain and demonstrate the following. Use cadets to assist as necessary.

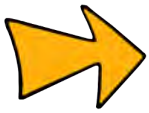
ERECTING

Setting up the Main Body

Use the following steps to set up the main body of a civilian-pattern dome tent:

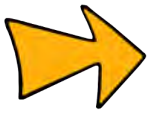
1. Remove sharp objects that might puncture the tent floor. A footprint beneath the structure is not necessary for a waterproof tent, but it reduces long-term wear on the tent floor.

2. Assemble all poles carefully.



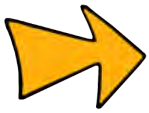
Shock-corded poles, (bungee cord) are meant to keep pole sections in the proper order, not as an automatic assembly mechanism for poles. Do not hold one section while whipping the rest of the pole back and forth, or toss the poles into the air; either procedure excessively stresses the pole joints and shock cord. Instead, fit poles together section by section, making sure that each piece slides completely into the next. Forcing an improperly assembled pole can damage the pole and / or the tent body and fly.

3. Lay the tent body flat. In windy conditions, peg all the floor corners before proceeding.
4. Lay the poles on top of the tent body so that each one crosses diagonally from one corner to the opposite corner; the two poles should cross in the centre to form an X.
5. Attach the pole clips to the canopy.
6. Fit the pole ends into the grommet tabs at the four corners of the tent.



Have one person lift the top of the tent to loft it up as the tension can cause the other poles to pop out. This is the stage when the greatest stress can be placed on the poles. There is often more than one grommet on each webbing tab to increase or decrease the tautness of the tent to compensate for fabric slackening or tightening caused by changes in humidity. When first erecting the tent, it is best to use the outermost (loosest) grommet on each tab.

7. Starting at a point over one of the doors, attach the clips on the tent to the poles.
8. Peg out the corners of the tent.



Most tents are colour-coded to help users erect them.

Attaching the Fly

1. Drape the fly over the tent so that the doors in the fly line up with the doors in the canopy.
2. Attach the Velcro wrap-ties to secure the fly onto the poles. They are usually on the underside of the fly on most tents. Attaching these wrap-ties is very important for strengthening the tent. The wrap-ties allow the poles to reinforce one another in a series of trusses; they also connect the corner guy wire attachment points directly to the poles for maximum stiffness when these guy wires are rigged.
3. Fit all of the grommet tabs on the fly over the appropriate pole ends.

Staking and Guying Out the Tent

Attach, peg out, and tension the four corner guy wires. Rather than thick, heavy poles for strength, most tents employ light, sturdy guy wires as part of their structure. This keeps the tents weight low. The design also makes it very important to securely rig the guy wires in any amount of wind. Not doing so could cause the tent to move in the wind (as with any tent, shelter from trees, rock, or snow walls will make for a quieter night under stormy conditions).

The pegs included with a tent are suitable for general use on relatively soft ground. On very hard-packed ground, use stakes that can withstand the force needed to secure them. On snow, sand, or other loose-packed surfaces, wider T-stakes or aluminum snow stakes will hold better; these stakes hold best buried horizontally. Improvise with other stakes (hiking staffs, ice axes, branches, rocks, trees), using the tents stake loops or cord as required.

Ventilating the Tent

Proper ventilation is the key to minimizing condensation in any tent. Some points to consider are:

- Keep fabric doors open as widely as the prevailing weather permits.
- If bugs are not a problem, leave mesh doors open.
- Open each door from the top down; warm, moist air rises and escapes through high openings.
- If the design of the tent allows, open it at either end or both sides to allow air to flow through.
- On very hot nights, when there will be no rain or dewfall, leave the flysheet off and use the inner tent to keep out bugs.

TEARING DOWN AND PACKING

The most important consideration in taking down a tent is not to stress the poles and fabrics, by following these steps:

1. Disconnect guy wires and release the tension from the tent.
2. Release all the poles. If the tent has pole sleeves, push the poles out of the sleeves instead of pulling them out.
3. Fold each pole in half first, and then fold down towards the outsides, two sections at a time. To minimize the stress on the bungee cord in the poles and to speed disassembly,
4. Remove all of the components from one another prior to storing. A wet tent should be dried prior to packing as the moisture damages the tent over time.
5. Fold and roll the tent rather than stuffing it into its sack. Rolling makes a smaller package, and causes fewer creases in the polyurethane coating. The tent and poles may be carried separately for easier packing or load sharing.

CARE AND MAINTENANCE

Protecting the Tent

Ultraviolet (UV) damage is the largest hazard for tents. Fabrics should not be exposed to sunlight for extended periods of time; this eventually results in colour fading and fabric failure. The uncoated fabrics of the tent canopy are most susceptible to damage from UV and should be covered by the more durable fly. If extended exposure is unavoidable, cover the tent with a tarp or a sheet of nylon.

Lighting the Tent

Using a candle lantern in a tent carries definite risks. Never leave a candle lantern burning unattended; always watch for fire hazards from overheating fabrics or spilling wax. Spilling wax can be dangerous, particularly to eyes and other sensitive areas. Use candle lanterns wisely and with extreme caution. Cooking in a tent is strongly discouraged because of fire hazards and carbon monoxide inhalation risks. Unlike campfire smoke and other fumes, carbon monoxide can render someone unconscious without warning.

Eating in the Tent

Mop up spills promptly with water. Many foods, particularly acidic ones like fruit or juices, can weaken synthetic fabrics over time. It is best to eat and store food away from a tent to avoid attracting animals.

Cleaning the Tent

Clean the tent by hand while it is set up, using a sponge, a mild non-detergent soap, and warm water. Rinse thoroughly. Do not dry clean, machine wash, or machine dry. Stubborn stains like tar can be left in place and dusted with talcum powder to prevent transfer to other areas of the tent in storage. After cleaning, a spray-on water repellent designed for synthetic fabrics may be applied to the flysheet if surface water repellent is weakened. This is apparent when water droplets no longer bead on the fabric. If the poles are exposed to salt or salt water, rinse them in fresh water and allow them to dry before storing (while aluminum does not rust, it can become brittle through unseen corrosion over time).

CONFIRMATION OF TEACHING POINT 3

The cadets' observation of this activity will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in erecting, tearing down and packing a modular tent will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

It is important for the cadets to be able to erect a modular tent because they are often used during survival exercises. A cadets' understanding of the erecting, tearing down and packing of tents allows them to better assist in the set-up of the camp during an aircrew survival exercise.

INSTRUCTOR NOTES / REMARKS

Every cadet, as a member of a group, should be given the opportunity to erect, tear down and pack a modular tent during the exercise.

The directives outlined in CATO 11-08 *Environmental Protection and Stewardship* are to be adhered to during this training.

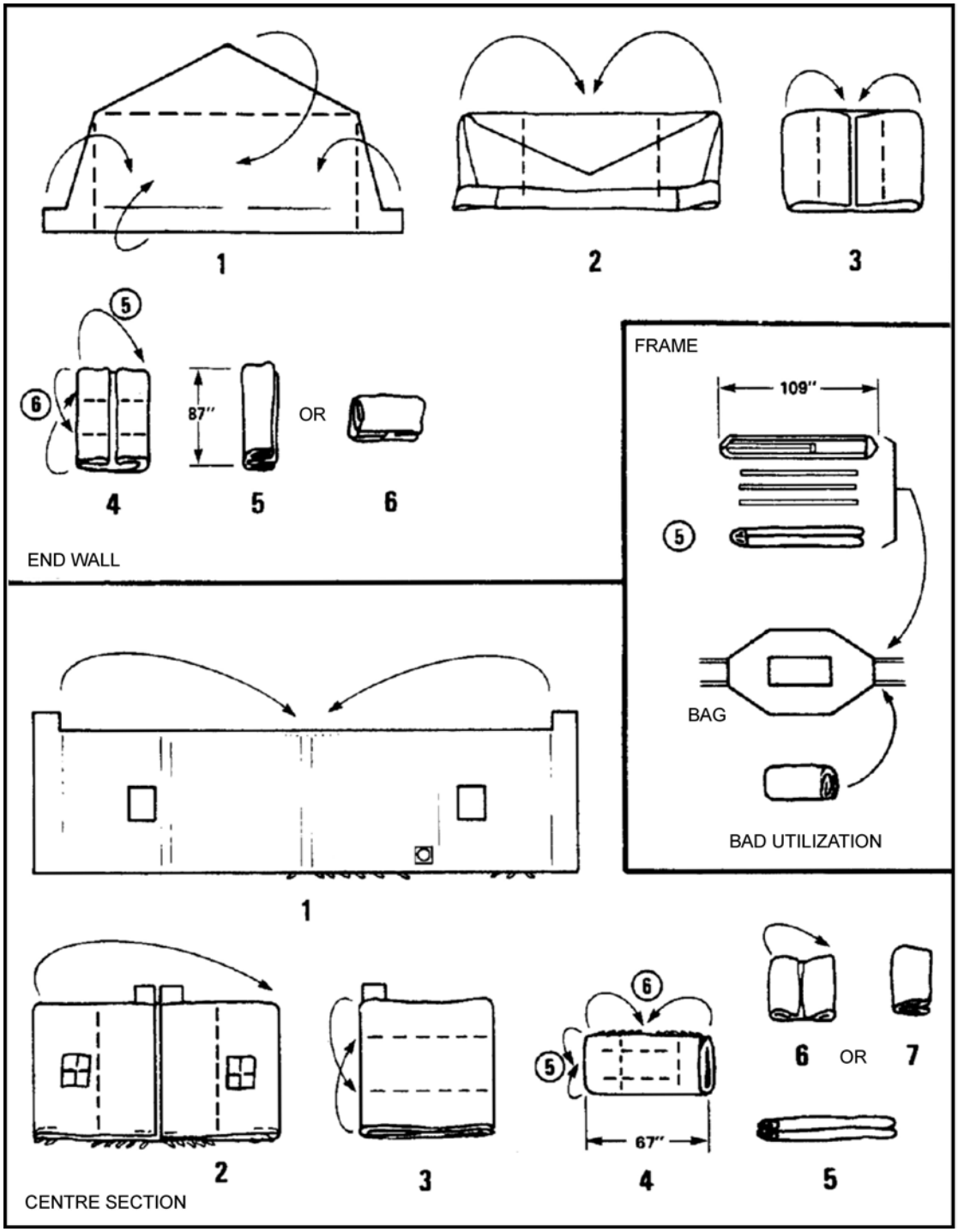
REFERENCES

A3-012 B-GG-302-002/FP-001 DAD (1982). *Basic Cold Weather training*. Ottawa, ON: Department of National Defence.

A3-059 C-87-110-000/MS-000 Canadian Forces. (1983). *Operational support and maintenance manual: Tent, main*. Ottawa, ON: Department of National Defence.

C3-003 ISBN 1-896713-00-9 Tawrell, P. (1996). *Camping and wilderness survival: The ultimate outdoors book*. Green Valley, ON: Author.

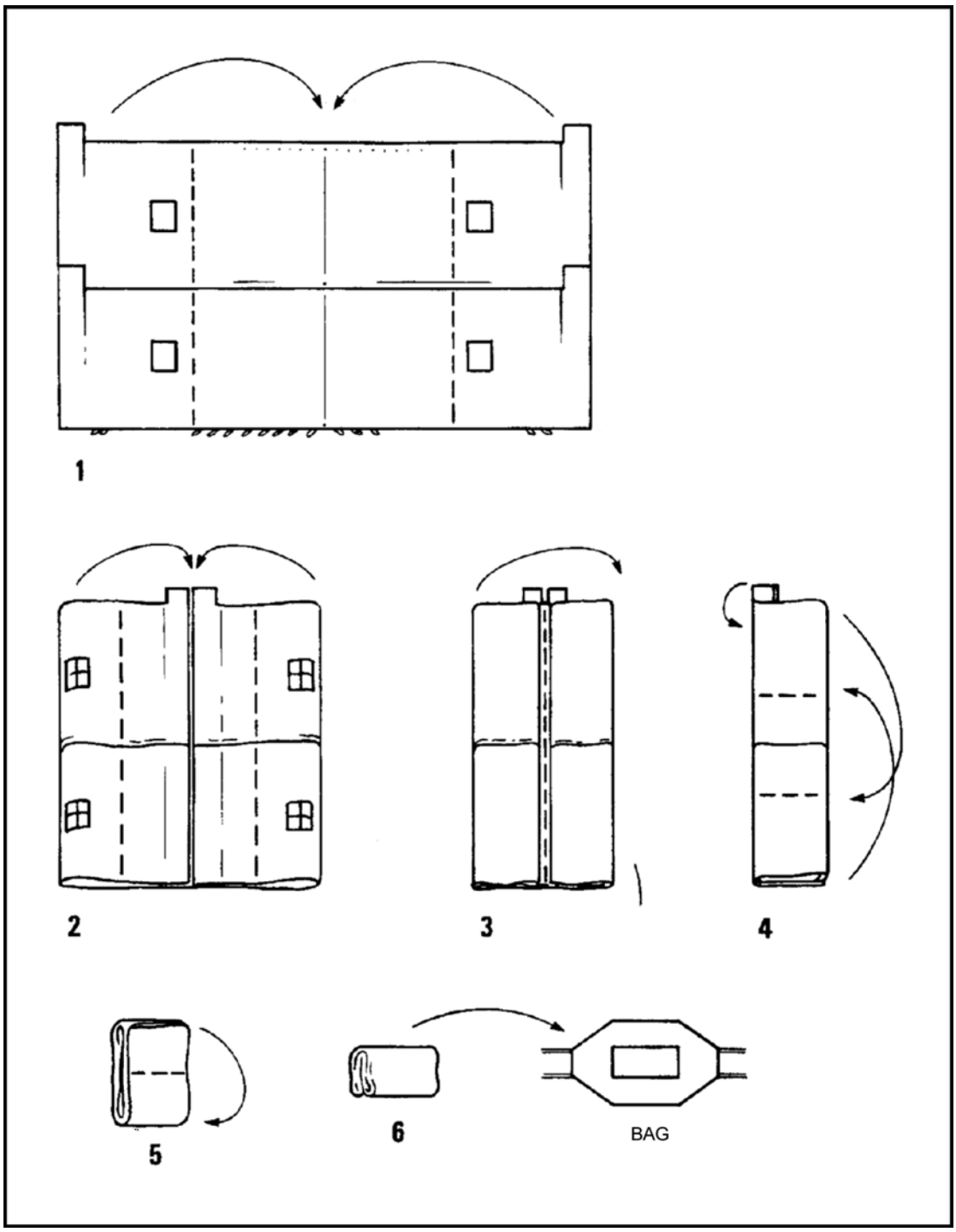
FOLDING A SINGLE TENT SECTION



Note. From Operational Support and Maintenance Manual for Tent, Main (p. 2-17), by DND Canada, 1983, Ottawa ON: Department of National Defence. Copyright 1983 by DND Canada.

Figure A-1 Folding a Single Tent Section

FOLDING LACED TENT SECTIONS



Note. From Operational Support and Maintenance Manual for Tent, Main (p. 2-18), by DND Canada, 1983, Ottawa ON: Department of National Defence. Copyright 1983 by DND Canada.

Figure A-2 Folding Laced Tent Sections

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 8

EO C190.01 – PARTICIPATE IN A PRESENTATION GIVEN BY A MEMBER OF A SURVIVAL ORGANIZATION / SEARCH AND RESCUE (SAR) COMMUNITY

Total Time: 60 min

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 9

EO C190.02 – TIE KNOTS AND LASHINGS

Total Time: 60 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Photocopy the Knot-Tying and Lashing Instructions, located at Attachments A and B, for each cadet.

Cut lengths of braided rope for the cadets to tie the knots. The rope should be 10 mm in diameter and 3 m in length. Each cadet will require two lengths of rope.

Cut lengths of cord for the cadets to tie lashings. The cord should be 4-mm in diameter and 3 m in length. Each group of six cadets require eight pieces of cord.

Collect poles from natural resources. Poles should be approximately 6 cm in diameter and 2 m in length. Each cadet will require one pole.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TP 1 to present background material on rope terminology.

