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A-CR-CCP-805/PF-001

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL FIVE INSTRUCTIONAL GUIDES

(ENGLISH)

Cette publication est disponible en français sous le numéro A-CR-CCP-805/PF-002.

Issued on Authority of the Chief of the Defence Staff

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A-CR-CCP-805/PF-001

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Contact Officer: D Cdts 3-2-6 – Air Cadet Program Development Staff Officer

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FOREWORD AND PREFACE

1. **Issuing Authority.** This Instructional Guide (IG) A-CR-CCP-805/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 Cadet Organization.

3. **Purpose of the IG.** The IG to be used by Royal Canadian Air Cadet Squadrons in conjunction with other resources to conduct Proficiency Level Five. 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-805/PG-001, *Royal Canadian Air Cadets Proficiency Level Five 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. 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 IGs, 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.

Introduce the material to be presented in the section.

Personal question to which a written answer is expected.

Did you know?

Information meant to add to the interest level of self study packages.

Activate Your Brain

Confirmation question to which a written answer is expected.

An answer key is provided at the end of each self-study package.

Instructions on where to get more information on the subject.

Rhetorical question meant for reflection. A written answer is not expected.

Question that refers to previously taught mandatory material. A written answer is expected.

Information to explain or clarify the content of a self-study package.

Indication of the end of the content within a self study package. If applicable a final exercise will follow which the cadet will complete and return to the Proficiency Level / Training Officer.

5. **Suggested Changes.** Suggested changes to this document shall be forwarded through the normal chain of command to National Defence Headquarters (NDHQ) Attention: Air Cadet Program Development Staff Officer (D Cdts 3-2-6), or by email to air.dev@cadets.gc.ca.

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COMMON TRAINING

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 1

EO M501.01 – DEFINE GLOBAL CITIZENSHIP

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-805/PG-001, *Proficiency Level Five 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 TPs 1 and 2 as it is an effective way to generate interest and orient the cadets to globalization and distinguish between local, national and global citizenship.

A group discussion was chosen for TPs 3 and 4 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions, and feelings about global citizenship. Sharing in the discussion encourages the cadet to examine their own thoughts and feelings and may prompt them to re-examine their previously held ideas. Participating in a group discussion improves the cadets' verbal communication and listening skills.

An in-class activity was chosen for TP 5 as it is an interactive way to provoke thought and stimulate an interest in developing a definition of global citizenship.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have defined global citizenship.

IMPORTANCE

It is important for cadets to define global citizenship because individuals are increasingly being asked to rethink their conceptions of identity as they adjust to the realities and challenges of a highly-integrated world.

Teaching Point 1 **Explain globalization.**

Time: 5 min Method: Interactive Lecture

GLOBALIZATION

Globalization refers to the increasing integration of economies around the world and specifically refers to the:

- efficient movement of goods, services and money across international borders;
- efficient movement of people (labour) across international borders; and
- efficient movement of knowledge (technology) across international borders.

Globalization is not new and has been going on for centuries, but in the last two decades the process has been sped up by factors, such as:

- the development of economic opportunities in new foreign markets;
- the negotiation of numerous free trade agreements, such as the North American Free Trade Agreement (NAFTA) between Canada the United States and Mexico, the Canada–Costa Rica Free Trade Agreement and the Dominican Republic–Central American Free Trade Agreement (DR–CAFTA) of which Canada is a member because of NAFTA and its agreement with Costa Rica; and
- advances in technology.

These developments have lead to dramatic increases in cross-border trade, investment and migration so large that today, globalization is often described as "farther, faster, cheaper and deeper."

The United Nations (UN) estimates that as of 2009 there were more than 200 million people living in countries other than their own, excluding irregular and illegal migrants. In the developed world, the percentage of migrants in the total population more than doubled from 1960 to 2005, from four percent to ten percent. (http://www.globalpolicy.org/globalization/cases-of-globalization/47935.html)

Technology has been particularly important for increased globalization. Advances in information technology have given consumers, investors and businesses new tools for identifying and pursuing economic opportunities including:

- faster and more accurate analysis of economic trends around the world;
- easy transfer of assets; and
- efficient methods of long distance communication and collaboration with partners around the world.

Globalization is controversial, however. Those who favour globalization argue that it allows poor countries and their citizens to develop economically and raise their standard of living. Those who argue against globalization claim that it mainly benefits large multinational corporations and business executives at the expense of local businesses, cultures and people.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. What is globalization?

Q2. What three factors have increased the pace of modern day globalization?

Q3. Why is globalization controversial?

ANTICIPATED ANSWERS:

A1. Globalization refers to the increasing integration of economies around the world and specifically refers to the movement of goods, services and money across international borders, the movement of people (labour) across international borders and the movement of knowledge (technology) across international borders.

A2. The pace of modern day globalization has been increased by the development of economic opportunities in new foreign markets, the signing of free trade agreements and technological advances.

A3. Globalization is controversial because some argue that it allows poor countries and their citizens to develop economically and raise their standard of living. Others argue against globalization and claim that it has mainly benefited large multinational corporations and business executives at the expense of local businesses, cultures and common people.

Teaching Point 2 **Distinguish between local, national and global citizenship.**

Time: 10 min Method: Interactive Lecture

In Canada, the word "citizen" generally refers to an inhabitant of a city, town, province or nation and the word "citizenship" generally refers to the quality of being a citizen of a particular city, town, province or nation and can be defined as:

Local citizenship. Local citizenship refers to being a member of a specific city, town or province. Depending on where Canadians live, they have certain rights, privileges, advantages or disadvantages created by their particular political, economic, social and geographical environment.

National citizenship. National citizenship refers to the rights and obligations that Canadians have because they live in Canada. Every Canadian citizen is granted certain rights based on Canada's tradition of democracy and respect for human dignity and freedom. These rights are found in *Canada's Human Rights Codes* and in the *Canadian Charter of Rights and Freedoms* and include:

- **Equality rights.** Every citizen is entitled to equal treatment before and under the law, and equal protection and benefit of the law without discrimination.
- **Democratic rights.** Every citizen has the right to participate in political activities including voting and being elected to political office.
- **Legal rights.** Every citizen has the right to be presumed innocent until proven guilty, the right to retain a lawyer and to be informed of that right and the right to an interpreter in court proceedings.
- **Mobility rights.** Every citizen has the right to enter and leave Canada and to move and take up residence in any province.
- **Language rights.** Every citizen has the right to use either the English or French language in communications with the federal government and certain provincial governments.

- **Minority language education rights.** In general, English and French minorities in every province and territory have the right to be educated in their own language.

Canadians also enjoy fundamental freedoms of religion, thought, expression, peaceful assembly and association. If Canadian citizens have their rights violated by the federal, provincial or territorial governments or their rights are violated by others, Canadian citizens can challenge that action in court.

Global Citizenship. Global citizenship is a relatively new term, but it is based on an ancient concept. In both ancient Greece and Rome, a citizen was someone who not only belonged to a place, but was also someone who played a role in improving society and making life better. As time passed and interaction between different countries and cultures increased, ancient people began to call themselves "citizens of the world" or "global citizens." These historical definitions show that citizenship has never been simply about belonging to a place but is also about making positive changes, and considering the wider environment.

In Canada, as elsewhere, there are a variety of opinions about what global citizenship means. These opinions range from the idea that everyone is a global citizen because they all live on one planet to the idea that, in a legal sense, there is no such thing as a global citizen because there is no such thing as a world government. Regardless, there is a consensus that global citizenship goes beyond simply knowing that everyone is a citizen of the planet and reflects more the idea that all citizens of the planet have a collective responsibility to each other and the planet itself. In this regard, everyone belongs to one community, the planet, and consequently has a stake in the well-being of that community and its people.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. What does local citizenship mean?

Q2. Name three rights that all Canadians have.

Q3. How is global citizenship different from local and national citizenship?

ANTICIPATED ANSWERS:

A1. Local citizenship refers to being a member of a specific city, town or province and the rights, privileges, advantages or disadvantages created by their particular political, economic, social and geographical environment.