A demonstration and performance was chosen for TPs 2 and 3 as it allows the instructor to explain and demonstrate tying knots and lashings while providing an opportunity for the cadets to practice and develop these skills under supervision.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

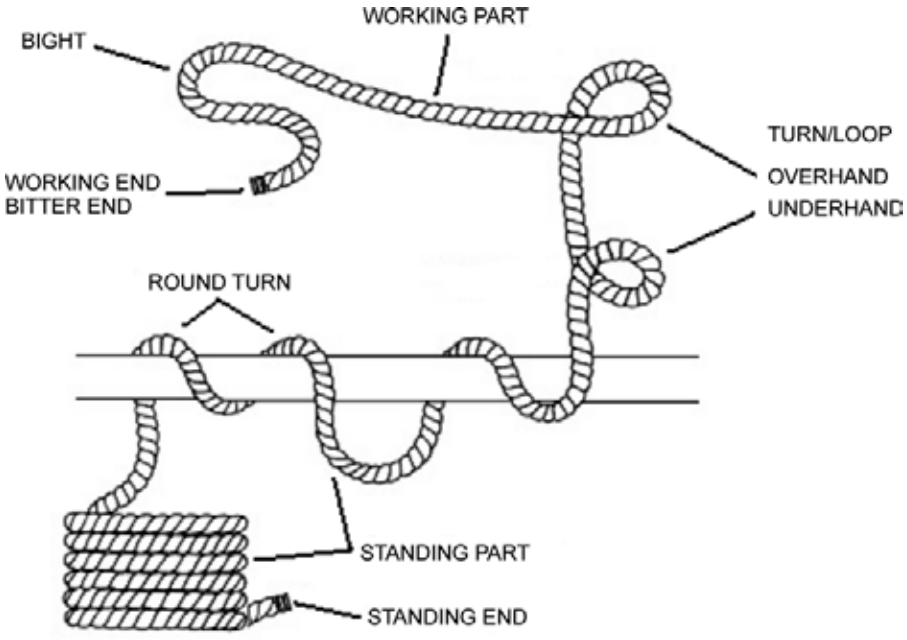
By the end of this lesson the cadet shall have tied knots and lashings.

IMPORTANCE

It is important for the cadets to know how to tie different knots and lashings in order to construct sturdy shelters, tents, snares and camp crafts.

Teaching Point 1 **Describe the parts of a rope.**

Time: 5 min Method: Interactive Lecture



Note. From Lost Knowledge Site, 2006, by Bryan Green. Retrieved March 6, 2009, from http://lostknowledgesite.com/BackToBasics/Knots/Knots.html

Figure 1 Parts of a Rope

PARTS OF A ROPE

The following definitions will assist cadets when tying each knot or lashing:

- The working end (bitter end) is the very end of the rope that is used for tying a knot.
- The working part (running part) is the short length of rope that is manipulated to make the knot.
- The standing part is the section of rope that usually “stands still” during the knot-tying process. Often it is the longer end that leads away from the loop, bight or knot.
- The standing end is the end of the rope opposite the end being used for tying a knot.
- The crossing turn or loop is a part of rope that crosses over itself. The working part can be over or under the standing part in a crossing turn.
- A bight is a loop in the rope that does not cross over itself.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. What part of the rope is called the working part?

Q2. What is a bight?

Q3. What is the standing end?

ANTICIPATED ANSWERS:

A1. The working part (running part) is the short length of rope that is manipulated to make the knot.

A2. A bight is a loop in the rope that does not cross over itself.

A3. The standing end is the end of the rope opposite the end being used for tying a knot.

Teaching Point 2 **Explain, demonstrate and have the cadets tie knots.**

Time: 25 min Method: Demonstration and Performance

For this skill lesson, it is recommended that the instruction take the following format:

1. Explain and demonstrate the complete knot while cadets observe.
2. Explain and demonstrate each step required to complete the knot. Monitor cadets as they imitate each step.
3. Monitor the cadets' performance as they practice the complete knot.

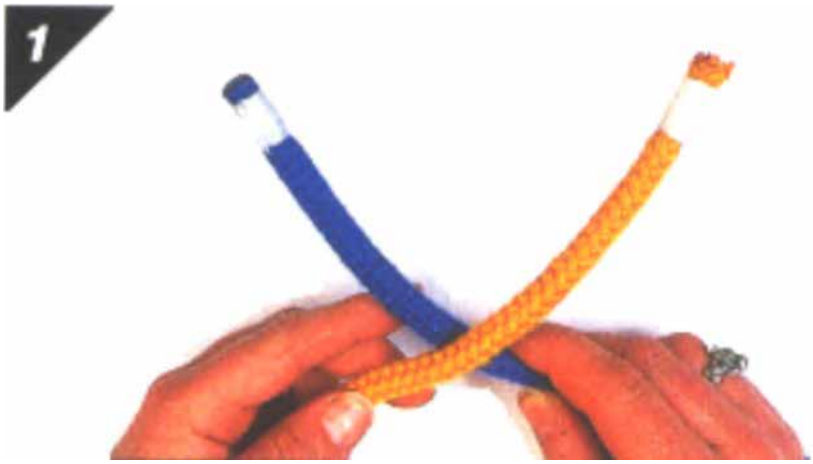
Note: Assistant instructors may be used to monitor the cadets performance.

KNOTS

Reef Knot. The reef knot is used for joining two ropes of equal diameter together. This knot can hold a moderate amount of weight and is ideal for first aid. It may be used when tying slings because the knot lies flat against the body.

Steps for Tying a Reef Knot

1. Place the left-hand working end on the top of the right-hand working end.



Note. From Pocket Guide to Knots and Splices (p. 98), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 2 Step 1

2. Bring the left-hand working end under the right-hand working end.

Note. From Pocket Guide to Knots and Splices (p. 98), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 3 Step 2

3. Place the working end that is now on the right, on top of the working end that is now on the left.

Note. From Pocket Guide to Knots and Splices (p. 98), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 4 Step 3

4. Bring the working end that is on top under the other working end so it comes out at the same place it entered the knot.

Note. From Pocket Guide to Knots and Splices (p. 98), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 5 Step 4

5. Pull tight to complete the reef knot.

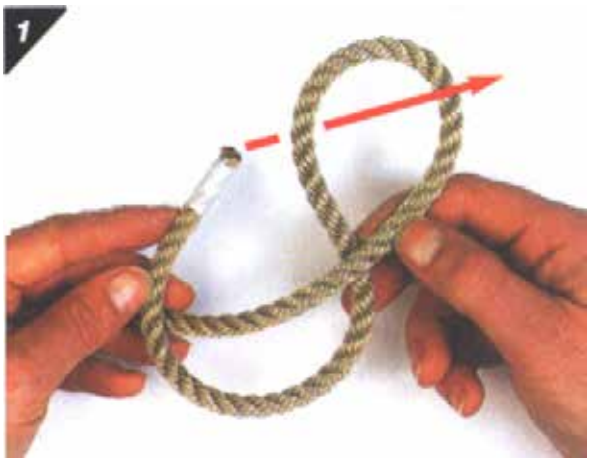
Note. From Pocket Guide to Knots and Splices (p. 98), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 6 Step 5

Figure-of-Eight Knot. The figure-of-eight knot is very simple and quick to tie. It makes an ideal stopper knot and is very easy to untie.

Steps for Tying a Figure-of-Eight Knot

1. Make a crossing turn with the working end passing under the standing part of the rope and then bring the working end over the standing part.



Note. From Pocket Guide to Knots and Splices (p. 44), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 7 Step 1

2. Tuck the working end up through the loop from behind, forming a figure-of-eight.

Note. From Pocket Guide to Knots and Splices (p. 44), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 8 Step 2

3. Pull tight to complete the figure-of-eight knot.

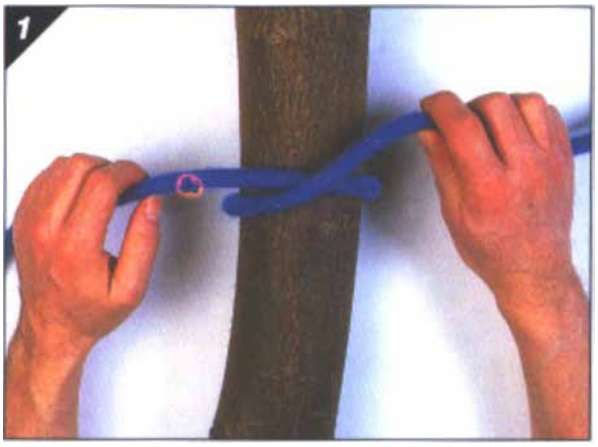
Note. From Pocket Guide to Knots and Splices (p. 44), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 9 Step 3

Clove Hitch. The clove hitch consists of two half hitches or crossing turns each made in the same direction. It is used to finish and start lashings and should not be used in a situation where the hitch has variable tension as it can work loose.

Steps for Tying a Clove Hitch

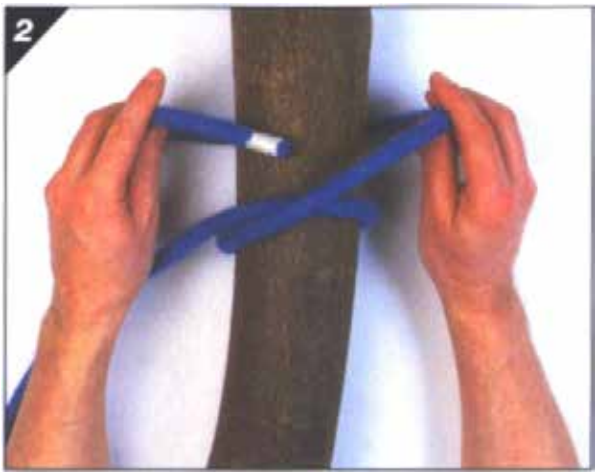
1. Make a turn around a pole / tree bringing the working end of the rope over and trapping the standing part of the rope. This makes the first half hitch.



Note. From Pocket Guide to Knots and Splices (p. 106), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 10 Step 1

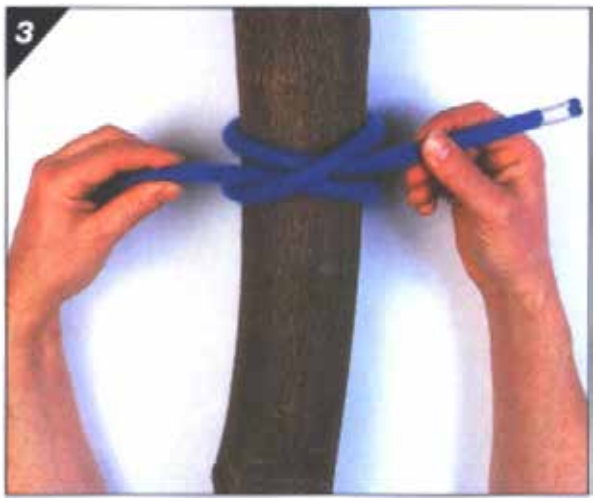
2. Bring the working end behind the pole / tree, above the first half hitch.



Note. From Pocket Guide to Knots and Splices (p. 106), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 11 Step 2

3. Put the working end under the turn just made. This gives the second half hitch and forms the clove hitch.



Note. From Pocket Guide to Knots and Splices (p. 106), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 12 Step 3

4. Pull tight to complete the clove hitch.

Note. From Pocket Guide to Knots and Splices (p. 106), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 13 Step 4

Bowline. The bowline is a very secure knot that will not slip, regardless of the load applied. Use this knot whenever a non-slip loop is required at the end of a line.

Steps to Tying a Bowline

1. A short distance back from the working end, make a crossing turn with the working part on top. Go on to form the size of the loop required.

Note. From Pocket Guide to Knots and Splices (p. 163), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 14 Step 1

2. Bring the working end up through the crossing turn. It goes under first, and then lies on top of the other part of the turn.

Note. From Pocket Guide to Knots and Splices (p. 163), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 15 Step 2

3. Bring the working end around behind the standing part and down through the crossing turn. A good way to remember this is: “the rabbit comes out of the hole, around the tree and back down the hole again”.

Note. From Pocket Guide to Knots and Splices (p. 163), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 16 Step 3

4. Pull tight by holding the working end and pulling on the standing part to complete the bowline.

Note. From Pocket Guide to Knots and Splices (p. 163), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 17 Step 4

Distribute Knot-Tying Instructions located at Attachment A to the cadets so they may practice the knots after the lesson.

CONFIRMATION OF TEACHING POINT 2

The cadets' participation in tying knots will serve as the confirmation of this TP.

Teaching Point 3 **Explain, demonstrate and have the cadets tie lashings.**

Time: 25 min Method: Demonstration and Performance

For this skill lesson, it is recommended that the instruction take the following format:

1. Explain and demonstrate the complete lashing while cadets observe.
2. Explain and demonstrate each step required to complete the lashing. Monitor cadets as they imitate each step.
3. Monitor the cadets' performance as they practice the complete lashing.

Note: Assistant instructors may be used to monitor the cadets performance.

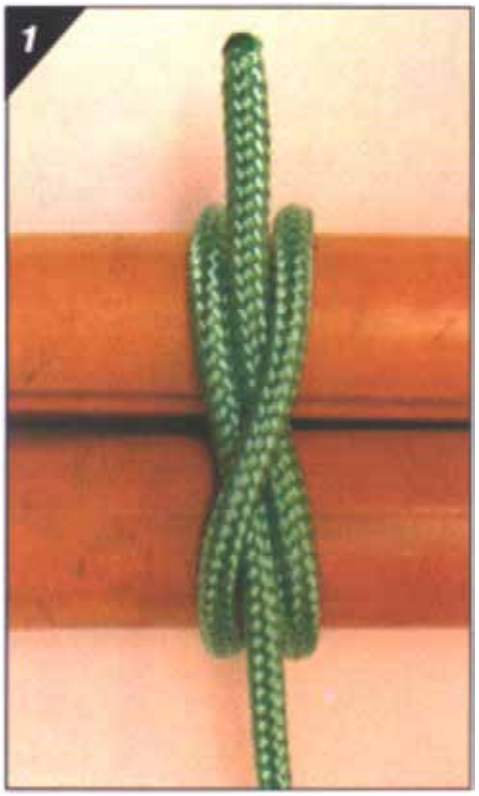
LASHINGS

Round Lashing. Sometimes called a sheer lashing, the round lashing has two distinct uses. First, it creates an "A" frame or set of using a single lashing. Second, two or three round lashings can be used to bind together a couple of poles to make a longer spar. To make an "A" frame, two poles are put side by side; the lashing is

made at one end. A slightly different approach is used to join two poles together to make a longer pole. The procedure is exactly the same, except the initial and final clove hitches are tied around both poles and there is no space left between the poles and no frapping is used. For extra strength to the spar, add extra lashings at the opposite end and middle of the adjoining poles.

Steps to Tying a Round Lashing

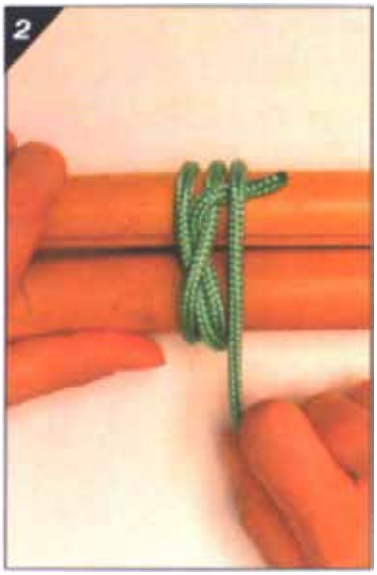
1. Start by making a clove hitch around both poles.



Note. From Pocket Guide to Knots and Splices (p. 184), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 18 Step 1

2. Wrap around both poles, trapping the end of the clove hitch.



Note. From Pocket Guide to Knots and Splices (p. 184), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

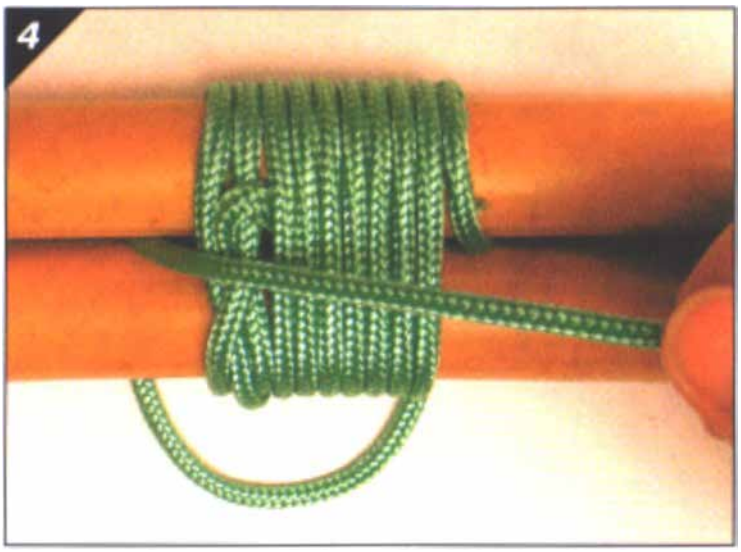
Figure 19 Step 2

3. Make eight to ten more turns round the pair of poles.

Note. From Pocket Guide to Knots and Splices (p. 184), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 20 Step 3

4. The lashing is finished with a clove hitch around both poles or a couple of frapping turns by bringing the end of the rope between the two poles.



Note. From Pocket Guide to Knots and Splices (p. 185), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

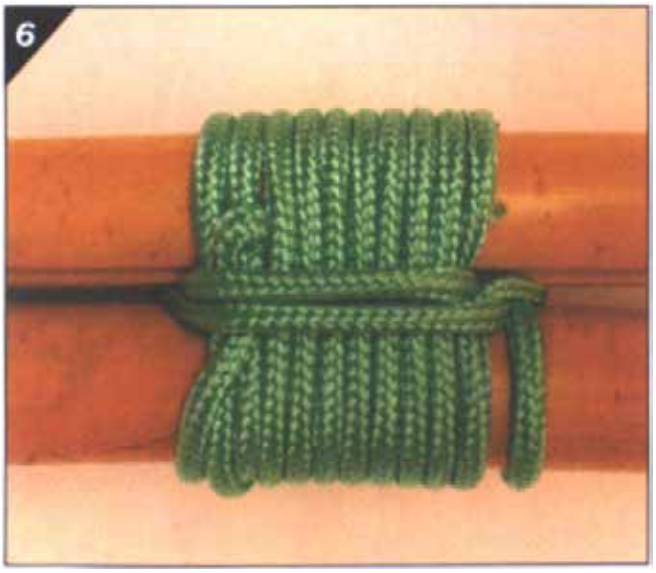
Figure 21 Step 4

5. Finish off with a clove hitch around one of the poles.

Note. From Pocket Guide to Knots and Splices (p. 185), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 22 Step 5

6. Pull tight to finish the round lashing with the poles parallel.



Note. From Pocket Guide to Knots and Splices (p. 185), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 23 Step 6

7. If being used for an "A" frame then open the poles.

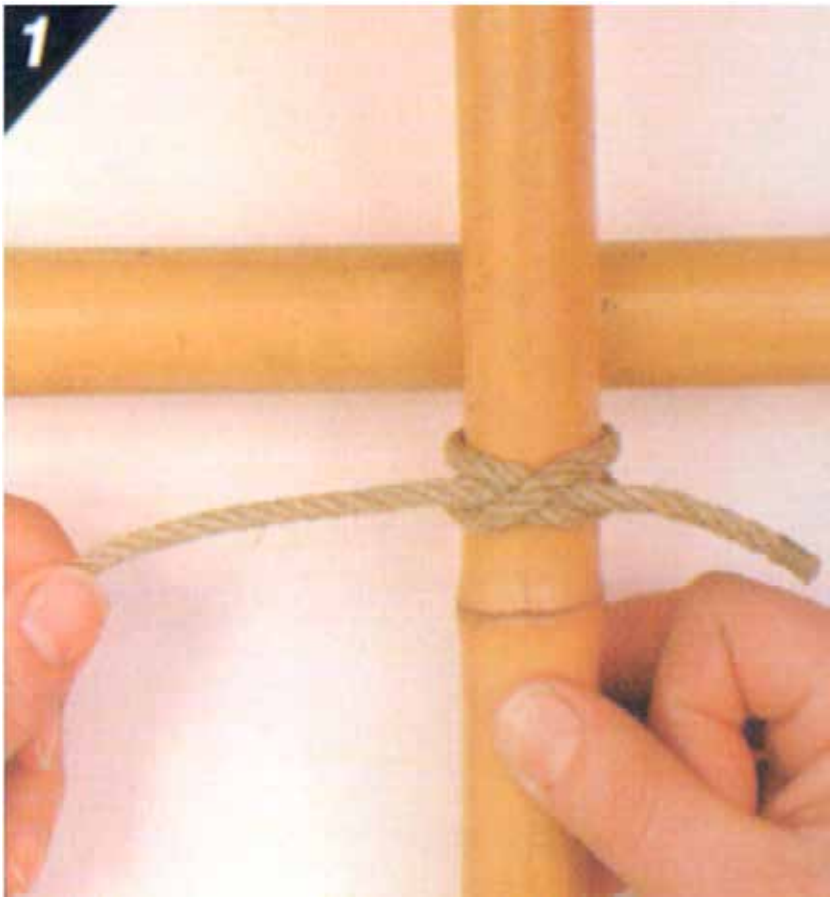
Note. From Pocket Guide to Knots and Splices (p. 185), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 24 Step 7

Square Lashing. A square lashing secures two poles together at 90 degrees and can be used in the construction of shelters and camp crafts. The cord used to make the lashing should be considerably smaller than the size of the poles. For the lashing to be effective, each turn must be pulled as tight as possible as it is made.

Steps to Tying a Square Lashing

1. With the vertical pole on top of the horizontal pole, make a clove hitch on the vertical pole just below the horizontal pole.



Note. From Pocket Guide to Knots and Splices (p. 181), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

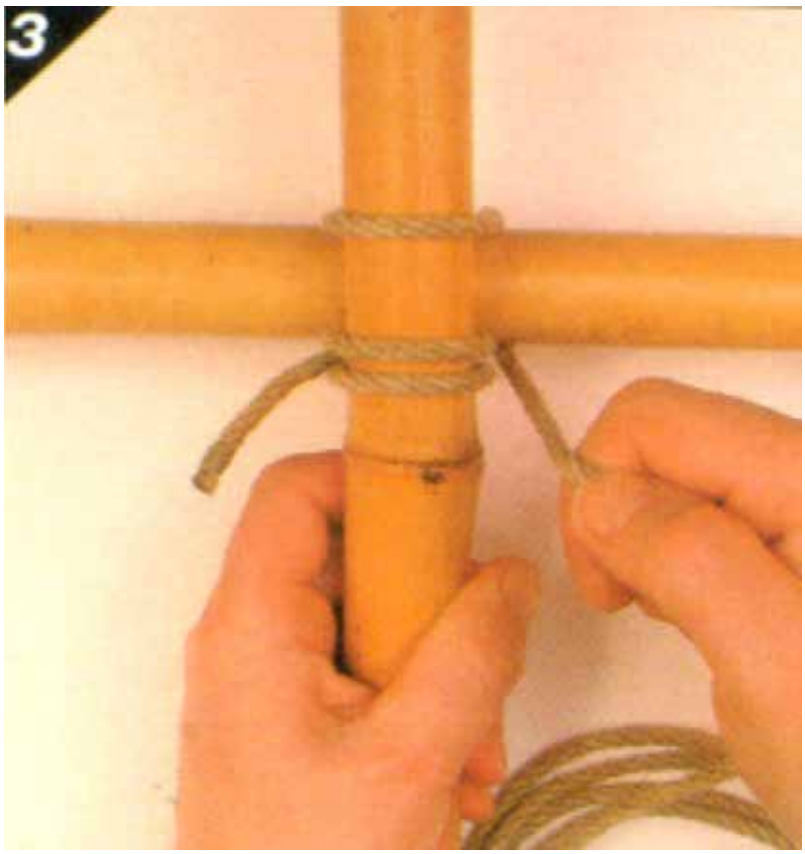
Figure 25 Step 1

2. Bring all the cord around behind the horizontal pole.

Note. From Pocket Guide to Knots and Splices (p. 181), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 26 Step 2

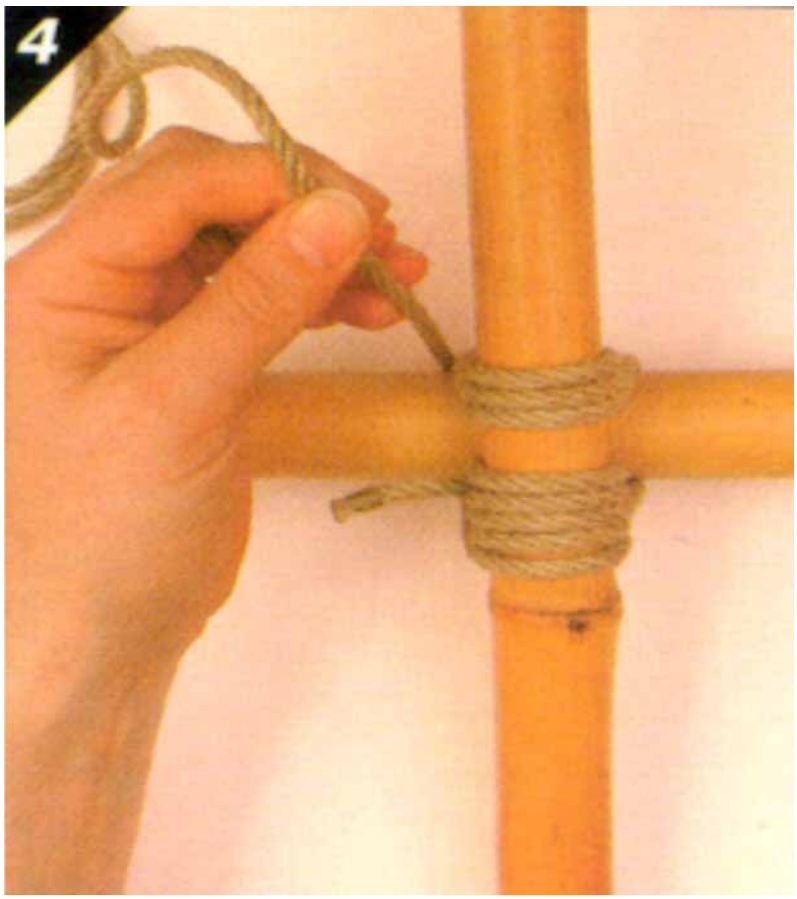
3. Bring the cord over the vertical pole and back behind the horizontal pole to the clove hitch. Pull tight.



Note. From Pocket Guide to Knots and Splices (p. 181), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 27 Step 3

4. Carry on making two or three more complete turns around the two poles, pulling tight after each turn.



Note. From Pocket Guide to Knots and Splices (p. 181), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 28 Step 4

5. After passing the clove hitch, bring the cord around the horizontal pole from behind and start to wrap around the junction between the two poles. These are frapping turns—pull them as tight as possible.

Note. From Pocket Guide to Knots and Splices (p. 181), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 29 Step 5

6. Make two frapping turns.

Note. From Pocket Guide to Knots and Splices (p. 181), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 30 Step 6

7. Finish off with a clove hitch around the horizontal pole.

Note. From Pocket Guide to Knots and Splices (p. 181), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 31 Step 7

8. Pull tight to complete the square lashing.

Note. From Pocket Guide to Knots and Splices (p. 181), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 32 Step 8

Figure-of-Eight Lashing. The figure-of-eight lashing is used to join three poles together to create a tripod. The tripod can be used for creating signal fires, shelters and camp crafts in a survival situation.

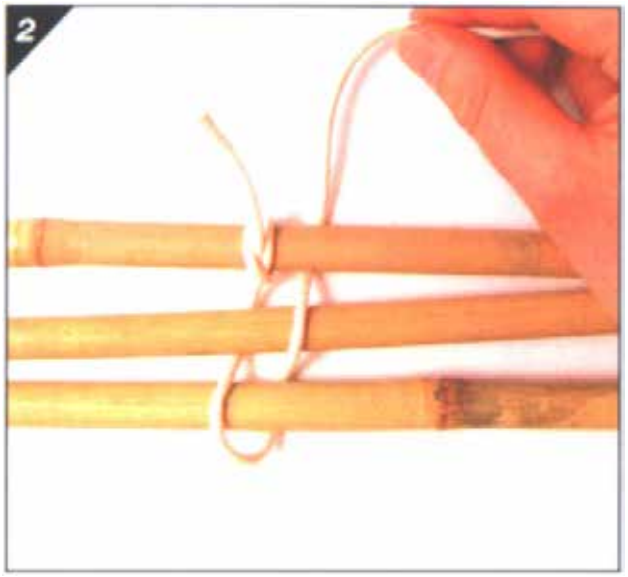
Steps to Lashing a Figure-of-Eight Lashing

1. Start with a clove hitch around one of the poles, and lead the rope under and over the other two poles.

Note. From Pocket Guide to Knots and Splices (p. 187), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 33 Step 1

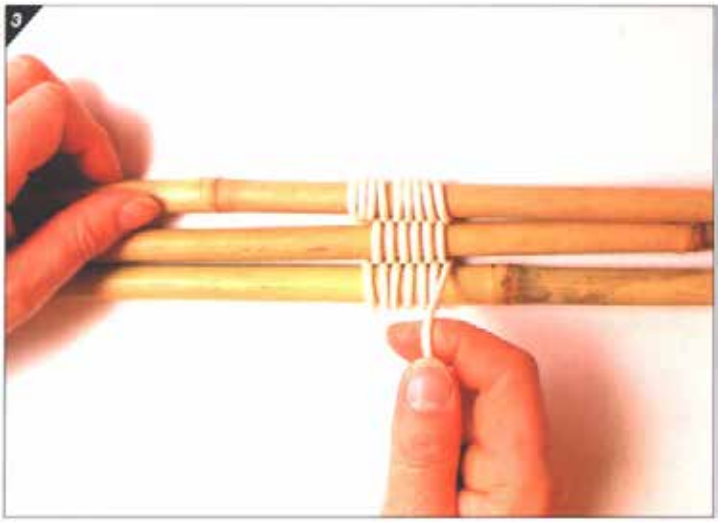
2. Go around the pole furthest away from the start and weave the rope back over and under.



Note. From Pocket Guide to Knots and Splices (p. 187), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 34 Step 2

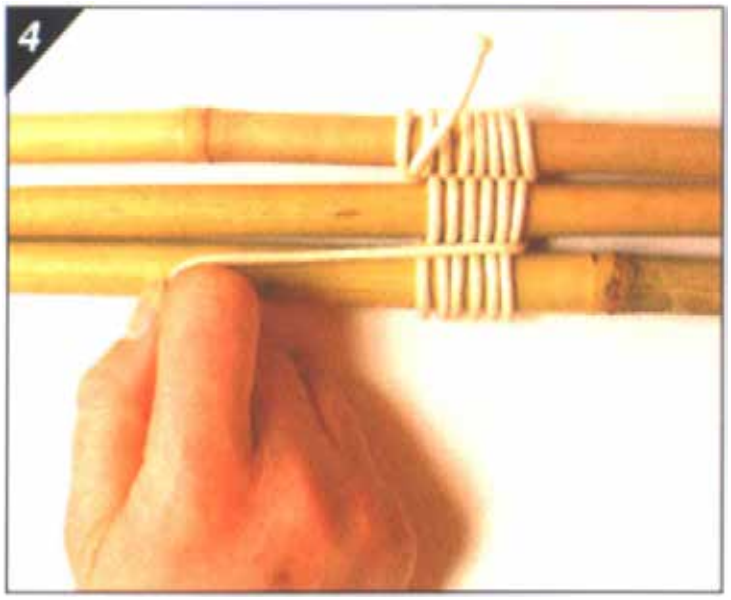
3. Continue to weave the rope in the figure-of-eight manner for seven or eight full passes before bringing the rope up between two of the poles.