A2. Canadians have the right to equal treatment and protection before the law, the right to vote and be elected to political office, the right to be presumed innocent until proven guilty, the right to retain a lawyer and to be informed of their rights, the right to an interpreter in court, the right to enter and leave Canada and the right to live in any Canadian province, the right to use either the English or French language when communicating with the federal government and certain provincial governments and the right to be educated in their own language.

A3. Local and national citizenship has mainly to do with our rights as Canadians but global citizenship has more to do with thinking of the planet as a community and how we think and act in recognizing our collective responsibility for the well-being of that community.

Teaching Point 3 **Identify the characteristics of a global citizen.**

Time: 15 min Method: Group Discussion

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.

BACKGROUND KNOWLEDGE

Canada has often been described as a community of communities because of its many different ethnic groups, who are encouraged to preserve and celebrate elements of their unique cultures. The world is in Canada because of the diversity of its founders—-First Nations, French, and English—the successive waves of immigrants who have helped shape Canada's self-image over the last century, and the choices Canada has made to make bilingualism and multiculturalism official government policy.

Canadians see themselves in the world, as evidenced by the value they place on peacekeeping, development assistance to underdeveloped countries and various forms of international cooperation. Canada, for example, has a Minister of International Cooperation, responsible for the Canadian International Development Agency (CIDA), among other things, to ensure that Canada fulfills its international obligations.

Consequently, Canadians find it very easy to accept the idea that global citizenship goes beyond simply knowing that everyone is a citizen of the planet and reflects more the idea that all citizens of the planet have a collective responsibility to each other and the planet itself.

The collective responsibility that all citizens have toward each other and the planet itself include:

- recognizing and condemning injustice and inequality;
- having a desire and ability to work against injustice and inequality wherever it is seen;
- thinking and behaving in ways that value Earth and safeguard the future for those who follow;
- believing individuals can make a difference;
- engaging with distant places and different cultures;
- exploring what links them to other people, places and cultures; and
- learning from, as well as about, other people, places and cultures.

Global citizens participate in decisions concerning their lives and actively work to improve the political, economic, social, cultural and environmental conditions in which they live. Global citizens express themselves through involvement in different activities in the various communities—local, national, global—of which they are a part. Expressions of global citizenship can range from helping out in a local soup kitchen, volunteering during times of national emergency or donating time and money to emergency relief in distant parts of the world.

With the impacts of globalization apparent in every dimension of daily living—employment, nutrition, lifestyle choices, health—it is important to understand that local relates to global. A global citizen is someone who cares about themselves, how they act and how their actions impact others locally, nationally and globally. A global citizen is someone who is willing to act if they feel that the world they live in is not what it should be and honestly feels that by taking action locally regarding various issues is in fact acting globally.

Global citizens generally:

- are aware of the wider world and have a sense of their own role as a world citizen;
- respect and value diversity;
- have an understanding of how the world works economically, politically, socially, culturally, technologically and environmentally;
- are outraged by social injustice;
- participate in and contribute to the community at a range of levels from local to global;
- are willing to act to make the world a more sustainable place; and
- believe in individual accountability.

Today, everyone is a global citizen whether they are conscious of it or not. Global interdependence happens every day and everyone relies on countless different people from all over the world for the clothes they wear, the food they eat and the technology they use. Daily living in Canada is constantly affected by what people are doing around the world.

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. Why is Canada often described as a community of communities?

Q2. Give some examples of how Canada sees itself in the world.

Q3. What elements of collective responsibility do Canadians have toward each other and the planet?

Q4. What is meant by the phrase "local is global" as it relates to global citizenship?

Q5. What are the characteristics of a global citizen?

Q6. Why is everyone a global citizen?

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 points have been covered.

CONFIRMATION OF TEACHING POINT 3

The cadets' participation in the group discussion about the characteristics of a global citizen will serve as the confirmation of this TP.

Teaching Point 4 **Recognize the importance of being a global citizen.**

Time: 10 min Method: Group Discussion

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.

BACKGROUND KNOWLEDGE

The world is unfair and unequal, and global citizenship promotes challenging and changing this. More than 6.7 billion people live on this planet in vastly different conditions. About 1 billion people—nearly one in six—live in extreme poverty on less than a dollar a day.

In countries in Sub-Saharan Africa, poverty remains a daily threat. On that part of the African continent, 33 million children were not enrolled in primary school in 2005. (http://www.canadiangeographic.ca/worldmap/cida/about.asp?language=EN&Resolution=800x600)

Around the world, 854 million people still go to bed hungry every night and each minute, one woman dies during pregnancy or childbirth because she did not receive adequate or prompt care.

The 1998 Human Development Report from the United Nations (UN) stated that the amount people in Europe and North America spend a year on pet food, cosmetics and perfume ($37 billion) would provide basic education, water and sanitation, basic health and nutrition to all those without those things, with $9 billion leftover. (www.http://hdr.undp.org/en/reports/global/hdr1998/)

Central to global citizenship is the importance of learning about and from the experience of others, both at home and abroad. Global citizenship acknowledges that informed individuals can change things by becoming activists and making good choices about how they behave.

Society is diverse, and global citizenship empowers everyone, especially younger people, to counter the many forms of ignorance and intolerance within it. Attitudes of empathy and respect for diversity, as well as the skills of co-operation and negotiation, are essential to combat the prejudice and discrimination which currently exist in the world.

Global citizenship encourages individuals to challenge the misinformation and stereotyped views that exist about Third World countries, now commonly referred to as Majority World countries because they contain the majority of the world's population. There are many generalizations, assumptions and half-truths about Third World countries. Unbiased learning requires individuals to think critically about issues such as this, which is a key element of global citizenship.

Countries of the world are interdependent and global citizenship encourages everyone to recognize their responsibilities toward each other. There are many similarities and links between people across the globe, not only in terms of personal needs and aspirations, but also regarding communications and trade.

How far can an email be sent? Where do all the tasty food items that people enjoy everyday come from?

The world is rapidly changing and global citizenship is about flexibility and adaptability as well as about a positive image of the future. To create a fairer and safer world, there needs to be a clear vision of what this world should look like, as well as the means to attain it and global citizenship helps provide this.

Central to global citizenship is the importance of learning from the experience of others, both in the individual's own society and beyond. Global citizenship acknowledges that individuals can change things by making informed choices about how they behave.

Global citizenship may appear to be an ideal concept that is essentially an unattainable goal. However, one key element of global citizenship is that individuals can make a difference and that philosophy must be used as a source of encouragement. While the world has many problems that are not easy to solve, many countries have made remarkable progress in the last several decades. Overall, poverty is decreasing and today, 82 percent of people in the world can read and write which is the highest percentage in history. Between 1960 and 2005, life expectancy in developing countries increased by almost 20 years, from 47 to 65. Some developing countries have built up their economies to the point where they are now major competitors in the international marketplace.

"What we do for ourselves dies with us. What we do for others and the world remains and is immortal." Albert Pine (www.http://thinkexist.com/quotes/albert_pine/)

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 are some examples of inequality in the world?

Q2. How does global citizenship prepare individuals to function in a diverse society?

Q3. How are countries of the world interdependent?

Q4. What important philosophical idea should individuals always keep in mind regarding global citizenship?

Q5. What evidence is there that the world situation is improving?

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 points have been covered.

CONFIRMATION OF TEACHING POINT 4

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

Teaching Point 5 **Conduct an activity where the cadets will build a global citizen.**

Time: 10 min Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets build a global citizen.

RESOURCES

- Four packages of sticky notes (different colors),
- Pens / pencils,
- Coloured markers, and
- Flip chart paper.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Tape sheets of flip chart paper together to make a large rectangle.
2. Draw around one person to get an outline of their body or simply draw a large outline of a figure on the flip chart paper.
3. Have the cadets write around the outline using words and / or phrases learned during this lesson to describe a global citizen.
4. Have the cadets choose the most important words and / or phrases and write them on sticky notes without communicating with other cadets.
5. As a group, place the sticky notes around the outline. It does not matter if words are repeated.
6. Have the cadets discuss the words and / or phrases used to describe a global citizen and note those that appear the most often.
7. Fill in any important words or phrases that may have been missed.