Note. From Pocket Guide to Knots and Splices (p. 187), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 35 Step 3

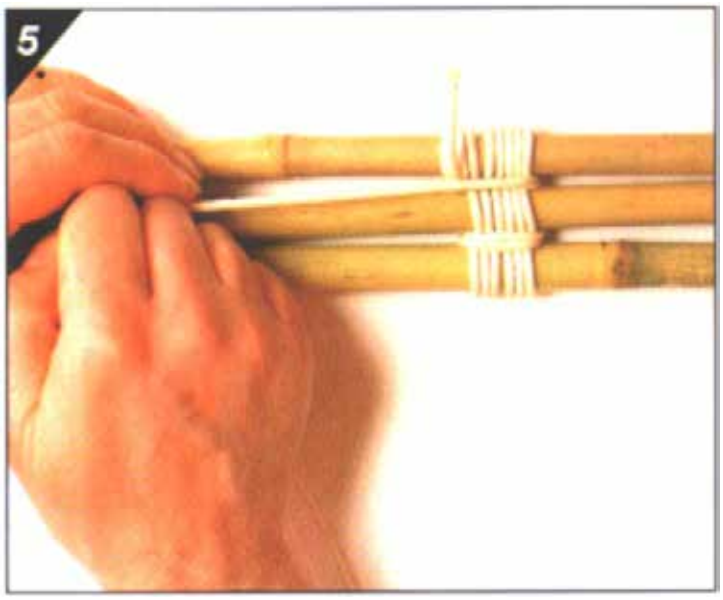
4. Pull the rope parallel to the poles and start to put in some frapping turns.



Note. From Pocket Guide to Knots and Splices (p. 188), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 36 Step 4

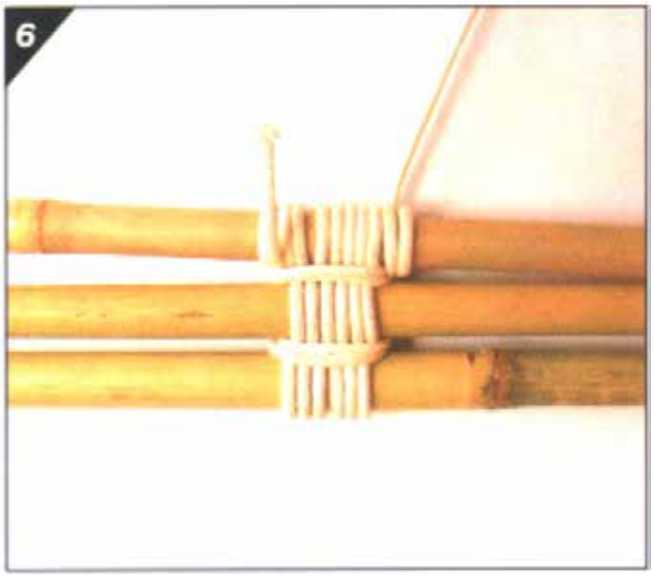
5. After making frapping turns between the first two poles move on to make frapping turns around the other pair of poles.



Note. From Pocket Guide to Knots and Splices (p. 188), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 37 Step 5

6. Finish off with a clove hitch around the pole from which you first started.



Note. From Pocket Guide to Knots and Splices (p. 188), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 38 Step 6

7. Open to create tripod.

Note. From Pocket Guide to Knots and Splices (p. 188), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure 39 Step 7

Distribute Lashing Instructions located at Attachment B to the cadets, so they may practice the knots after the lesson.

CONFIRMATION OF TEACHING POINT 3

The cadets' participation in tying lashings will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the knot-tying activities will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

It is important for the cadets to select the appropriate knot and lashing when constructing shelters, signal fires or camp crafts for safety and quality.

INSTRUCTOR NOTES / REMARKS

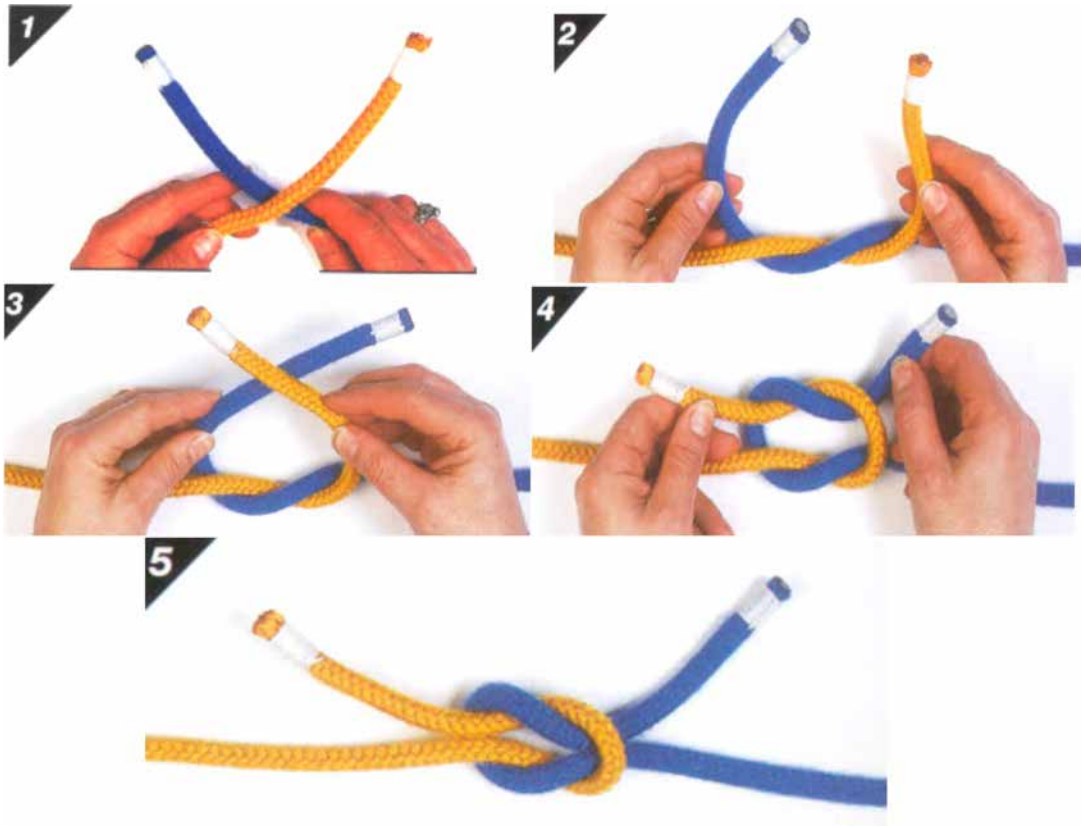
The cadet will require two 3 m lengths of 10 mm diameter braided rope to perform the required knots and lashings.

REFERENCES

C3-026 ISBN 1-55267-218-2 Pawson, D. (2001). *Pocket guide to knots and splices*. London, England: PRC Publishing.

KNOT-TYING INSTRUCTIONS

REEF KNOT



Note. From Pocket Guide to Knots and Splices (p. 98), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure A-1 Steps 1–5

1. Place the left-hand working end on the top of the right-hand working end.
2. Bring the left-hand working end under the right-hand working end.
3. Place the working end that is now on the right on top of the working end that is now on the left.
4. Bring the working end that is on top under the other working end so that working end that is moving comes out at the same place it entered the knot.
5. Pull tight to complete the reef knot

KNOT-TYING INSTRUCTIONS

FIGURE-OF-EIGHT KNOT

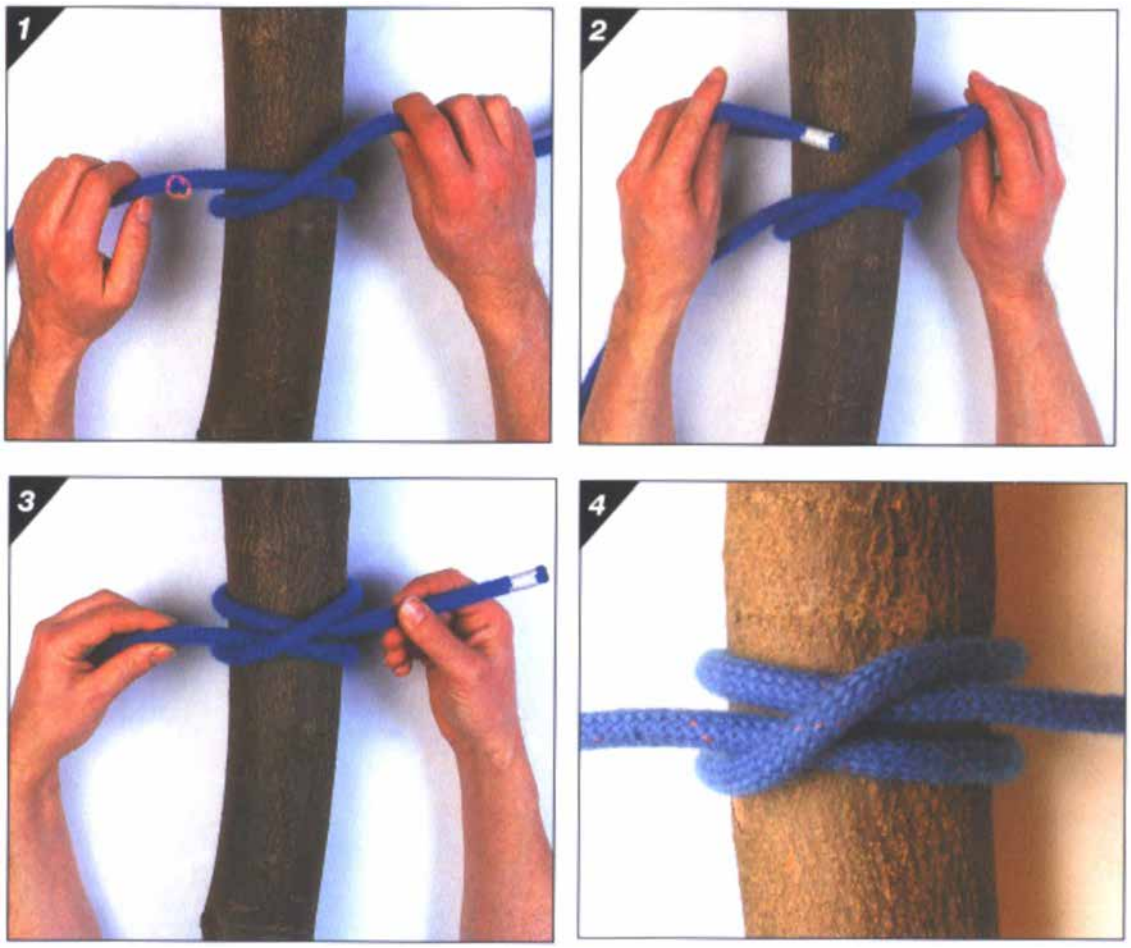
Note. From Pocket Guide to Knots and Splices (p. 44), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure A-2 Steps 1–3

1. Make a crossing turn with the working end passing under the standing part of the rope and then bring the working end over the standing part.
2. Now tuck the working end up through the loop from behind, forming a figure-of-eight.
3. Pull tight to complete the figure-of-eight knot.

KNOT-TYING INSTRUCTIONS

CLOVE HITCH



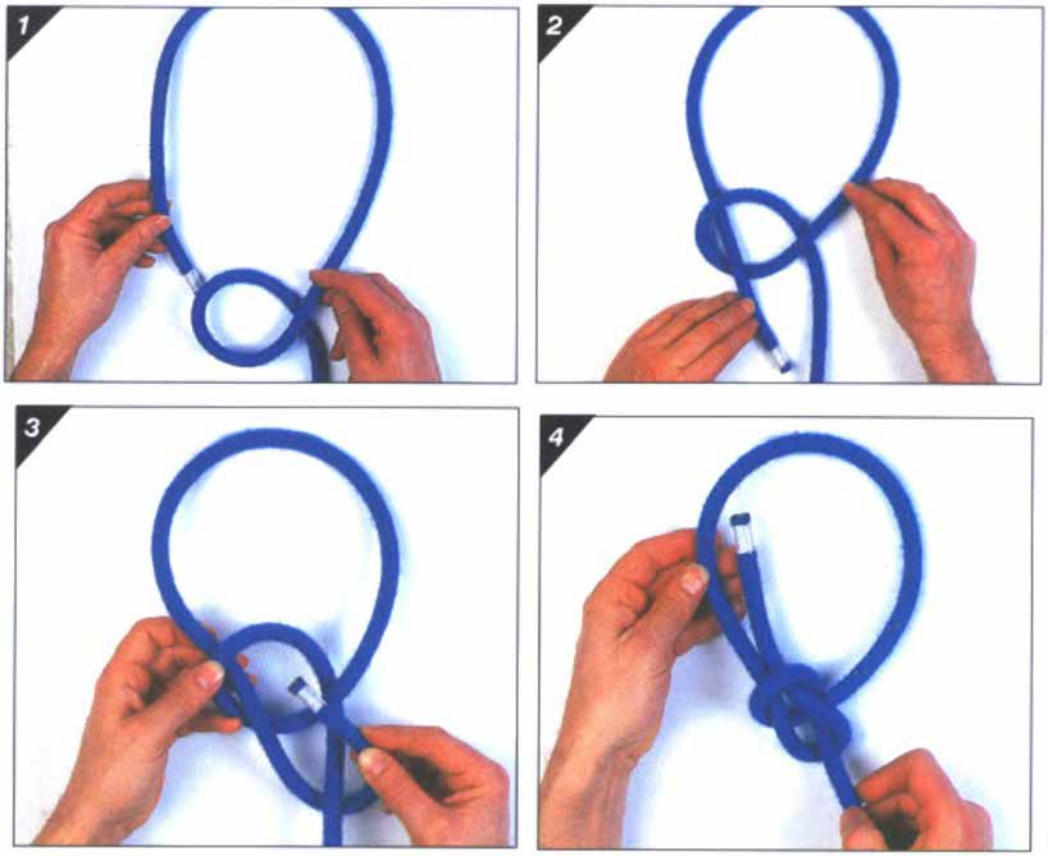
Note. From Pocket Guide to Knots and Splices (p. 106), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure A-3 Steps 1–4

1. Make a turn around the pole / tree bringing the working end of the rope over and trapping the standing part of the rope. This makes the first half hitch.
2. Bring the working end round behind the pole / tree, above the first half hitch.
3. Put the working end under the turn just made. This gives the second half hitch and forms the clove hitch.
4. Pull tight to complete the clove hitch.

KNOT-TYING INSTRUCTIONS

BOWLINE



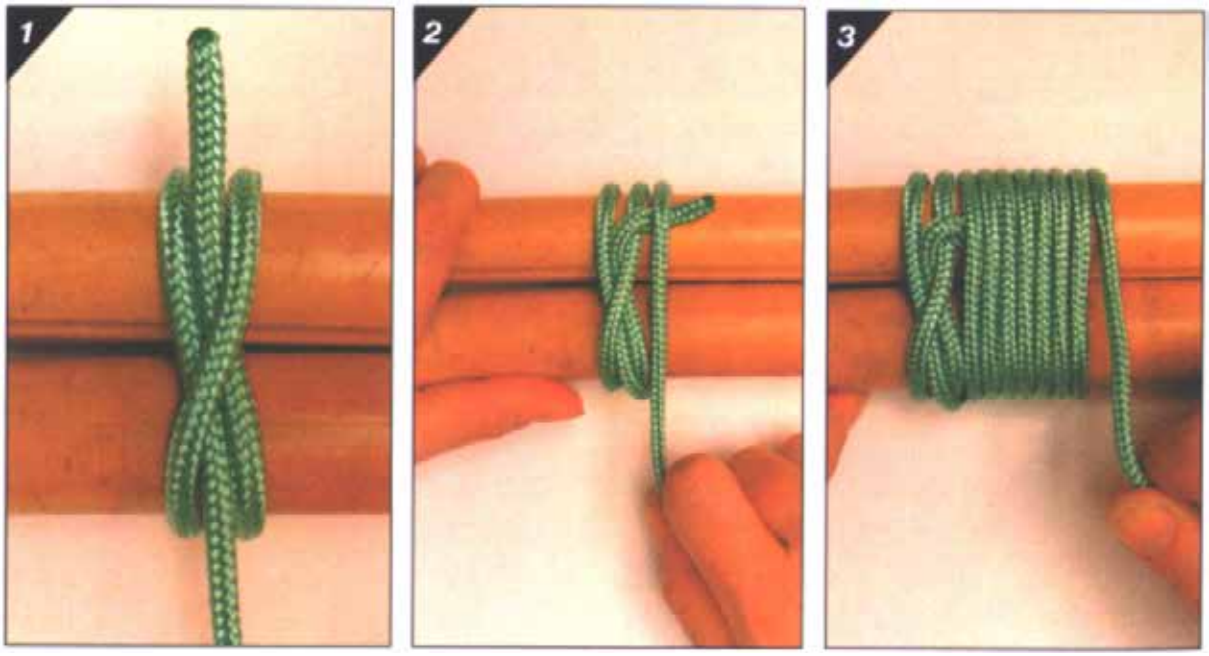
Note. From Pocket Guide to Knots and Splices (p. 163), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure A-4 Steps 1–4

1. A short distance back from the working end, make a crossing turn with the working part on top. Go on to form the size of the loop you require.
2. Bring the working end up through the crossing turn. It will go under first, and then lie on top of the other part of the turn.
3. Bring the working end around behind the standing part and down through the crossing turn. A good way to remember this is: “the rabbit comes out of the hole, around the tree and back down the hole again”.
4. Pull tight by holding the working end and pulling on the standing part to complete the bowline.

LASHING INSTRUCTIONS

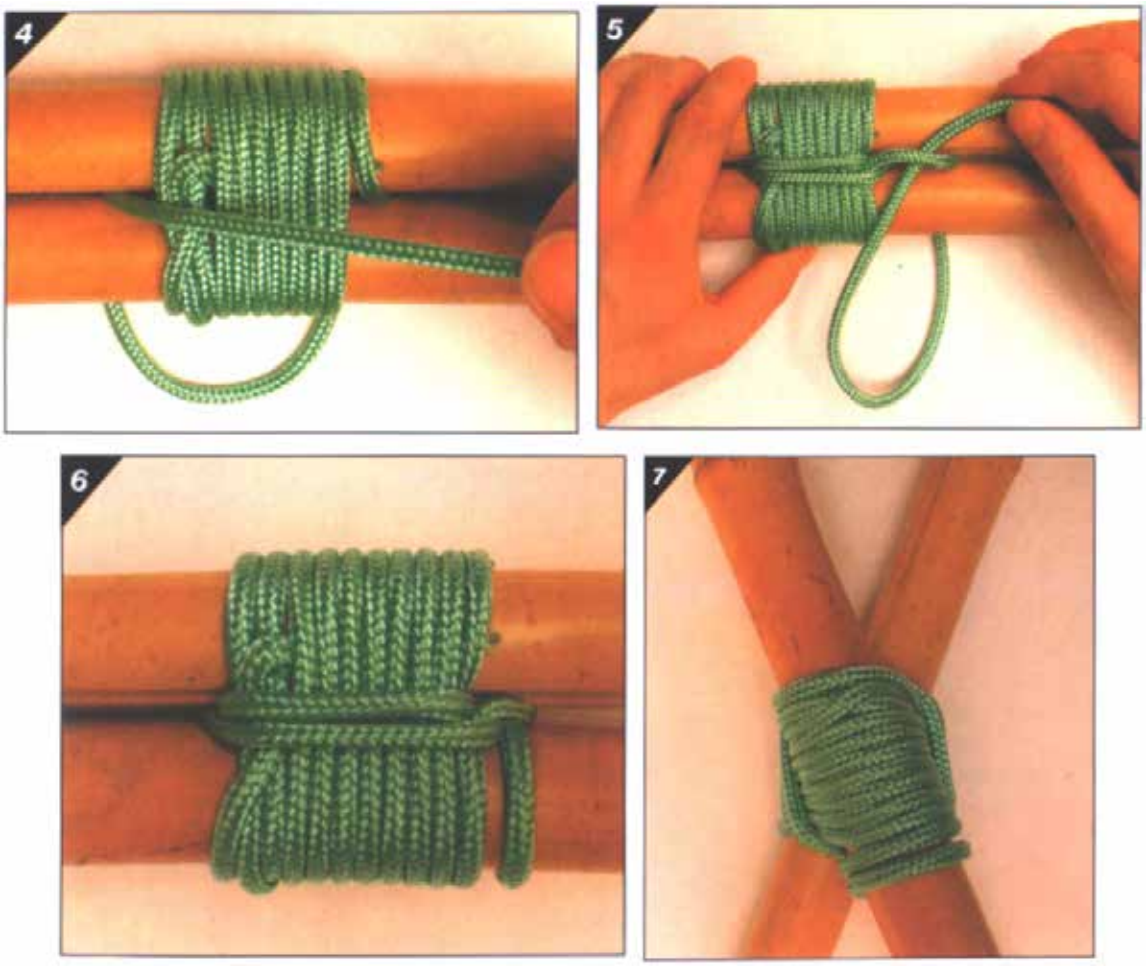
ROUND LASHING



Note. From Pocket Guide to Knots and Splices (p. 184), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure B-1 Steps 1–3

1. Start by making a clove hitch around both poles.
2. Wrap around both poles, trapping the end of the clove hitch.
3. Carry on making eight to ten more turns round the pair of poles.



Note. From Pocket Guide to Knots and Splices (p. 185), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure B-2 Steps 4–7

4. The lashing could now be finished with a clove hitch around both poles or put in a couple of frapping turns by bringing the end of the rope between the two poles.

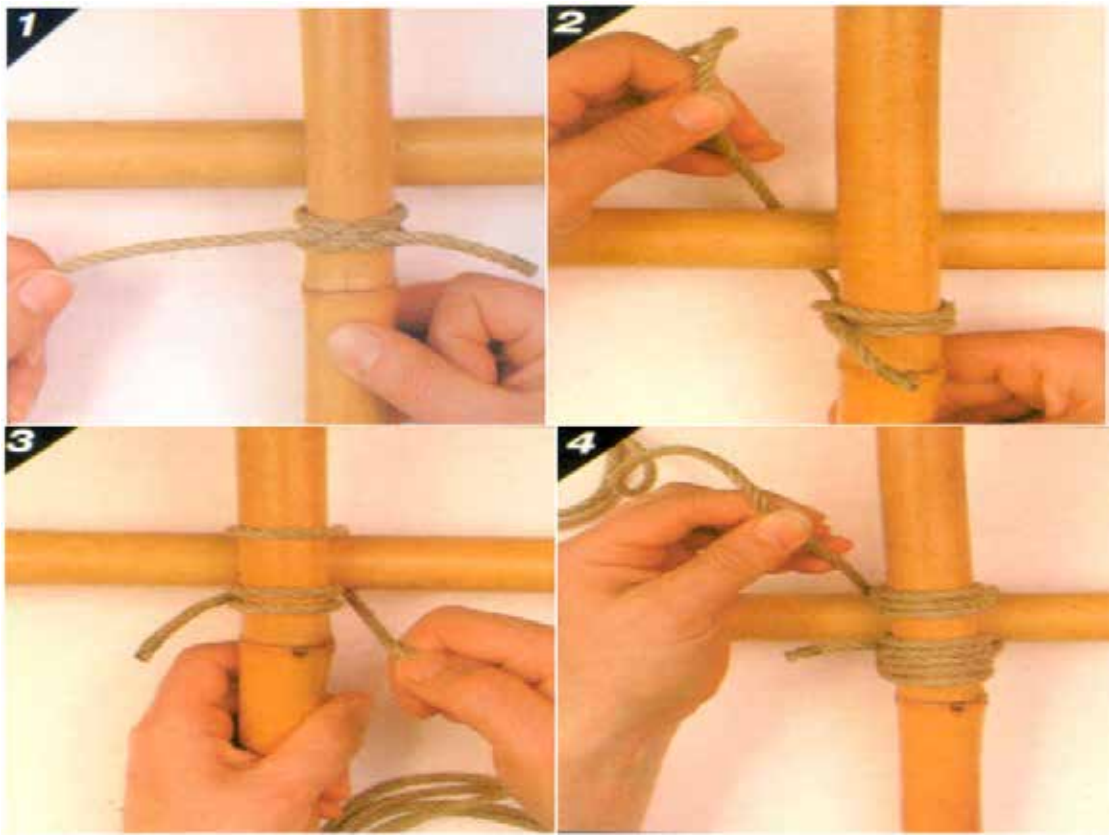
5. Finish off with a clove hitch around one of the poles.

6. Pull tight to finish the round lashing with the poles parallel.

7. If being used for an "A" frame then open the poles.

LASHING INSTRUCTIONS

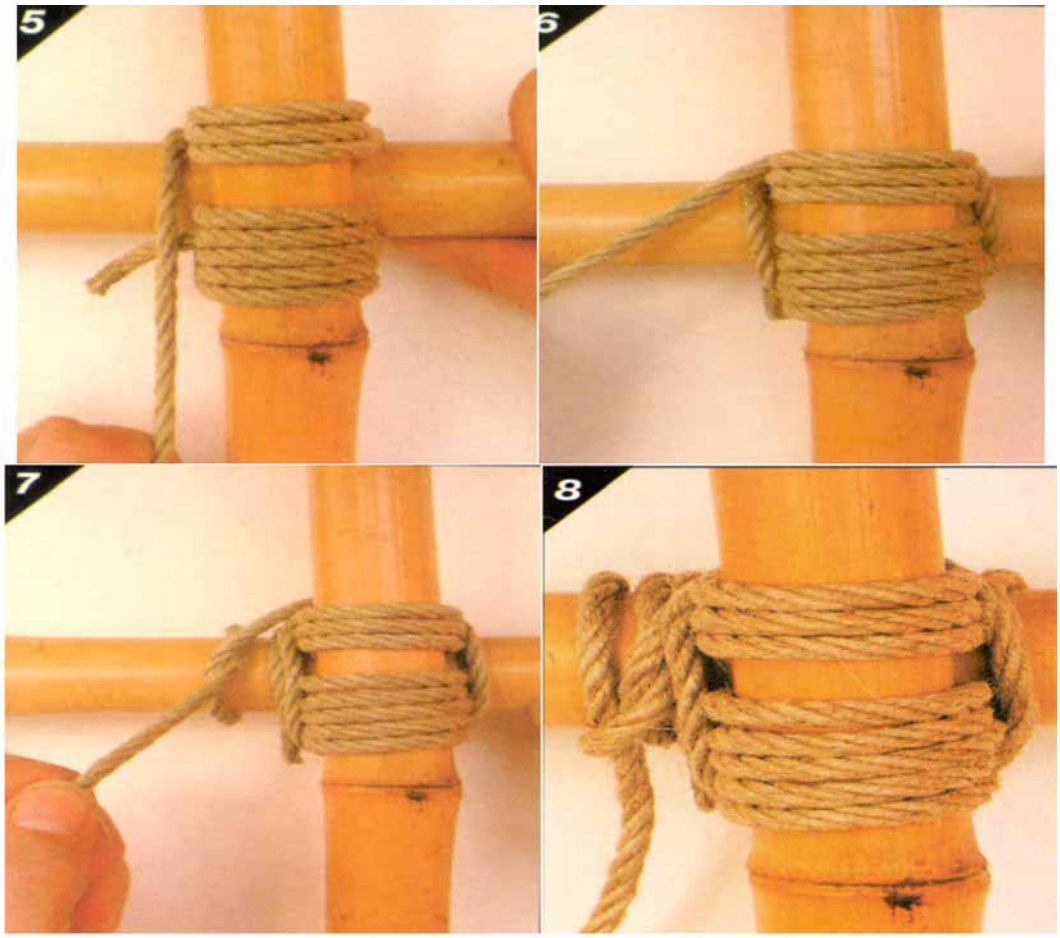
SQUARE LASHING



Note. From Pocket Guide to Knots and Splices (p. 181), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure B-3 Steps 1–4

1. With the vertical pole on top of the horizontal pole, make a clove hitch on the vertical pole just below the horizontal pole.
2. Bring all the cord around behind the horizontal pole.
3. Bring the cord over the vertical pole and back behind the horizontal pole to the clove hitch. Pull tight.
4. Carry on making two or three more complete turns around the two poles, pulling tight after each turn.



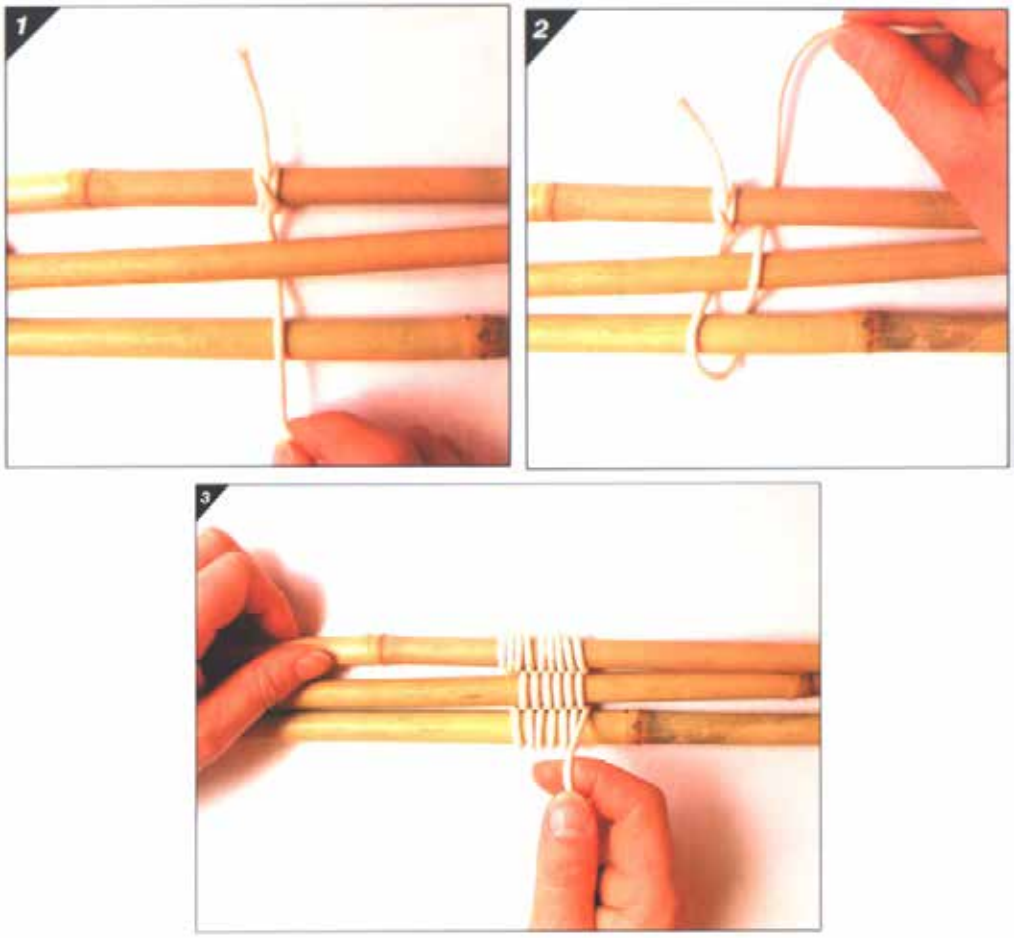
Note. From Pocket Guide to Knots and Splices (p. 181), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure B-4 Steps 5-8

5. After passing the clove hitch, bring the cord around the horizontal pole from behind and start to wrap around the junction between the two poles. These are frapping turns—pull them as tight as possible.
6. Make two frapping turns.
7. Finish off with a clove hitch around the horizontal pole.
8. Pull tight to complete the square lashing.