8. Organize the words and / or phrases that have appeared most often by placing them around the outline using the following criteria:

   - **Knowledge (head).** Place characteristics having to do with understanding and knowledge around the head.
   - **Actions (hands).** Place characteristics having to do with activities that global citizens engage in around the hands.
   - **Attitudes (feet).** Place characteristics having to do with what global citizens think around the feet.

9. If time permits, discuss the characteristics most important for a global citizen.

SAFETY

Nil.

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 the defining a global citizen activity will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Like other countries of the world Canada is constantly changing and Canadians are always being influenced by competing values and interests. Historically, Canadians have consistently demonstrated a spirit of compromise and tolerance toward diversity because as a nation Canada was born out of diversity. Today, individual Canadians must ensure that their institutions balance promoting Canadian interests with international cooperation in a constantly changing world. Global citizenship contains a set of principles, values and behaviours which can accomplish this.

INSTRUCTOR NOTES / REMARKS

Nil.

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COMMON TRAINING

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 2

EO C501.01 – REFLECT UPON INDIVIDUAL GLOBAL CITIZENSHIP

Total Time: 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the completion of this self-study package are listed in the lesson specification located in A-CR-CCP-805/PG-001, *Proficiency Level Five Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the self-study package within the section for which they are required.

Self-study packages are intended to be completed by the cadet independently. More information about self-study packages can be found in the foreword and preface.

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

Photocopy the self-study package located at Attachment A for each cadet.

Photocopy the answer key located at Attachment B but **do not** provide it to the cadet.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A self study was chosen for this lesson as it allows the cadet to reflect upon global citizenship at their own learning pace. This encourages the cadet to become more self-reliant and independent by focusing on their own learning instead of learning directed by the instructor.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have reflected upon individual global citizenship.

IMPORTANCE

It is important for cadets to reflect upon individual global citizenship because globalization affects daily choices in all aspects of their life. It will help them recognize, as they move into adulthood, the competitive challenge created by globalization in all aspects of Canadian life.

SELF-STUDY PACKAGE INSTRUCTIONS

OBJECTIVE

The objective of this self-study package is to have the cadet reflect upon individual global citizenship.

RESOURCES

- Self-study package, and
- Pen / pencil.

ACTIVITY LAYOUT

Provide the cadet with a classroom or training area suitable to complete the self-study package.

ACTIVITY INSTRUCTIONS

1. Provide the cadet with a copy of the self-study package located at Attachment A and a pen / pencil.
2. Allow the cadet 90 minutes to complete the self-study package.
3. Provide assistance to the cadet as required.
4. Collect the self-study package once the cadet has finished.
5. Correct the self-study package with the self-study package answer key located at Attachment B.
6. Provide feedback to the cadet and indicate whether or not they have completed the Enabling Objective (EO).
7. Return the completed self-study package to the cadet for their future reference.
8. Upon the completion of the self-study package, record the result in the cadet's log book and training record.

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadet's completion of the self-study package will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Globalization is an ongoing phenomenon that affects all aspects of daily living, is most likely irreversible and will continue at an increased pace. Whether they realize it or not, everyone is a global citizen with a collective responsibility to see that the effects of globalization are beneficial for Canadians and the world at large.

INSTRUCTOR NOTES / REMARKS

Nil.

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GLOBAL CITIZENSHIP AND YOU

SECTION 1: GROWING UP GLOBAL AND DIGITAL

SECTION 2: REVEAL YOUR TRUE IDENTITY

SECTION 3: TAKE IT GLOBAL

SECTION 1
GLOBALIZATION AND DAILY LIVING

How many times have you heard the word "generation" applied to a particular group of people? Sometimes words like "hard-working", "spoiled", "intelligent" and "selfish" are used to describe various generations of people.

Indication of the end of the content within a self study package. If applicable a final exercise will follow which the cadet will complete and return to the Proficiency Level / Training Officer.

GENERATION Y / Z	INTERNET (I) GENERATION
GENERATION WHY	MILLENNIALS
GENERATION NEXT	DIGITAL GENERATION
ECHO BOOMERS	NET GENERATION

Did you have trouble deciding? Have you seen or heard any of these labels before? In actual fact, most of them have been used at different times to describe your generation. However, "digital generation" and "net generation" or the "I Generation" are most commonly used to describe those whose birth dates range from the mid 1970s to the late 1990s although there is disagreement on fixed dates.

Generally, you have been described as:

optimistic	hopeful	connected 24/7	independent
technically savvy	determined	goal-oriented	success driven
structured	multi-tasker	inventive	creative

Make a list of four characteristics that best describes you.

_____ _____

_____ _____

_____ _____

But all the descriptors are not flattering. You are also sometimes described as:

Screenagers. You are addicted to computer screens.

Shameless. You are careless about what you post online.

Adrift. You are spoiled by your parents and afraid to choose a path in life.

Dishonest. You download and share information, music, etc that belongs to others.

Slackers. You waste time with online socializing at work and find it difficult to hold a nine-to-five job.

The one unifying characteristic of your generation, however, is that you are the first to grow up in a global era totally surrounded by digital media.

GROWING UP GLOBAL

Globalization refers to the increasing integration of economies around the world and specifically refers to the:

- efficient movement of goods, services and money across international borders;
- efficient movement of people (labour) across international borders; and
- efficient movement of knowledge (technology) across international borders.

Generally, people distinguish between economic, political and cultural globalization.

Economic Globalization

On whom do you depend everyday?

When thinking about on whom you depend everyday, you probably thought of those closest to you, such as parents, relatives, teachers, and friends. You probably didn't realize that you also depend on a man in Brazil, a woman in Ghana and a boy or a girl in Pakistan as a result of economic globalization.

Economic globalization, a process that has resulted from human innovation and technological progress, refers to the increasing integration of economies around the world through the movement of goods, services, and money across international borders. The term also includes the movement of people (labour) and sometimes knowledge (technology) across international borders.

As a result of increasing globalization, everyday you depend on people from all around the world to make your clothes, produce your food and manufacture the items you use in daily activities. Some of the more common items and the country in which they may be made include:

Did you know?

During a normal day you depend on numerous countries throughout the world for the clothes you wear, the food you eat and the activities you engage in?

Clothing

- **Shirts.** Shirts and other clothing made of cotton are made in countries, such as **Malawi** and **India** because cotton grows best in warm climates.
- **Jeans.** Many types of jeans are made in Bangladesh by women who work on the factory production line.
- **Footwear.** Many types of footwear are made in the US, Burma and Thailand.

Take a look at the tags on the clothing you wear. Where were they made? How many say "Made in Canada"?

Breakfast

- **Orange juice. Brazil** is the world's biggest producer of oranges which are grown in huge plantations because of the warmth and sunshine.
- **Tea.** Many types of tea come from **Sri Lanka** where tea plants are grown in plantations called "Tea Estates." "Pickers" take the green leaves off the plant and then let them dry, so that they can be ground down into tea.
- **Cereal.** Cereals that you eat are made mainly from rice and maize (corn). **Argentina** provides most of your cereal.
- **Coffee.** Coffee is really a fruit and the coffee cherries are picked from a coffee plant which grows in a climate that is warm and humid. After the cherries are picked, they are split open and the coffee beans are taken out and dried.

Did you know?

The five highest coffee producing nations are **Columbia**, **Vietnam**, **Kenya**, **Cote d'Ivoire (Ivory Coast)** and the State of **Hawaii** in the **US?**

How does the relationship between coffee producing countries and coffee consuming countries illustrate economic globalization?

Just for fun … don't over think this but list as many nicknames or slang terms used to describe coffee as you can think of.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Snacks

- **Chocolate.** Most of the chocolate you eat comes from the **Ivory Coast** in West Africa.
- **Sweets.** The sugar in the sweets you eat comes mainly from countries in the Caribbean like **Jamaica**.