LASHING INSTRUCTIONS

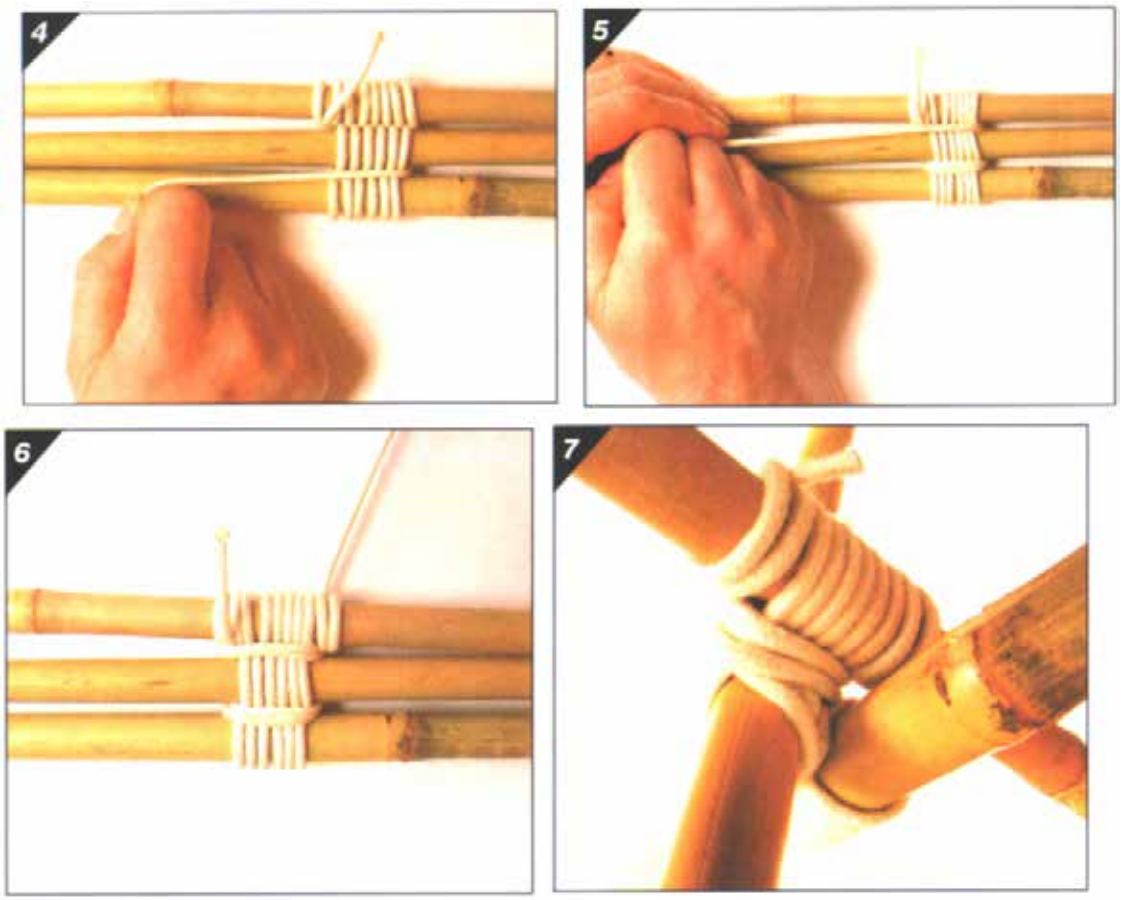
FIGURE-OF-EIGHT LASHING



Note. From Pocket Guide to Knots and Splices (p. 187), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure B-5 Steps 1–3

1. Start with a clove hitch around one of the poles, and lead the rope under and over the other two poles.
2. Go around the pole furthest away from the start and weave the rope back over and under.
3. Continue to weave the rope in the figure-of-eight manner for seven or eight full passes before bringing the rope up between two of the poles.



Note. From Pocket Guide to Knots and Splices (p. 181), by D. Pawson, 2001, London, England: Prospero Books Inc. Copyright 2001 by PRC Publishing Ltd.

Figure B-6 Steps 4-7

4. Pull the rope parallel to the poles and start to put in some frapping turns.
5. After making frapping turns between the first two poles move on to make frapping turns around the other pair of poles.
6. Finish off with a clove hitch around the pole from which you first started.
7. Open to create tripod.

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 10

EO C190.03 – CONSTRUCT A HOOTCHIE-STYLE SHELTER

Total Time: 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Prepare all materials required for the construction of a hootchie-style shelter for each group of cadets.

Prepare an example hootchie-style shelter.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A demonstration and performance was chosen for TP 1 as it allows the instructor to explain and demonstrate setting up a hootchie-style shelter while providing an opportunity for the cadets to observe and ask questions.

A practical activity was chosen for TP 2 as it is an interactive way for the cadets to experience setting up shelters in a safe and controlled environment.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have constructed a hootchie-style shelter.

IMPORTANCE

In a survival situation, it is very important to be able to construct an effective shelter. A shelter protects a person from weather, animals and insects. They can also provide warmth, shade and comfort. The hootchie-style shelter is effective for squadron aircrew survival exercises.

Teaching Point 1 **Explain and demonstrate the procedure for constructing a hootchie-style shelter.**

Time: 25 min Method: Demonstration

OBTAIN THE APPROPRIATE SUPPLIES

In order to effectively build a hootchie-style shelter, the following supplies will be needed:

- Two military-style groundsheets that properly zip together (these are also called half shelters or utility sheets).
- Three metres of twine or thin rope.
- Several pegs or small twigs.
- Spade or small shovel.
- Knife or scissors.

Note. Created by Director of Cadets 3, 2006, Ottawa, ON: Department of National Defence.

Figure 1 Two Military Groundsheets

Note. Created by Director of Cadets 3, 2006, Ottawa, ON: Department of National Defence.

Figure 2 Appropriate Supplies

SELECTING A SITE

1. Apply the site selection principles when constructing the hootchie.
2. Ensure that the two trees are spread approximately ten feet apart (or the length of the groundsheets allowing for approximately two feet for the entrance).

CHECKING MATERIAL

1. Inspect the material for fatigue and wear (should not have holes as it would allow rain and other objects into the completed shelter).
2. Ensure that the zippers on the groundsheets are not damaged.
3. Inspect the grommets on each groundsheet to ensure they are in good repair so that they can be utilized for holding pegs down.

Note. Created by Director of Cadets 3, 2006, Ottawa, ON: Department of National Defence.

Figure 3 Grommet

4. The twine used should be strong enough to hold the two groundsheets up and allow enough give for the fatigue that is experienced when cadets enter and leave the shelter.

ZIPPING THE GROUNDSHEETS

1. The two groundsheets are zipped together to form a sufficient bond.

Note. Created by Director of Cadets 3, 2006, Ottawa, ON: Department of National Defence.

Figure 4 Zipping Groundsheets

Note. Created by Director of Cadets 3, 2006, Ottawa, ON: Department of National Defence.

Figure 5 Two Groundsheets Zipped Together

TYING THE SHELTER TO TREES

1. Using a clove hitch, tie each end of the zipped groundsheet to the two trees with the twine provided, cutting the excess twine for future use.
2. Ensure that the shelter is tied at the waist of the tallest occupant. This height allows enough head room when the shelter is complete.

Note. Created by Director of Cadets 3, 2006, Ottawa, ON: Department of National Defence.

Figure 6 Tying Shelter to a Tree

3. The two groundsheets should be pulled tight as possible between the two trees to prevent rain from collecting and stops the shelter from sagging after extended use.
4. When tying the shelter, ensure that the flap at the peak of the shelter covers the zipper and that there is enough room on one end for an entrance and exit.

Note. Created by Director of Cadets 3, 2006, Ottawa, ON: Department of National Defence.

Figure 7 Shelter Tied to Two Trees

PEGGING

1. Using an appropriate length string, pull the string through the grommets that run along the bottom of the groundsheets.
2. Tie the string together to form a loop. Using these loops, tightly pull each corner of the groundsheets out from the centre and peg them using small twigs.
3. Leave the edge of the groundsheet about 5 cm above the ground for ventilation.

Note. Created by Director of Cadets 3, 2006, Ottawa, ON: Department of National Defence.

Figure 8 Pulling Pegs Tight

Note. Created by Director of Cadets 3, 2006, Ottawa, ON: Department of National Defence.

Figure 9 Shelter 5 cm Above the Ground

4. After the corners are pegged, peg the remaining grommets in between the two corners on each side.

When each side of the shelter is pegged, it should be flush, tight surface with no wrinkles. This tight surface allows for efficient run-off of rain.

Note. Created by Director of Cadets 3, 2006, Ottawa, ON: Department of National Defence.

Figure 10 Flush, Tight Surface

Ensure that the flaps for the doors are tied together prior to pegging. If the doors are not tied they may not tie together properly when the shelter is tightly pegged.

Note. Created by Director of Cadets 3, 2006, Ottawa, ON: Department of National Defence.

Figure 11 Doors Tied Together

DIGGING TRENCHES

1. Dig small trenches 10 cm away from the sides of the shelter to allow for effective drainage of rainwater.
2. Trenches should be approximately 10 cm in width and 5–10 cm deep.
3. When the shelter is complete, dry grass or hay can be used as bedding.

Note. Created by Director of Cadets 3, 2006, Ottawa, ON: Department of National Defence.

Figure 12 Completed Hootchie-style Shelter

Teaching Point 2 **Have the cadets construct a hootchie-style shelter.**

Time: 60 min Method: Practical Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets construct a hootchie-style shelter.

RESOURCES

- Two groundsheets,
- Three metres of twine or thin rope,
- Several pegs or small twigs,
- Spade or small shovel,
- Knife or scissors, and
- Flagging tape.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

- Divide the cadets into groups of two. Each group member should be of the same gender.
- Direct cadets to find a suitable site to build a hootchie-style shelter.
- Issue required resources to each group of cadets.
- Direct each group to construct a hootchie-style shelter.

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadets' participation in the activity will serve as confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

In a survival situation, it is very important to be able to construct an effective shelter. A shelter protects a person from weather, animals and insects. They can also provide warmth, shade and comfort. The hootchie-style shelter is effective for squadron aircrew survival exercises.

INSTRUCTOR NOTES / REMARKS

The directives outlined in CATO 11-08 *Environmental Protection and Stewardship* are to be adhered to during this training.

REFERENCES

C3-002 ISBN 0-00-653140-7 Wiseman, J. (1999). *The SAS survival handbook*. Hammersmith, London: HarperCollins Publishers.

C3-003 ISBN 1-896713-00-9 Tawrell, P. (1996). *Camping and Wilderness Survival: The ultimate outdoors book*. Green Valley, ON: Author.

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 11

EO C190.04 – COLLECT DRINKING WATER IN THE FIELD

Total Time: 60 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Prepare a suitable instructional area.

Prepare examples of water collection devices.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TP 1 to orient the cadet to conserving water and generate an interest in the subject.

A demonstration and performance was chosen for TP 2 as it allows the instructor to explain and demonstrate collecting drinking water and provides an opportunity for the cadet to practice the skill under supervision.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have collected drinking water in the field.

IMPORTANCE

Cadets will obtain the skills to collect water in a survival situation. Water is vital to human survival. Without sufficient drinking water the body with shut down and eventually die. Having sufficient drinking water combats thirst, which is an enemy of survival.

Teaching Point 1 **Describe the importance of water conservation and retaining fluids.**

Time: 15 min Method: Interactive Lecture

OVERVIEW

The human body consists of 75% water. It is required to keep kidneys functioning so they may eliminate wastes, control body temperature, and regulate the nervous system.

Water is essential to life. All living things contain water and depend on it. The average person can survive for approximately three weeks without food but only three days without water. Do not wait until water supplies have completely diminished to find a water source. When faced with a survival situation, conserve water and find a source as soon as possible. The source should be fresh, running water though. However, boiling or the use of chemical purifiers can sterilize water.

When water is lost from the body it must be replaced to maintain health and efficiency. The human body loses two to three litres of water per day, which must be replaced to maintain the water balance. This water replacement occurs by consuming actual water or water that is contained in food.

DEHYDRATION

The human body has no means of storing water like it can with food fats. When the body is deprived of water it becomes dehydrated, which can affect it in very negative ways.

Effects of Water loss:

Loss of 1–5% Body Water	Loss of 6–10% Body Water	Loss of 11–12% Body Water
Thirst	Headache	Delirium
Discomfort	Dizziness	Swollen tongue
Lethargy	Dry mouth	Twitching
Impatience	Tingling in limbs	Deafness
Lack of appetite	Blue shade to skin	Darkening vision
Flushed skin	Slurred speech	Lack of feeling in the skin
Increased pulse	Difficulty breathing	Skin starts to shrivel
Nausea	Inability to walk	Inability to swallow
Weakness	Blurred vision	Death

RETAINING FLUIDS

The following precautions can be taken to keep fluid loss to a minimum:

- Avoid exertion.
- Do not smoke.
- Keep cool, stay in the shade.
- Do not lay on the hot ground or heated surfaces.
- Eat as little as possible – If there is little fluid in your body, water is taken from the vital organs to digest the food.
- Avoid speech.
- Breathe through the nose, not the mouth.

CONFIRMATION OF TEACHING POINT 1

QUESTION:

Q1. What percentage of the human body is water?

Q2. How much water does the human body lose each day?

Q3. What are three ways to prevent water loss?

ANTICIPATED ANSWERS:

A1. Seventy-five per cent.

A2. Two to three litres.

A3. Avoid exertion, do not smoke, keep cool, stay in the shade, do not lay on the hot ground or heated surfaces, eat as little as possible, avoid speech, and breathe through the nose, not the mouth.

Teaching Point 2 — **Explain, demonstrate and have the cadets collect drinking water.**

Time: 40 min — Method: Demonstration and Performance

For this skill lesson, it is recommended that the instruction take the following format:

1. Explain and demonstrate the complete skill while cadets observe.
2. Explain and demonstrate each step required to complete the skill. Monitor cadets as they imitate each step.
3. Monitor the cadets' performance as they practice the complete skill.

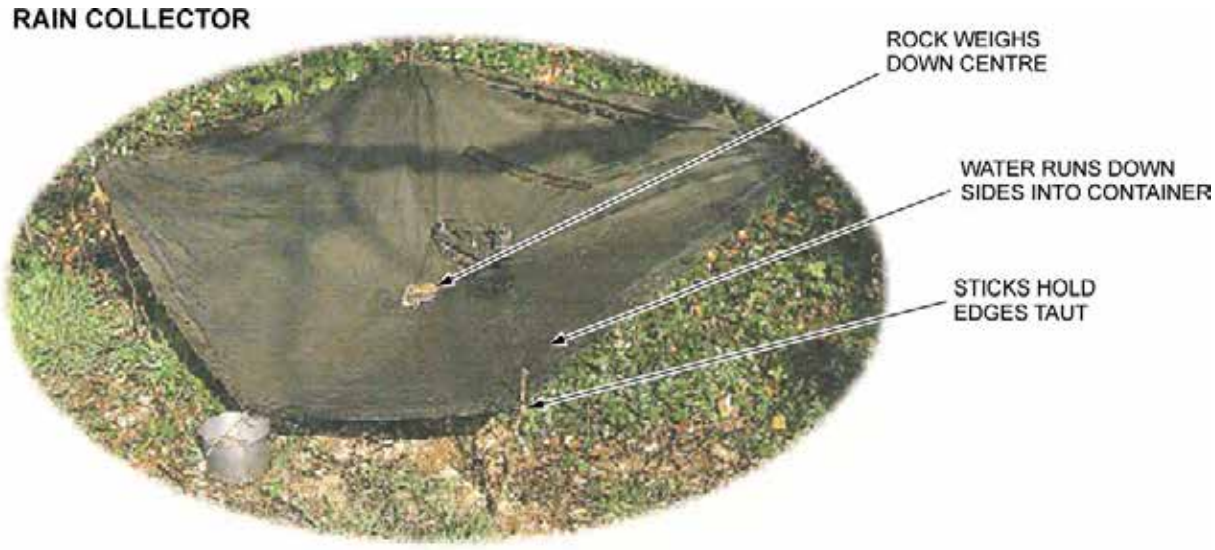
Note: Assistant instructors may be required to monitor the cadets' performance.