Lunch

- **Bananas.** Many of the bananas you eat are grown in **Ecuador**.
- **Grapes.** Grapes are grown all over the world but those grown in **Greece** are most popular.
- **Sandwich.** Bread for your sandwich is mainly made from flour (rye, barley, rice or most commonly wheat), salt and water and **China** is the country which grows the most wheat.

- **Crisps.** Many varieties of crisps are made from dehydrated or dried potatoes and some of the companies that produce dehydrated potatoes are in **Belgium**.

Dinner

- **Rice.** Rice is grown from seed in "paddy" fields in Asian countries such as **Vietnam**.
- **Pasta.** The **Italians** invented the pasta that you love to eat.
- **Chicken.** Some of the chicken you eat especially frozen chicken and products like chicken nuggets come from **Thailand**.
- **Beef.** Nearly half of the beef you eat comes from **Argentina**.
- **Cheese.** Cheese is very popular and one of the most popular cheese-making countries is **France**.

Activities

- **Sports.** Many sports companies have factories in Asian countries, such as **Pakistan**.
- **Automobiles.** Most cars and other vehicles are made in the **US**, **Germany**, **Japan** and **Korea**.
- **Toys.** Many of your plastic toys, video games and puzzles are made in **Taiwan**.
- **Pens and pencils.** Most of the pens and pencils that you use are made in **China**.

Consider the clothes you have worn, the food you have eaten for snacks and meals and the activities you have participated in and list the countries that you have relied on today.

_____	_____
_____	_____
_____	_____
_____	_____

No doubt China figured prominently in your day. China is a special case and it would be difficult to list all the products made in that country and exported throughout the world. However, an examination of the relationship between the American corporation Wal-Mart and China illustrates how these two partners alone influence economic globalization.

Did you know?

As of 2009, Walmart:

- has almost 5000 stores in 10 countries worldwide;
- has 39 stores in 15 cities around China;
- has supply contracts with more than 5000 Chinese companies;
- gets 70% of all the products in its stores from China; and
- intends to increase its trade with China by 10% every year.

(http://www.organicconsumers.org/corps/Walmartchina113004.cfm)

Walmart's inventory of stock produced in China was valued at US$18 billion in 2009. If Walmart was a country, it would rank as China's eighth largest partner ahead of Russia, Australia and Canada.

(http://www.organicconsumers.org/corps/Walmartchina113004.cfm)

***Activate Your Brain # 1*:**

Look at the facts above and explain how Walmart and China are helping to increase economic globalization.

Response:

_____

_____

_____

Check out Sara Bongiorni's book, *A Year Without "Made in China"* at http:www.amazon.ca/Year-Without-Made-China-Adventure/dp/0470116137

Globalization is a very controversial issue and opinions vary as to its pros and cons. Undoubtedly, there are some unscrupulous corporations who take advantage of workers in developing countries and pay low wages to have their goods produced and then sell them for huge profits. However, to say that all corporations are poor global citizens is a stereotype and you will be challenged to distinguish the good from the bad.

Since the early 1990s, the fair trade movement with its umbrella organization the Fairtrade Labelling Organization (FLO) International, has worked to ensure that producers and workers in developing countries get a better deal.

Did you know?

That one way for you to act as a global citizen is to support companies that conduct business responsibility in developing countries? Look for this symbol on products in stores in your neighbourhood …

Figure A-1 Fair Trade Symbol

Note. From "Econsciousmarket", 2009, *World Fair Trade Day*. Retrieved December 8, 2009, from http://www.econsciousmarket.com/eco-times/world-fair-trade-day/

TransFair Canada is a national, nonprofit fair trade certification organization and the only Canadian member of the Fairtrade Labelling Organizations International (FLO). What it does can be broken down into three main categories:

Certification. TransFair Canada is responsible for certifying that Canadian products bearing the Fair Trade certification marks meet international Fair Trade standards and monitors products once they enter Canada to ensure that what is sold as Fair Trade Certified meets that standard.

Licensing. TransFair Canada licenses Canadian companies to use the Fair Trade certification marks on their products, and ensures that these marks are used in a way that is misleading to the public.

Promotion. TransFair Canada works alongside community groups, companies, and individual citizens to promote and build momentum for Fair Trade certified products through media campaigns and promotional materials.

Did you know?

The FLO International announced in December 2009 that the Kit Kat bar is going Fairtrade? The move by Nestlé, which kicked off in mid-January 2010 when the first certified Kit Kat bars arrive on shop shelves, will benefit thousands of farmers in Côte d'Ivoire, also know as the Ivory Coast, who produce cocoa from which chocolate is made. Côte d'Ivoire, which is one of the world's poorest countries, produces 40 percent of the world's cocoa and one in four people directly or indirectly rely on cocoa farming for their livelihood. (http://www.fairtrade.org.uk/press_releases_and_statements/december_2009/kit_kat_gives_cocoa_farmers_in_cte_divoire_a_break.aspx)

Political Globalization

Traditionally, politics takes place within national political systems. National governments, such as the Government of Canada, are responsible for maintaining the security and economic welfare of their citizens, as well as the protection of human rights and the environment within their borders.

Citizens normally pay attention to political activities within their country but as a result of globalization they now pay attention to political activity at the global level. One consequence of living in a global world is that the decisions and actions of international organizations affect countries and people all over the world. Some of these include:

- **The International Monetary Fund** (IMF) is the world's central organization for international monetary cooperation and its primary purpose is to ensure the stability of the system of currency exchange rates and international payments that enables countries to buy goods and services from each other. To accomplish its purpose the IMF:
    - reviews national, regional, and global economic and financial developments;
    - provides advice to its 184 member countries, encouraging them to adopt policies that create economic stability and raise living standards;
    - serves as a forum where countries can discuss the national, regional, and global consequences of their policies;
    - makes loans to member countries when their payments to other countries exceed their earnings; and
    - provides technical assistance and training to help developing countries achieve economic stability and growth;

- **The World Bank** which is a source of financial and technical assistance to developing countries around the world. It is not a bank in the common sense and is made up the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA), owned by 186 member countries of the World Bank. Together, they provide low-interest loans and interest-free grants to developing countries for education, health, public administration, infrastructure, financial and private sector development, agriculture, and environmental and natural resource management; and
- The **World Trade Organization** (WTO) which is the international organization whose primary purpose is to open trade for the benefit of all. The WTO helps negotiate agreements aimed at reducing obstacles to international trade and helps implement and monitor these agreements as well as settle trade disputes between countries. The WTO currently has 153 members, of which 117 are developing countries. The WTO's main activities include:
    - negotiating the reduction or elimination of barriers to trade and agreeing on rules governing the conduct of international trade;
    - administering and monitoring the application of the WTO's agreed upon rules for trade;
    - monitoring and reviewing the trade policies of its members;
    - settling trade disputes among its members;
    - helping train developing country government officials in international trade matters;
    - conducting economic research in support of the WTO's other main activities; and
    - educating the public about the WTO, its mission and activities.

The World Bank, the IMF, and the WTO have tremendous power and influence, but are often accused by citizens around the world of excluding the opinions of the developing countries they are supposed to help and who are the most seriously affected by their policies. They claim that policies of these organizations are often developed behind-the-scenes and are heavily influenced by the larger and wealthier member countries.

Not surprisingly, massive citizen protests generally develop when these organizations meet. Numerous groups including university students, trade unions, faith-based and peace groups come together to oppose what they consider to be business-driven and undemocratic decision making that take advantage of developing countries. Check out http://www.globalissues.org/article/45/public-protests-around-the-world for more information.

Another form of global political involvement is to join non-governmental organizations (NGOs) which are groups and institutions that are entirely or largely independent of government whose objectives are mainly humanitarian rather than commercial. NGOs include charitable and religious associations that raise private funds for development, distribute food and family planning services and promote community organization. They also include independent cooperatives, community associations, water-user societies, women's groups and pastoral associations. Citizen groups that raise awareness and influence policy are also NGOs.

Members of these and other organizations act globally by forming alliances with organizations in other countries and using global communications systems to influence international organizations instead of working through their national governments.

Check out these sites for more information about the NGOs listed above:

http://www.ifrc.org/

http://www.oxfam.org/

http://www.savethechildren.org/

http://www.care.org/about/index.asp

http://www.actionaid.org/

Globalization of Culture

Technology has now created the possibility of a global culture. The Internet, social-networking sites, telecommunications, cellular communications, satellite technology, etc are dissolving cultural boundaries. The spread of values, behavioural norms, and culture generally is heavily tilted in favour of Western ideals. Over 80% of all websites in the world are in English and the majority of published material, including educational publications, on the Internet is in English. Small cultures and languages are in danger of disappearing due to the competition in the international marketplace where only the biggest international publishing and entertainment companies are able to produce high quality electronic materials. Global entertainment companies and other major corporations such as Walmart, McDonalds, Disney and Coca–Cola have the capability of manipulating personal tastes and may eventually determine what goods and services people want.

Some argue that the Internet and major corporations make it very difficult for governments to control its citizens and people around the world will follow their own interests and form partnerships with like- minded groups. According to this view, the control of culture which can be accomplished with technology, is seen as far more important than the control of political and geographical borders.

While the creation of one culture for the whole world may be an extreme position, it is true that technology makes it very easy to cross national borders and any effort by individual countries to exclude global pop culture usually makes the banned objects all the more irresistible.

Consider how Internet technology can be used to both help create cultural globalization and help prevent it.

Is a global culture, common to everyone in the world, a good or bad thing?

Response:

_____

_____

GROWING UP DIGITAL

The second part of the defining characteristic of your generation is that you are the first to be growing up completely surrounded by digital media. To you technology is a part of the natural landscape.

For the first time in history, your generation is more comfortable, knowledgeable, and literate, than your parent's generation, with an innovation that may allow you to develop and impose your culture on the rest of society.

Through technology you have learned to play, communicate, and work very differently than anyone else in the past.

What bugs you more—stuck in traffic, standing in line at the store, or a slow connection?

You live in the high-speed, interactive world of email, cell phones, smartphones, Google, Facebook, Twitter, YouTube and countless other sites. The speed of delivery on the Internet is getting faster as high-speed broadband Internet access is now common. You can access a world of knowledge from your Blackberry, for example, or your mobile phone, which can surf the Internet, be used as a global positioning system (GPS), take photos, and swap text messages.

Just about every one of you has an iPod and a personal profile on a social–networking site such as Facebook, which lets you monitor your friends and be monitored by them all the time.

Did you know that according to one survey:

- 97% of you own a computer;
- 94% of you own a cell phone;
- 76% of you use instant messaging with 15% logged on 24/7;
- 34% of you use websites as primary news sources;
- 75% of you have a Facebook account; and
- 60% of you own an iPod or the equivalent.

How many of the statistics above apply to you personally?

_____ _____

_____ _____

_____ _____

For personal interest, do a survey of your squadron, peer group, or school etc and see if the statistics just presented apply to them as well.

As a result of all technological activity, digital content is exploding at astronomical rates. As of 2007, the digital universe contained 281 000 000 000 gigabytes of digital content, which works out to about 45 gigabytes per person on the planet. The traces that you leave in the digital environment by taking pictures, making phone calls, uploading videos to YouTube, downloading digital content etc are your digital footprint.

But you control less than half your total digital footprint and your digital shadow is much larger. Your digital shadow includes images of you on surveillance cameras and records in banks, retail stores, airlines, telephone and medical databases, web searches, etc. In general, it is information about you in cyberspace.

How often do you actively and passively feed information about yourself in the digital environment? Go to http://dsc.discovery.com/convergence/Koppel/interactive/interactive.html and check it out. Can you find ways to reduce your digital footprint and digital shadow?

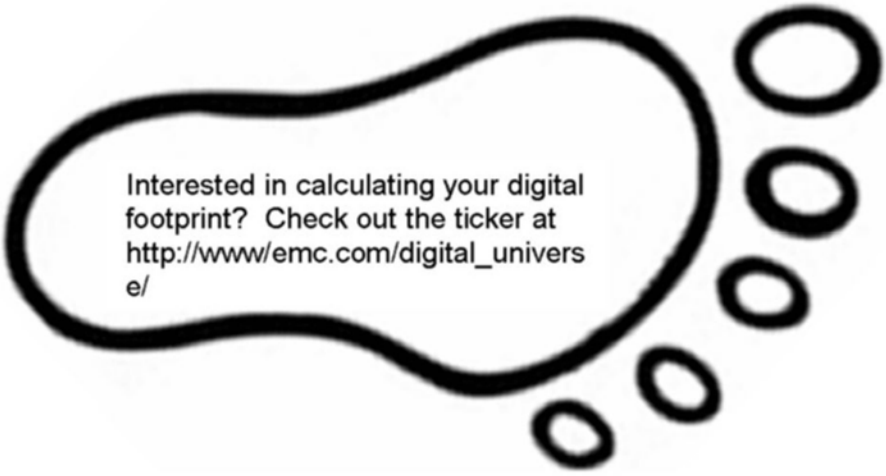

Figure A-2 Digital Footprint

Note. From "Pepperflood", 2009, *Blogspot.com*, Copyright 1999–2009 by J. Flood. Retrieved November 26, 2009, from http://pepperflood.blogspot.com/

Did you know?

Prospective employers and various other institutions and organizations screen social networking sites?

According to Canada's Privacy Commissioner, young Canadians need to "think twice" about how much personal information they post on the Internet and take greater responsibility for what they do online. You are choosing to open up your lives in ways your parents thought impossible and your grandparents thought unthinkable. Be careful what you post and follow these simple suggestions to protect yourself:

- google search yourself;
- untag any photos or correct erroneous information others may have posted about you;
- create a personal website; and
- follow through with fresh content and accurate information.

For more information, check out "6 tools to monitor your online reputation" at http://www.dumblittleman.com/2008/10/6-tools-to-monitor-your-online.html

Give it some thought

Who should be mainly responsible for policing social–networking sites? Consider which of these statements best describes your opinion?

- the user should be mostly responsible and exercise caution when using social–networking sites;
- Canada's Privacy Commissioner should be mostly responsible and propose legislation to protect Canadian's right to privacy online; or
- the sites themselves should change their third party access and protect their customer's right to privacy.

Did you know?

Canada's Privacy Commission is working to promote online privacy for you through its new website www.youthprivacy.ca? Check it out.

SECTION 2
REVEAL YOUR TRUE IDENTITY

Even though there are differing opinions, most people agree that global citizenship goes beyond simply knowing that everyone is a citizen of the planet and reflects more the idea that all citizens of the planet have a collective responsibility to each other and the planet itself. In this regard, everyone belongs to one community, the planet, and consequently has a stake in the well-being of that community and its people.

Just as your generation can be described as global and digital, it can also be described as a generation that believes in causes with a keen desire to give and volunteer with hands-on ways of improving the lives of people, domestically and internationally. You are global citizens and believe that you can change the world one donation, one voluntary activity, or one purchase at time.

Did you know?

According to the report *Caring Canadians, Involved Canadians: Highlights from the 2007 Canada Survey of Giving*, Volunteering and Participating, 58% of Canadians between the ages of 15 and 24 volunteered on behalf of a group or organization? (http://www.givingandvolunteering.ca/files/giving/en/csgvp_highlights_2007.pdf)

Global citizens are a new breed of activist trying to change the world, one voluntary activity at a time. Complete the survey below and reveal your true identity about giving and volunteering. There is no right or wrong answer. Pick the answer that best fits you.

Pick the answer that best fits you by shading in the appropriate bullet.

1. Before I support a cause or organization with my time or money I …
   - Ask my friends what they know about it.
   - Check out the organization's website.
   - "Google" it.
   - Don't bother researching it. They all do good, right?
2. If I want to donate money to a cause or organization, I'll most likely …
   - Get out my mobile and text to give.
   - Go online and check out the organization's website.
   - Whip out the ol' check book and then find an envelope and a stamp.
   - Solicit my friends and family for donations.
3. When looking for a job, I seek out organizations that …
   - Match 100% of my charitable donations.
   - Match 100% of my Registered Retirement Savings Plan (RRSP) contributions.
   - Give employees time off to conduct volunteer work.
   - Have a strong connection to their community.