COLLECTING WATER

Rain Water

Set out a container to collect any rain that may fall. The flow from the roof of a shelter can be collected using improvised guttering to channel the rain into containers. Rainwater requires less purification than a standing body of water. Collecting rainwater is also easier than other collection methods.

Stretch a plastic bag / poncho tightly over a wide area, preferably on a slope. Peg down its corners with sticks and collect the rain in a container. A rock may be used to weigh down the centre and better direct the water into the container. When waterproof sheets are unavailable, use birch bark sheet and shape it to channel the water into a container.



Note. From The Complete Wilderness Survival Manual by Hugh McManners, 1994, Toronto, ON: McMillan Canada.

Figure 1 Rain Collector

DEW

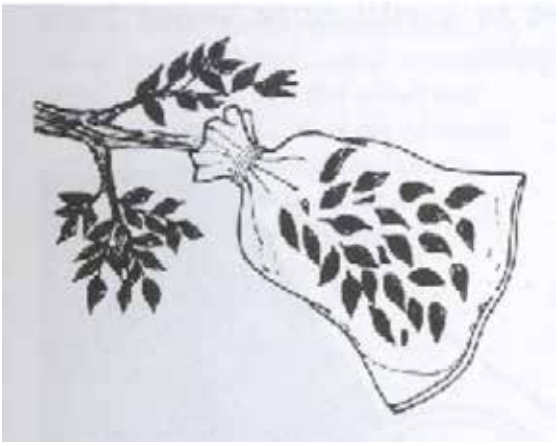
As the air cools down at night, the water vapour in the air condenses as dew on low-lying ground, and vegetation. This water evaporates rapidly as the sun rises. Many plants, insects and animals depend upon dew to survive. Humans can also make use of this natural water supply. Dew can be collected by soaking a cloth in long wet grass. The best time for collection is at dawn. When the cloth is soaked, wring the water out into a container. If a cloth is unavailable, a spare t-shirt or other piece of clothing may be used.

Note. From The Complete Wilderness Survival Manual by Hugh McManners, 1994, Toronto, ON: McMillan Canada.

Figure 2 Dew Collection

Water from Vegetation

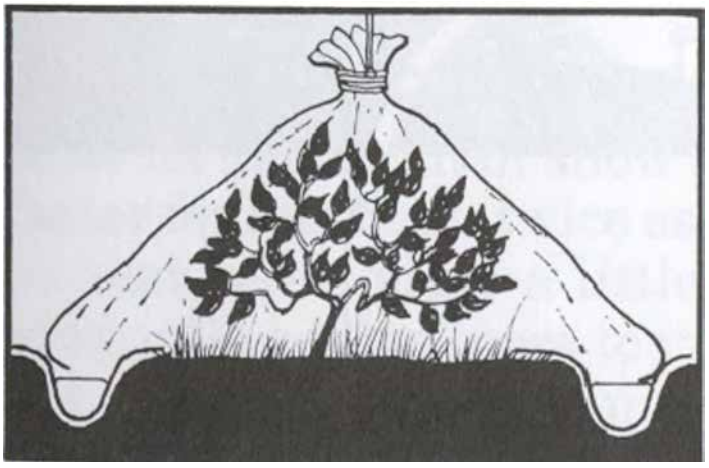
Tie a plastic bag over a healthy, bushy green branch. The water vapour given off by the foliage heats up inside the plastic and condenses to form water inside of the bag. On trees, keep the mouth of the bag at the top with a corner hanging low to collect condensed evaporation.



Note. From The SAS Survival Handbook, by John Wiseman, 1999, London, England: HarperCollins Publishers.

Figure 3 Collecting Condensation

An entire plant can also be used as a water source. Placing a plastic bag over any vegetation collects moisture by evaporation. The moisture condenses on the plastic as it cools. Suspend the bag to an overhead tree branch, or place a wide stick on the inside to prop up the plastic bag. Arrange points for the water to collect.



Note. From The SAS Survival Handbook, by John Wiseman, 1999, London, England: HarperCollins Publishers.

Figure 4 Collecting condensation from plants

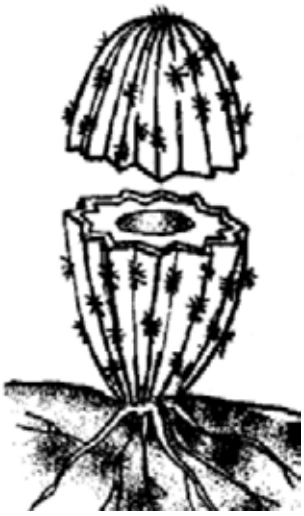
There are many different types of vegetation that store water in either their leaves or roots. Some types of vegetation capture rainwater to trap insects for food. Others secrete special fluids that can be tapped and drank by humans in emergencies. Some examples include: pitcher plants, cacti, tree roots and vines.

PITCHER PLANT

(NEPENTHES SPP.)
THIS PLANT CATCHES INSECTS IN A WATERY FLUID IN ITS "PITCHER". YOU CAN EXTRACT THE WATER, BUT IT MUST THEN BE STRAINED TO REMOVE ANY INSECTS (WHICH YOU CAN EAT).

Note. From The Complete Wilderness Survival Manual by Hugh McManners, 1994, Toronto, ON: McMillan Canada.

Figure 5 Pitcher Plant



Note. From Camping and Wilderness Survival: The Ultimate Outdoors book by Paul Tawrell, 1996, Green Valley, ON: Author

Figure 6 Cactus

Solar Still

Water can be extracted from soil using a solar still. As long as there is a difference in temperature in between two surfaces, air between those surfaces heats up and becomes saturated. The air condenses as droplets on the cooler surface.

To construct a solar still dig a hole about three feet wide and two feet deep. Place a collecting can at the bottom of the hole. Spread a plastic sheet across the hole and hold it in place with rocks. Weigh down the centre of the sheet over the container with a fist-sized rock. As the temperature of the air and soil rise, water

vapour condenses on the underside of the cooler sheet and runs into the container. Dig another hole when the moisture in the hole / still has been used up.

Note. From The Complete Wilderness Survival Manual by Hugh McManners, 1994, Toronto, ON: McMillan Canada.

Figure 7 Solar Still

Digging for Ground Water

Water often seeps into a hole dug in a location where the water table is high. Dig a hole about one foot deep. Water seeps from the ground into the hole. The water is dirty the first few times the hole fills, but clear water eventually rises and can be purified and drunk. Keep scooping away the muddy water until clear water rises. Note the surroundings before a water hole has been dug. Never dig where the mud has a potent smell or a green slime on the surface. This water is probably contaminated. Do not collect water where there are dead animals and always purify the water before drinking.

ACTIVITY

Time: 20 min

OBJECTIVE

The objective of this activity is to have the cadets make a water collection device.

RESOURCES

- Plastic bags / sheets of plastic (one per group).
- Shovels (one per group).
- Pegs (one per group), and
- Cup or bowl (one per group).

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

- Divide the cadets into groups of three or four.
- Assign each group a water collection device to set up.
- Cadets are to construct the water collection device as per instructions given during the lesson.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. What are some surface characteristics to look for when searching for a water source?

Q2. How can insects help find a water source?

Q3. What is a method of collecting water?

ANTICIPATED ANSWERS:

A1. Follow dry riverbeds. The structure and composition of the rocks may result in a stream emerging. The riverbed may be followed to its source. There may be a trickle of water that remains or humid soil is present where a pit can be dug to the water table. Watch for damp spots on the ground. A high water table can cause this. Old human habitations can be a good place to find water. Old mines and dumps are good examples. Water may be collected from dew accumulation.

A2. Insects live within flying distance of water. Their flight path may be followed to a water source.

A3. Rain collection, dew collection, water from vegetation, solar still, and water from the ground.

END OF LESSON CONFIRMATION

The cadets' participation in the activity will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Cadets have learned the effects of water on the human body, how to find water and how to collect it. Water is vital to human survival; without sufficient drinking water the body shuts down and eventually dies. Having sufficient drinking water combats thirst, which can be an enemy of survival.

INSTRUCTOR NOTES / REMARKS

The directives outlined in CATO 11-08 *Environmental Protection and Stewardship* are to be adhered to during this training.

This lesson should be scheduled at the start of the morning with the cadets setting up their water-collection devices. Follow up should take place the next to indicate the cadets' water-collecting devices worked.

REFERENCES

C3-002 ISBN 0-00-653140-7 Wiseman, J. (1999). *The SAS survival handbook*. Hammersmith, London: HarperCollins Publishers.

C3-003 ISBN 1-896713-00-9 Tawrell, P. (1996). *Camping and wilderness survival: The ultimate outdoors book*. Green Valley, ON: Author.

C3-021 ISBN 0-7715-9035-0 McManners, H. (1994). *The complete wilderness survival manual*. Toronto, ON: McMillan Canada.

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 12

EO C190.05 – IDENTIFY ENVIRONMENTAL INJURIES

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for this lesson to orient the cadets to environmental injuries and generate awareness of the subject.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have identified environmental injuries.

IMPORTANCE

Being able to recognize environmental injuries gives cadets the confidence to help in an emergency that could occur any time while in a survival situation. Knowing the symptoms and basic treatments for environmental injuries will aid cadets in possibly preventing and detecting an injury earlier.

Teaching Point 1 **Explain how to recognize hiking injuries.**

Time: 5 min Method: Interactive Lecture

BLISTERS

Blisters are sign that boots do not fit properly or are not broken in. Blisters are also a sign that the feet are too tender for the distance being covered in the hike. The first sign of a blister is hot spots. Upon noticing a blister, relieve the pressure on the area by loosening the boots, removing a pair of socks, or even cutting a hole in the socks around the offending area.

SHIN SPLINTS

Shin splints are characterized as pain in the front of the lower leg. Shin splints primarily come from excess toe flexion (bending). Shin splints are usually caused by walking without extending the ankle on each step and not using the toes to press down on the ground. Do not wear clogs of any kind because the ankle needs to stay flexed to keep the clog on the foot.

MUSCLE CRAMPS

Muscle cramps are often associated with dehydration. Muscle cramps commonly occur in people who overwork their muscles to the point of exhaustion. Some possible causes of muscle cramps include:

- lack of water,
- lack of calcium,
- lack of potassium, and
- lack of sodium.

SPRAINS

A sprain occurs when the ligaments of a joint are torn by a sudden twist or wrench. Symptoms of a sprain can include the joint being very painful when moved, and considerable swelling. First aid for a sprain includes wrapping the joint in a heavy bandage and resting the limb in a comfortable elevated position.

Inform the cadets that if they experience any of the mentioned symptoms they should tell someone immediately and go to the nearest first aid station.

CONFIRMATION OF TEACHING POINT 1

QUESTION:

Q1. What are blisters a sign of?

Q2. What is the primary cause of shin splints?

Q3. What are the common causes of muscle cramps?

ANTICIPATED ANSWERS:

A1. Blisters are a way of telling the body the boots do not fit, they are not broken in or the feet are too tender for the miles covered hiking.

A2. Shin splints primarily come from excess toe flexion.

A3. Lack of water, lack of calcium, lack of potassium, and lack of sodium.

Teaching Point 2 **Explain how to recognize frostbite injuries.**

Time: 5 min Method: Interactive Lecture

FROSTBITE

There are several types of frostbite. Each of the types is increasingly worse than the previous. The types of frostbite include:

- **Incipient frostbite or frostnip**. This type of frostbite is the initial pain from the cold. It is followed by numbness and after rewarming, a tingling feeling. No permanent damage occurs with this type of frostbite.
- **Superficial frostbite**. This type of frostbite affects only the skin and tissue that is near the surface. The affected area is white and frozen to the touch, but the tissue beneath it is soft and resilient. In worse cases, blisters form after 24 to 36 hours and the pain of the injury may last several weeks.
- **Deep frostbite**. This frostbite is more serious and involves deeper tissue, possibly as deep as the bone. Before rewarming, the injured area is hard. Blisters usually form in three to seven days and are larger than in superficial frostbite. There will be a significant amount of swelling, which can last several weeks.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

1. What is incipient frostbite or frostnip?
2. What is superficial frostbite?
3. What is deep frostbite?

ANTICIPATED ANSWERS:

1. It is the initial pain from the cold.
2. It only affects the skin and tissue that is near the surface.
3. It is more serious and involves deeper tissue, possibly as deep as the bone.

Teaching Point 3 **Explain how to recognize the signs and symptoms of hypothermia.**

Time: 5 min Method: Interactive Lecture

HYPOTHERMIA

Hypothermia means too little heat. In medical terms it means a lowering of the body's core temperature, resulting in the breakdown of bodily functions.

Some factors that contribute to hypothermia include:

- lack of proper nutrition or hydration,
- inadequate clothing,
- getting wet, and
- exhaustion.

Some ways to prevent hypothermia include:

- wearing a sufficient thickness of insulation,
- having protection from the wind,
- keeping dry (inside and out),
- maintaining proper nutrition and hydration, and
- pacing to prevent fatigue.

Signs to watch for in others include:

- complaints of feeling cold,
- stumbling,
- falling,
- slurred speech,
- violent shivering,
- poor judgement,
- irrational behaviour, and
- in extreme cases loss of urinary control and fruity acetone breath.

Signs for individuals to watch for in themselves include:

- feeling of deep cold,
- shivering,
- stumbling,
- falling, and
- poor coordination.

CONFIRMATION OF TEACHING POINT 3

QUESTIONS:

Q1. What are some factors that contribute to hypothermia?

Q2. What are the signs of hypothermia to watch for in others?

Q3. What are the signs of hypothermia to watch for in yourself?

ANTICIPATED ANSWERS:

A1. Lack of proper nutrition or hydration, inadequate clothing, getting wet and exhaustion.

A2. Complaints of feeling cold, stumbling, falling, slurred speech, violent shivering, bad judgement, irrational behaviour, people with profound hypothermia may lose urinary control and have fruity acetone breath.

A3. Feeling of deep cold, shivering, stumbling, falling and poor coordination.

Teaching Point 4 **Explain how to recognize heat related injuries.**

Time: 10 min Method: Interactive Lecture

HEAT CRAMPS

Heat cramps are usually the first warning of heat exhaustion. They occur in the muscles that are doing the most work such as the arms, legs and abdomen. Heat cramps are usually due to a lack of body salt.

Symptoms of heat cramps include:

- shallow breathing,
- vomiting, and
- dizziness.

Treatment for heat cramps includes:

- moving to shade,
- resting, and
- drinking water with a small amount of salt dissolved in it.

HEAT EXHAUSTION

Heat exhaustion is produced by exposure to high temperature and humidity. It is also produced through the loss of body fluids through excessive sweating. It can occur without direct exposure to the sun.

Symptoms of heat exhaustion include:

- pale face,
- cold and sweating skin,
- weak pulse accompanied by dizziness,
- weakness,
- cramps, and
- deliriousness or unconsciousness.

Treatment for heat exhaustion includes:

- moving to shade,
- resting, and
- drinking water with a small amount of salt dissolved in it.

HEATSTROKE

Heatstroke is the most serious result of overexertion or overexposure to the sun.

Symptoms of heatstroke include:

- hot dry skin,
- flushed face and feverish,
- sweating stops,
- rising temperature,
- fast, strong pulse,
- severe headache,
- vomiting, and
- unconsciousness.

Treatments for heatstroke include:

- laying in the shade with head and shoulders slightly raised;
- removing layers of outer clothing;
- cooling body by wetting clothing with tepid (warm) water and fanning; and
- sprinkling water over the individual (do not fully immerse the individual in water).