4. I consider volunteering …
   - As essential to my daily routine as eating and checking email.
   - Something good to do when I can spare a couple of hours.
   - Too time consuming. I need time for "me."
   - Useless. How can one person make an impact?
5. When I want to take action and make a difference, I'm most likely to …
   - Send an email or call my Member of Parliament (MP).
   - Develop my own online petition
   - Donate money.
   - Grab some friends to join me and volunteer.
6. If I want to share information about a cause that is important to me, I …
   - Post it on my social network because it is a fast and easy way to reach a lot of people.
   - Go door to door and hand out pamphlets.
   - Blog it for the world to see.
   - Post it to Twitter in 140 characters or less.
7. When I'm buying a product, I …
   - Research the company's commitment to social issues or the environment.
   - Just walk in. I'm there to buy a product, not do good.
   - Buy from companies that donate a portion of their proceeds to charity.
   - Will switch brands (price and quality being equal) if the second brand is associated with a good cause.
8. To change the world, we need …
   - More money, time and people power.
   - More teamwork from government, business and ordinary people.
   - A laptop, a cell phone, an idea and me.
   - More action at the local level.

There is no right or wrong answer to this quiz. Its purpose is to encourage you to think critically and personally about each item and respond. For a more interesting online version of this survey, check out http://www.socialcitizens.org/quiz and compete with your peers to see who is more of a global citizen.

SECTION 3
TAKE IT GLOBAL

Did you know?

You and your friends contribute more to charity than the federal government of Canada? (http://www.intercordiacanada.org/index.php/news/Canadian-youth-spend-more-of-their-money-on-foreign-aid-than-the-government/)

In a 2008 poll conducted by Ipsos Reid for World Vision, Canadians age 14 to 18 reported donating, on average, about five percent of their money to international charitable organizations. By contrast Canada's federal government appends approximately two percent of its budget on foreign aid.

What can you do to become a better global citizen? Some suggestions include:

- Educate yourself about different regions of the world.
- Make ethical choices in your personal life and protect the environment.
- Participate in your own community and contribute to its well-being.
- Don’t be apathetic; take an interest in what's going on.
- Constantly improve your communication skills and express yourself.
- Treat people as you want to be treated.
- Learn about different cultures and share your culture.
- Interact with people from diverse cultures and challenge injustice if necessary.
- Pick a cause and advocate for it.
- Reflect on your actions.
- Gain awareness of global affairs, and local and global issues.
- Believe that people can make a positive change in the world and become engaged.

Check out http://www.students.ubc.ca/current/download/global_engagement.ppt for more information on global citizenship.

There are numerous examples of young people who have become engaged and one of the more interesting examples is that of Michael Furdyk.

Did you know?

Michale Furdyk was born in Toronto, Canada in 1982. When he was in ninth grade, he and a couple of his friends launched an online magazine about computers called MyDesktop.com. In May 1999, when Michael was in the eleventh grade, they sold it for over $1 million. In October 1999, Michael and his friend Jennifer Corriero started TakingItGlobal, which is an online space where young people could work together with others around the world to do something good. As of 2009, the site has members all over the world, only 30% of its members are from North America, and the conversation takes place in 248 languages. (Don Tapscott, *Grown up Digital*, p. 280)

You could be the next Michael Furdyk. There are several simple things you can do to become engaged in a digital world, such as:

1. Join a social networking site or even create your own. It's an easy way to connect with old friends or meet new ones who share your interests. Promote your cause online.
2. Share websites you like and find out what sites your friends are reading by using free social bookmarking.
3. Share photos of issues that are important to you.
4. Find videos relevant to a cause you care about or create your own and post them online.
5. Champion a cause by creating and personalizing a charity badge or widget. Email the link of your charity badge to family, friends and other contacts or post it online.
6. Use micro-blogging, sites such as Twitter to get your information out there and attract others to your cause.
7. Start a blog and invite your email contacts and people from your social network to your blog. Encouraging readers to leave comments is a great way to start online conversation.
8. Volunteer online. Various online programs, such as *In2Books* allow you to choose when and where to give your time.
9. Create online petitions through organizations such as, *The Point* and *Care2* to help promote the causes most important to you.
10. Donate to various causes through your cell phone. Text-to-give campaigns let donors make a secure donation to the cause they care about.

Did you know?

You can buy a chicken, a donkey, a sheep or a goat and improve someone's self-sufficiency, self-esteem and educational opportunities? Or that you and a few of your friends can help boys and girls play soccer?

Goats provide families with protein and income to help them survive. For $100 you can buy one dairy goat which will give up to 250 L of milk a year. Buy two and they can be bred to produce 2–3 kids a year and eventually multiply into a whole herd. Give a leg-up to someone in need in a developing country.

For $60 you and a few friends can buy six soccer balls and help children, who rarely see a new ball, enjoy a sport that maybe you love.

Figure A-3 Oxfam Goat

Note. From "Oxfam Canada", 2009, *Welcome to Oxfam Unwrapped*. Retrieved November 25, 2009, from http://www.boatnerd.com/pictures/special/ccggriffon/griffon2003_1230BS.jpg

For more information on these programs, check http://www.oxfamunwrapped.ca/category.php?category=2 or check out the World Vision Catalogue at www.worldvision.ca

Have you heard about voluntourism? As the word implies, voluntourism combines vacation travel with volunteering at the destination visited. Search the Internet and you'll find dozens of organizations both nonprofits and commercial deeply involved in organizing volunteering vacations. The best site to learn about voluntourism is VolunTourism International (www.voluntourism.org). Check it out.

Congratulations, you have completed your self-study package on EO C501.01 (Reflect Upon Individual Global Citizenship). Hand the completed package to the Training Officer / Proficiency Level Officer who will record your completion in your Proficiency Level Five logbook.

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ACTIVATE YOUR BRAIN ANSWER KEY

***Activate Your Brain # 1*:**

Look at the facts above and explain how Walmart and China are helping to increase economic globalization.

Response:

Answers will vary but the cadets should make a connection between the facts that economic globalization refers to the increasing integration of economies around the world particularly in terms of the movement of goods across international borders which is aided by Wal-Mart because they have 5000 stores in 10 countries around the world and get 70% of their commodities from China.

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COMMON TRAINING

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 3

EO C501.02 – ANALYZE A GLOBAL ISSUE

Total Time: 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the completion of this self-study package are listed in the lesson specification located in A-CR-CCP-805/PG-001, *Proficiency Level Five Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the self-study package within the section for which they are required.

Self-study packages are intended to be completed by the cadet independently. More information about self-study packages can be found in the foreword and preface.

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

Photocopy the self-study package located at Attachment A for each cadet.

Photocopy the answer key located at Attachment B but **do not** provide it to the cadet.

Provide the cadet with a list of websites on global issues which can be used for Activate Your Brain #3.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A self study was chosen for this lesson as it allows the cadet to analyze a global issue at their own learning pace. This encourages the cadet to become more self-reliant and independent by focusing on their own learning instead of learning directed by the instructor.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have analyzed a global issue.

IMPORTANCE

It is important for cadets to develop the ability to critically analyze different, often conflicting, information sources in order to access reliable information and become informed about issues important to them.

SELF-STUDY PACKAGE INSTRUCTIONS

OBJECTIVE

The objective of this self-study package is to have the cadet analyze a global issue.

RESOURCES

- Self-study package, and
- Pen / pencil.

ACTIVITY LAYOUT

Provide the cadet with a classroom or training area suitable to complete the self-study package.

ACTIVITY INSTRUCTIONS

1. Provide the cadet with a copy of the self-study package located at Attachment A and a pen / pencil.
2. Allow the cadet 90 minutes to complete the self-study package.
3. Provide assistance as required to the cadet.
4. Collect the self-study package once the cadet has finished.
5. Correct the self-study package with the answer key located at Attachment B.
6. Provide feedback to the cadet and indicate whether or not they have completed the Enabling Objective (EO).
7. Return the completed self-study package to the cadet for their future reference.
8. Record the result in the cadet's logbook and training record.

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadet's completion of the self-study package will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Complete Section 3—Analyze a Global Issue.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

At times, it can be difficult to judge the truthfulness and accuracy of information because there is so much information available. Learning how to determine the accuracy and authority of an information source is one of the most important skills that you will develop as you try to develop an understanding of controversial global issues.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

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C0-444 The Heritage Foundation. (2008). *Scientists make anti-global warming case*. Retrieved October 22, 2009, from http://blog.heritage.org/2008/12/11/scientists-make-their-anti-global-warming-case/#

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C0-461 Harris, R. (2009). *Evaluating Internet research sources*. Retrieved November 23, 2009, from http://www.virtualsalt.com/evalu8it.htm

C0-462 Cornell University. (2009). *Critically analyzing information sources*. Retrieved November 23, 2009, from http://www.library.cornell.edu/olinuris/ref/research/skill26.htm

C0-466 Sustainable World Coalition. (2009). *Major global issues synopsis*. Retrieved December 1, 2009, from http://www.swcoalition.org/Article.html

Analyze A Global Issue

SECTION 1: CONTROVERSIAL ISSUES IN BOOKS AND PERIODICALS

SECTION 2: CONTROVERSIAL ISSUES AND INTERNET SOURCES

SECTION 3: EVALUATING WEBSITES

SECTION 1
DEALING WITH CONTROVERSIAL ISSUES IN BOOKS AND PERIODICALS

WHAT ARE CONTROVERSIAL ISSUES?

It is very difficult to say what the future will be like but what is certain is that you will be faced with decisions about a wide range of issues about which people have contradictory views. One important element of global citizenship is thinking critically about controversial issues and making informed choices as you exercise your individual rights and carry out your obligations to others.

Controversial issues are those that have a political, social or personal impact and deal with questions of value and belief. Such issues can be local or global, ranging from bullying, personal lifestyle, and banning cars from school property to the effects of globalization or climate change.

Controversial issues are usually complicated, with no easy answers and are issues on which people hold strong views based on different experiences, interests and values.

Almost any issue can become controversial if one side of an issue is presented in a way that raises the emotional response of those who might disagree.

Where do you get your information about controversial issues?

According to a 2008 Canadian Media Report nearly 75% of you get your news from the Internet while less than 10 % of you get your news from the traditional media, such as newspapers, television, radio and magazines. These statistics represent a significant increase in the use of the Internet for news from similar surveys conducted earlier and approximately 24% of you have left the traditional media because of a lack of trust.

Do you personally mistrust the traditional media to accurately report the news?

If you do, it is probably because like others of your generation you have come to realize that:

- in order to attract audiences, media companies often focus on stories of disaster and problems rather than good news which is most likely to be less dramatic; and
- news companies, just like other businesses, are owned by individuals who may have a particular point of view they wish to promote.

Consequently, you have turned to other media for information about current global issues. However, you should realize that living in an information age can be both a blessing and a curse. It is a blessing because there are many sources of information available but it is a curse because not all information sources contain accurate information.

Your challenge is to distinguish between the good and the bad as you educate yourself about what is going on in the world.

CONTROVERSIAL ISSUES IN BOOKS AND PERIODICALS

You can begin evaluating physical information sources, such as books or articles in periodicals, even before you have the physical item in your hand. Evaluate such a source by first examining the bibliographic citation which is the written description of a book, journal article, essay, or some other published material that appears in a catalog or index. Information in a bibliographic citation usually includes the:

- author,
- publication date,
- edition or revision,
- publisher, and
- title.

This information can help you determine the usefulness of this source for your purpose.

A FIRST LOOK–BIBLIOGRAPHIC INFORMATION

Author

Determine the author's credentials which includes:

- educational background,
- previous writings,
- work experience, and
- area of expertise.

Further, try to determine if the author is:

- cited in other sources, and
- associated with a reputable institution or organization.

Publication Date

It is important that your information sources are up-to-date because the world is changing very fast especially in the business, the science, and technology sectors.

Did you know?

The publication date is often located on the face of the title page below the name of the publisher? If the publication date is not there, look for the copyright date on the reverse of the title page?

Edition or Revision

Determine if this is a first edition or not. Further editions of a source indicate that it has been updated with current information. Also, if a source has many printings or editions, it may indicate that the source has become a standard source in this area and is reliable.

Publisher

The publisher can be a good clue as to the reliability of a source. For example, if the publisher is a university, it is likely to be a scholarly source that is reliable.

Did you know?

It is important to determine if the publisher has a connection with a particular political party, corporation or other organization, such as conservation groups? This kind of affiliation may indicate that the book or article is biased in favour of the viewpoints or beliefs of these groups?

A FINAL LOOK—EXAMINE THE CONTENTS

Information sources, such as journals, magazines and newspapers which may contain valuable, up-to-date information are not created equal. These types of publications are often categorized as:

- scholarly journal,
- news or general interest publication,
- popular magazine, or
- sensational magazine or newspaper.

It is crucial that you consider the type of publication before using it an information source.

As you encounter these publications, consider the following:

Scholarly Journals

These publications are also called academic, peer-reviewed or refereed journals. Scholarly journals:

- have a summary of the article's contents before the main article;
- contain many graphs and charts but few if any glossy pages and dramatic pictures;
- always include a list of the information sources used in the article;
- are written by experts in that particular field whose personal information is generally located on the bottom of the first page;
- use technical language and requires the reader to have some background knowledge; and
- are usually published by professional organizations in the fields of medicine, law and education, for example ,or are published by educational institutions such as universities.

Peer review means that several experts must examine and approve the content of an article before it is published.

News or General Interest Publication

These publications are usually attractive in appearance, published in magazine or newspaper format and contain articles that are often heavily illustrated with photographs. News or general interest publications:

- sometimes provide a list of information sources but not always;
- contain articles written by staff writers or editors, scholars or freelance writers;
- use language that requires a certain level of education but does not require the reader to be an expert;
- are usually published by businesses or individuals; and
- are intended to provide general information on a variety of subjects to a wide audience.

Do you personally know anyone who has written articles for a news or general interest publication?

Popular Magazines

Popular magazines come in may formats but are most often glossy and attractive looking with lots of colour graphics, such as photographs and drawings. Popular magazines:

- do not include lists of information sources;
- use information that is often second-hand or third-hand and the original source is rarely mentioned;
- contain articles that are very short and written in simple language; and
- are mainly intended to entertain the reader, sell products or promote a personal viewpoint.

Sensational Publications

Sensational publications are published in a variety of styles but usually in newspaper format. Sensational publications:

- use very simple language;
- most often use emotional or exaggerated language;
- depend on an audience that is very easily convinced of things;
- use flashy headlines that are designed to surprise the reader; and
- are intended to arouse curiosity or appeal to stereotypes.

***Activate Your Brain #1*:**

Label the publications listed below as scholarly, news or general interest, popular or sensational. Write your response opposite the type of publication.

National Geographic	_____
Reader's Digest	_____
Journal of the Canadian Medical Association	_____
The Globe and Mail	_____
The National Examiner	_____
Sports Illustrated	_____
Canadian Economic Review	_____
The Star	_____

Try your hand at sensationalism. Write a headline that might appear on the front page of a sensational publication about a current global issue or news item.

_____

_____

Look online at http://www.library.cornell.edu/olinuris/ref/research/skill26.htm for more information on using books and articles from different types of publications.

SECTION 2
DEALING WITH CONTROVERSIAL ISSUES USING INTERNET SOURCES

Did you know?

Using the Internet carelessly is like going to the magazine section in a store, reaching out with your eyes closed and grabbing the first magazine you touch. What is the likelihood that you will find a reliable source? Now imagine that your local store owner prints up a magazine and puts it in the magazine section. Have your chances of getting an accurate reliable source increased or decreased?

Welcome to the Internet! Information is everywhere on the Internet and it is continuously being created and revised; therefore, the problem with accuracy becomes very important. Accurate information is important because it serves as the basis for your beliefs, decisions, choices, and understanding of the world, but on the Internet while such information is easily available, it ranges from the very good to the very bad.