SUNBURN

A sunburn with blistering is dangerous, especially with pale and sensitive skin.

Treatment for sunburn includes:

- avoiding further exposure to the sun by keeping in the shade or covering skin with clothes;
- taking painkillers if available; and
- covering all blisters with dressings (do not burst the blisters).

SORE EYES

Sore eyes may occur due to glare or excessive exposure to the sun or dust particles.

Treatment for sore eyes includes:

- resting in the shade;
- covering eyes after washing out the foreign debris;
- bathing eyes in warm water;
- using a mask to cover the eyes; and
- darkening below eyes with charcoal to avoid recurrence.

DEHYDRATION

Dehydration becomes more noticeable as more body fluid is lost. Water makes up 75% of the body’s weight. Survival is unlikely if more than one fifth of the body’s water is lost.

For fluid loss between 1-5% of body weight, symptoms include:

- thirst,
- vague discomfort,
- lack of appetite,
- flushed skin,
- impatience,
- sleepiness, and
- nausea.

For fluid loss between 6-10% of body weight, symptoms include:

- dizziness,
- headache,
- laboured breathing,
- no salivation,
- indistinct speech, and
- unable to walk.

For fluid loss between 11-20% of body weight, symptoms include:

- delirium,
- swollen tongue,
- inability to swallow,
- dim vision,
- numb, and
- shrivelled skin.

In the latter stages of dehydration, there is significant muscular weakness and impaired mental capacity.

Inform the cadets that if they experience any of the symptoms listed in this class to tell someone immediately and go to the nearest first aid station.

CONFIRMATION OF TEACHING POINT 4

QUESTIONS:

Q1. What are the symptoms of heat stroke?

Q2. Survival is unlikely if how much of the body's water is lost?

Q3. What is the treatment for heat exhaustion?

ANTICIPATED ANSWERS:

A1. Hot dry skin, flushed face and feverish – but sweating stops, temperature rises, pulse becomes fast and strong, severe headache, often with vomiting and unconsciousness may follow.

A2. One-fifth.

A3. Moving to shade, resting and drinking water with a little salt dissolved in it.

END OF LESSON CONFIRMATION

QUESTIONS:

Q1. What are blisters a sign of?

Q2. What are the three types of frostbite?

Q3. What are the signs of hypothermia to watch for in yourself?

ANTICIPATED ANSWERS:

A1. Blisters are a way of telling the body that one's boots do not fit, they are not broken in or one's feet are too tender for the miles they are covering in their hike.

A2. Incipient or frostnip, superficial frostbite and deep frostbite.

A3. Feeling of deep cold, shivering, stumbling, falling and poor coordination.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Environmental injuries can be very serious and life threatening. Understanding the symptoms and basic treatments for these injuries provides individuals with the knowledge to possibly prevent and detect an injury earlier.

INSTRUCTOR NOTES / REMARKS

The directives outlined in CATO 11-08 *Environmental Protection and Stewardship* are to be adhered to during this training.

REFERENCES

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 13

EO C190.06 – DEMONSTRATE RESPECT FOR THE ENVIRONMENT ON AN AIRCREW SURVIVAL EXERCISE

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Ensure the following materials are ready prior to the class:

- an example of biodegradable soap or shampoo; and
- a stove fuel cartridge.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for this lesson to present information on respecting the environment during an aircrew survival exercise.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have demonstrated respect for the environment on an aircrew survival exercise.

IMPORTANCE

Cadet squadrons are at aircrew survival training sites only a few days each year while these areas are always home to wildlife and vegetation. By following certain procedures, the wilderness can be preserved while serving aircrew survival exercises.

Teaching Point 1 **Discuss the importance of low impact camping.**

Time: 5 min Method: Interactive Lecture

Try to select a location where both good and poor examples of low impact camping are present.

LOW IMPACT CAMPING CONCERNS

The goal of low impact camping is to leave the training area in the condition it was before being used. There should be little indication that the area had been used at all.

POSSIBLE OUTCOMES OF ENVIRONMENTAL OVERUSE

With camping and hiking becoming increasingly popular, it is important to treat the environment with respect. The overuse of environmental resources could cause:

- an excess build up of garbage,
- barren, stripped land,
- exposed tree roots,
- destroyed plants, or absence of vegetation, and
- scarred trees where branches have been torn away.

These outcomes affect the environment negatively. For example, the amount of garbage in a wilderness area can pollute the ground, the water, and the wildlife that live there.

ENVIRONMENTAL PRECAUTIONS

Through people taking responsible actions and following proper precautions, a site can be left in its natural condition for continuous use. This environmental consciousness helps wildlife and plants to recover from the impact of field training. A number of precautions may be taken, to include:

- packing out all garbage, including used stove cartridges and other non-burnable trash;
- staying on trails whenever possible. Do not create new paths by cutting down vegetation;
- avoiding crushing plants underfoot by walking on rocks and compacted earth;
- no harassing or feeding animals;
- where campfires are allowed, gathering fallen branches instead of cutting down trees for firewood; and
- using designated fire pits for campfires.

CONFIRMATION OF TEACHING POINT 1

QUESTION:

Q1. When creating a fire, where should the firewood be collected?

Q2. Why should you stay on trails whenever possible?

Q3. If you come across various forms of wildlife, what precautions should be taken?

ANTICIPATED ANSWERS:

A1. Gather fallen branches instead of cutting down trees for firewood.

A2. So vegetation is left alone and not trampled.

A3. Do not harass the animals or feed them.

Teaching Point 2 **Discuss factors while cooking.**

Time: 5 min Method: Interactive Lecture

IMPORTANT FACTORS WHILE COOKING IN THE FIELD

There are a number of factors that should be considered while cooking in the field, to include:

- drain food away on the ground in the cooking area;
- evenly distribute waste water from cooking across the ground away from the cooking area and bivouac site;
- dump waste water away from ground water;
- pack up garbage immediately; and
- pack wet waste in a sealed container or a plastic bag and separate from dry garbage.

RECYCLING IN THE FIELD

It is very important to divide up garbage for recycling. There are different recycling groups for cardboard, paper, metal, glass, plastic and rigid foam.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. What factors should be taken into account when disposing of waste water from cooking?

Q2. What is important to keep in mind when disposing of wet waste?

Q3. What are the different types of recyclable materials?

ANTICIPATED ANSWERS:

A1. It should be evenly distributed across the ground away from the cooking area and bivouac site.

A2. Wet waste should be sealed in a container or plastic bag.

A3. Cardboard, paper, metal, plastic, rigid foam, and glass.

Teaching Point 3 **Discuss factors while washing.**

Time: 10 min Method: Interactive Lecture

IMPORTANT ENVIRONMENTAL FACTORS WHILE WASHING

It is important to maintain proper hygiene while in the field. If soap is going to be used while bathing in the field, certain precautions should be taken, to include:

- selecting a site on high and dry ground that is at least 100m away from a ground water source;
- using as little soap as possible, sponge bathe from a basin of water;
- ensuring that the grey water is disposed of properly into a grey water container; and
- using biodegradable soaps and shampoos should be used.

Prior to swimming in a large body of water, ensure that any oils (eg, sunscreen, grease, fuel residue, bug repellent, body oils.) are removed to ensure that no water is contaminated.

Show an example of biodegradable soap and shampoos to the cadets.

CONFIRMATION OF TEACHING POINT 3

QUESTIONS:

Q1. If using soap, where should one bathe?

Q2. If using soap to bathe, what form of soap should be used?

Q3. What should be washed off before going swimming?

ANTICIPATED ANSWERS:

A1. Ensure the site is on high and dry ground, and at least 100m away from a ground water source.

A2. Biodegradable soap.

A3. Different types of oils (eg, sunscreen, grease, fuel residue and body oils).

Teaching Point 4 **Discuss waste disposal methods.**

Time: 5 min Method: Interactive Lecture

PROPER DISPOSAL OF HUMAN WASTE

There are a number of factors that should be considered with respect to waste disposal in the field. Wherever possible, use an established toilet, outhouse or portable toilet. If toilets, outhouses, or portable toilets cannot be used, then a latrine should be dug for communal use. A hole about 60 cm x 60 cm, 30 to 60 cm deep works for about 20 people for up to two days. When the hole is full to about 15 cm from the top, cover it with the remaining dirt and natural cover.

Ensure to check local regulations concerning latrine construction prior to demonstrating this to the class. Some areas do not allow latrine construction.

CONFIRMATION OF TEACHING POINT 4

QUESTIONS:

Q1. If a latrine is constructed (regular measurements), how long will it be suitable?

Q2. Name three types of facilities that should be used for proper waste disposal?

ANTICIPATED ANSWERS:

A1. Up to two days.

A2. An established toilet, outhouse or portable toilet.

END OF LESSON CONFIRMATION

QUESTIONS:

Q1. When creating a fire, where should you collect the firewood?

Q2. What is important to keep in mind when disposing of wet waste?

Q3. What form of soap should be used?

ANTICIPATED ANSWERS:

A1. Gather branches instead of cutting down trees for firewood.

A2. Pack wet waste in a sealed container or a plastic bag and separate from dry garbage.

A3. Biodegradable soap.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

There are a number of things to remember to respect the environment during an aircrew survival exercise. Following proper methods for cooking, washing, and waste disposal are important to preserving the environment. If these methods are followed during exercises, the training area can be maintained and used for many years.

INSTRUCTOR NOTES / REMARKS

The directives outlined in CATO 11-08 *Environmental Protection and Stewardship* are to be adhered to during this training.

REFERENCES

C3-005 ISBN 0-89886-814-9 Sierra Club San Diego Chapter. (1999). *Wilderness basics: The complete handbook for hikers & backpackers*. Portland, OR: The Mountaineers Books.

C3-008 ISBN 0-02861-100-4 Mouland, M. (1999). *Complete idiot's guide to camping and hiking*. Toronto, Canada: Alpha Books.

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 14

EO C190.07 – IDENTIFY HABITATS OF ANIMALS AND INSECTS

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Recce the area to locate habitats of animals and insects. It is recommended the route be flagged with flagging tape or visibly marked for the cadets before the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An in-class activity was chosen for this lesson as it is an interactive way to present the content.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have identified habitats of animals and insects.

IMPORTANCE

It is important for cadets to be able to identify animals and insects for food in a survival situation. After a few days the body needs nourishment which may be provided by the animals and insects in the surrounding area.

Teaching Point 1 **Conduct an activity to have the cadets identify habitats.**

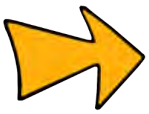
Time: 25 min Method: In-Class Activity

EDIBLE INSECTS

Insect Gatherings

Many insects are inactive during the heat of the day, although most emerge to collect moisture when it rains. Look for them in nooks and crannies of trees and behind the bark, in the tissue and seed pods of plants, in any moist shady spots and on the beds of pools of water and streams. The larvae and grubs of many insects are edible and easily found in rotten logs, underground, or under the bark of dead trees. Ants' and termites' nests are often immediately recognizable mounds. Snails can be found in fresh water, salt water and from deserts to alpine meadows. Slugs are simply snails without shells.

Insects provide ample amounts of protein, fats, carbohydrates, calcium and iron. Insects can be found throughout the world and they are easy to procure. Worms contain the highest class of protein with a large proportion of essential amino acids and are easily collected. Although a fair number of insects can be eaten raw, it is best to cook them to avoid ingesting unwanted parasites. Collect only living specimens. Avoid any that look sick or dead, have a bad smell or produce skin irritation or a rash when handled.



As a general rule, avoid insects that carry disease (eg, flies, mosquitoes, and ticks), poisonous insects (eg, centipedes and spiders), and insects that have fine hair, bright colours, and eight or more legs.

NUTRITION BREAKDOWN

Insect (per 100 g)	Protein (g)	Fats (g)	Carbohydrates (g)	Calcium (mg)	Iron (mg)
Crickets	12.9	5.5	5.1	75.8	9.5
Small grasshoppers	20.6	6.1	3.9	35.2	5.0
Giant water beetles	19.8	8.3	2.1	43.5	13.6
Red ants	13.9	3.5	2.9	47.8	5.7
Silkworm pupae	9.6	5.6	2.3	41.7	1.8
Termites	14.2	n / a	n / a	0.050	35.5
Weevils	6.7	n / a	n / a	0.186	13.1

Note. From Wilderness Survival. (p. 161), by G. Davenport, 2006, Mechanicsburg, PA: Stackpole Books. Copyright 2006 by

Figure 1 Nutritional Value

Insects that can be eaten are bees and wasps, hornets, beetle grubs, locusts, aquatic insects, snails, slugs and worms.

ANIMALS

Many animals make their homes in burrows, usually on high ground away from water. Some, such as rabbits and ground squirrels, use little effort to conceal them, although one or two exits are hidden for use in an emergency. Rabbits' emergency holes are easily dug out; a piece of bramble or barbed wire can be pushed down the hole to hook the rabbit out.

Signs of feeding include:

- the way in which bark has been stripped from trees;
- the gnawed shells of nuts;
- partially eaten fruits;
- bitten off shoots;
- the remains of prey; and
- animals of carnivores or the destruction of nests.

Discarded fruits or nuts are often found when food is plentiful—an animal finds one piece not to its liking and drops it to try another. They not only reveal an animal's presence but suggest bait for traps.

A skilled eye can often identify the species of animal by the pattern left by tooth or beak marks on a nut, or the way in which a pine cone has been stripped to get at its seeds.

DROPPINGS

Droppings give one of the best indications of whether an animal is an herbivore or a carnivore. The size of the animal can be judged from their mass and quantity; dryness is an indication of how long since the droppings were passed. Old droppings are hard and odourless. Fresh are wet and still smelling. Flies draw attention to droppings.

Many mammal droppings have a strong scent. Animals that live on vegetation, such as cattle, deer and rabbits, produce roundish and strawy droppings. The droppings from a meat eater, like cats, are long and tapered. Break open a dropping to see if there are any clues to what the animals have been eating, then bait accordingly.

ROOTINGS

Some animals root up the ground in search of insects and tubers. If the earth is still crumbly and fresh, an animal is likely to have been active on the spot recently. Small scratches may be where a squirrel or other rodents have been digging for shoots.

Scents and Smells

Listen to the noises and register the smells. They are certain to include indications of the wildlife present and where one kind of animals exists there may be others.

TRACKS

Animal tracks consist of bent blades of grass, gnawed bone, broken seeds, the dragged body or tail, and the footprint of the animal.

All prints of an animal are not the same as they depend upon:

- the age of the animal,
- the movement of the animal—walking, running, bounding,
- the material it is walking on—sand, mud, clay, grass, or snow,

- the season—some animals have extra fur on their paws in the winter, and
- the age of the tracks.

When a track is observed:

- Choose a well defined area of the track.
- Study the track to determine the direction of travel, the forefoot and hind foot pattern.
- Determine if there are any body rub points as a dragged tail, dragged foot, or dragged fur of the animal.
- Determine if the animal is running, hopping, walking, trotting, or just meandering.

ACTIVITY

Time: 15 min

OBJECTIVE

The objective of this activity is to have the cadets identify habitats of animals and insects.

RESOURCES

Nil.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Guide the cadets around various points on the trail / route, pointing out any signs of animal habitats.
2. Divide the cadets into groups of three and have them look for habitats of animals.
3. After 10 minutes, have the cadets return back to the instruction area.
4. Have the cadets discuss what animal(s) may live in the habitats they have found.

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadets' participation in the activities will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Being able to identify animals and insects becomes a very important skill in a survival situation. After a few days, the body needs nourishment which can be animals and insects found in the surrounding areas.

INSTRUCTOR NOTES / REMARKS

The directives outlined in CATO 11-08 *Environmental Protection and Stewardship* are to be adhered to during this training.

REFERENCES

C3-002 ISBN 0-00-653140-7 Wiseman, J. (1999). *The SAS survival handbook*. Hammersmith, London: HarperCollins Publishers.

C3-003 ISBN 1-896713-00-9 Tawrell, P. (1996). *Camping and wilderness survival: The ultimate outdoors book*. Green Valley, ON: Author.

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