Another analogy might be helpful. If you eat something harmful that you believe to be safe, you can become ill; if you avoid something good that you believe to be harmful, you have needlessly restricted your enjoyment of a certain aspect of life. The same thing applies to your attempts to understand what is going on in the world. How can you tell if something you are reading is true and reliable or false and unreliable?

FIRST LOOK–SCREENING THE WEB SITE

Did you know?

that examining a website's home page is the same as checking the bibliographic citation for a book and helps you determine the reliability of an Internet source?

Determine the Authority of the Site

Determining the authority of any particular website is especially important. Ask yourself these questions about the website:

- Is it absolutely clear which company or organization is responsible for the information on the site?
- Is there a link to a page describing what the company or organization does and the people who are involved normally referred to as an “About Us” page?
- Is there a valid way of making sure the company or organization is a real place that has real contact information? An email address is not enough.

If you answered "**NO**" to any of these questions the site is probably unreliable.

Determine the Accuracy of the Information

Eventually, while you are on the Web, you will encounter information that is not entirely true. In addition to determining the authority of a site, you also need to figure out if it is presenting accurate information. Ask yourself these questions about the information:

- Can I easily figure out who wrote the information?
- Are all factual claims clearly supported with documentary proof?
- Are there links to other sources?
- Are there any obvious grammatical and spelling errors which may indicate that the content is not accurate?
- How long ago was the page updated? Is there a date stamp on the article somewhere?
- Are the writer's qualifications clearly stated somewhere on the site?

Once again if you answered "**NO**" to any of these questions the site is probably unreliable.

Determine the Motivation of the Author

To find a non-biased information source, you will need to determine if the site has an interest in something other than providing accurate information. Ask yourself these questions:

- Does the writing seem fair and balanced or does it seem slanted toward a particular point of view?
- Can you determine from the site address who the site belongs to? Most organizations and businesses put their name in the Uniform Resource Locator (URL) unless they have a reason not to do so and this is a good way to determine quickly if the site is reliable. A piece on smoking and health created by the tobacco industry is most likely unreliable.
- Are the advertisements, if there are any, clearly separated from the content?

Any site that has a bias or a hazy line between the advertisements and the content is **NOT** a reliable site.

If the information is linked to an organization, try to determine its reliability by looking at the URL of the web page:

- if the URL ends with .edu, it is most likely an educational institution and most likely reliable;
- if the URL ends in .gc.ca, it is most likely a reliable government website; and

Government sites are usually good sources for statistics and objective reports.

- if the URL ends in .org it is usually a non-profit organization which can be good or bad depending on their goals or political biases.

Be aware that some websites with the .org ending are advocacy groups for a particular cause and are biased in favour of that particular cause.

Did you know?

A reputable online journal or magagzine should contain a bibliography for every article. The list of sources within that bibliography should be extensive and it should include scholarly, non-Internet sources.

Did you know?

Network and cable news stations are also involved in entertainment and you should consider them a stepping stone to other sources. Every television and print news source has a website. To some extent, you can rely on the most trusted news sources, but you should not rely on them exclusively.

Use Common Sense

Just because something is on the Web does not mean it is reliable and accurate. Some common places to find opinions and works of fiction that can be disguised as facts are:

Blogs. Anybody can publish a blog on the Internet which makes it very difficult to determine the background of the blogger or get an understanding of their level of expertise. Many people create blogs simply to give themselves a forum to express their views and opinions.

Personal websites. A web page is much like a blog when it comes to being an unreliable source. Web pages are created by the public and it is sometimes difficult to determine which websites are created by experts and professionals on a given topic.

Did you know?

Using information from a personal website is a little like collecting information from strangers on the street.

Wiki Sites. Wiki websites can be very informative, but they can also be untrustworthy. Wiki sites allow groups of people to add and edit the information contained on the pages without any or little regard for their expertise in the particular field.

Is it acceptable to use Wikipedia as a source of information? Wikipedia contains a great deal of information and is probably best used to get a reliable overview of a topic which gives you a good place to start and a collection of links to other resources.

A FINAL LOOK–DETERMINE THE QUALITY

Did you know?

Determining the quality of information is more like an art than a science because there is no single perfect indicator of reliability, truthfulness, or value. Instead, you must make a decision about whether to use a source from a collection of clues or indicators.

When researching information from the Internet, use the **CAFÉ** (Challenge, Adapt, File, and Evaluate) strategy as you encounter new material. The **CAFÉ** strategy includes:

- **Challenge** the information by asking questions like: Who says so? Why do they say so? Why was this information created? Why should I believe it? Why should I trust this source? Is it truthful and reasonable?
- **Adapt** or raise your standard and require more evidence for stronger claims which conflict with commonly accepted ideas. The new information may be true but you should not automatically accept that it is true.
- **File** new information in your mind rather than immediately believing or disbelieving it. Do not jump to a conclusion or come to a decision too quickly. Simply file away for future reference that someone claims something to be the case and reserve judgement about believing or disbelieving it.
- **Evaluate** and re-evaluate regularly. New information or changing circumstances affects the accuracy of information. You should recognize that information is constantly changing especially in science, medicine, business and technology.

If the resource stands up to your initial examination, apply the **CARS** (Credibility, Accuracy, Reasonableness and Support) strategy to finally determine if you will use a particular source. The **CARS** strategy includes:

- **Credibility** means trustworthy. Look at the author's credentials, evidence of quality control, such as peer review, and the reputation of the organization when determining credibility. Your goal is to find an authoritative source that contains good information and evidence that allows you to trust it.
- **Accuracy** means the information is up-to-date, factual, detailed, exact, and complete. Your goal is to find a source that is correct today and not yesterday, which gives the whole truth.
- **Reasonableness** means the information is fair, balanced, objective, and logical without conflict of interest, errors, or slanted tone. Your goal is to find a source that presents the subject thoughtfully and reasonably, in a truthful manner.
- **Support** means the source has links, contact information, proof of its claims as supporting documentation. Your goal is to find a source that provides convincing evidence for the claims made which can be supported by at least two other sources.

It is important that you keep an open mind regarding important issues. When you are confronted with information that contradicts or confirms your personal opinion you must still be objective and regarding the reliability of the source.

Look online at http://www.virtualsalt.com/eval8it.htm for more information on the **CAFÉ** and **CARS** strategies.

SECTION 3
ANALYZE A GLOBAL ISSUE

MAJOR GLOBAL ISSUES

Some of the more important current global issues which are unlikely to go away in the near future include the following:

Population

World population passed 6 billion in 2000, up from 2.5 billion in 1950. It is projected to grow to 8 billion in 2025, 9.3 billion in 2050, and eventually to stabilize at 10.5–11 billion with almost all growth occurring in the developing world. The world will need to feed 5 billion more people, which combined with higher standards of living, will put enormous strains on land, water, energy and other natural resources.

Poverty and Inequality

Hunger is slowly declining in most developing countries but the degree of inequality between rich and poor is not getting better. The Sustainable World Coalition claims that as of 2009, there are still 1.2 billion people who live on less than $1 per day.

Food Consumption

Food consumption per capita is increasing substantially around the world in both developed and developing countries. Food production is increasing, but continued increase is limited by available land and water, especially in Asia. Land suitable for agriculture is being used for economic development as the population of developing countries continues to increase and their economies improve through globalization.

Water

Water use is growing over twice the rate that population is growing and as of 2009, 70 % of water was used for agriculture. Development increases water use and hence water scarcity. Worldwide, half of all wetlands have been lost, and more than 20% of the 10 000 known freshwater species are extinct or threatened. By 2025, nearly half the world's population will experience water shortages.

Forests

The world's forests continue to shrink with the highest rate of decline in Africa followed by Latin America. Almost the entire decline is in tropical areas, which contain about half of all remaining forests. Expansion of agriculture is by far the main cause of deforestation. The loss of forests is lowering water quality and causing floods. About 10% of tree species are at risk of extinction.

Energy

Consumption of all types of energy is growing with the largest increase being fossil fuels. Biomass from burning wood and animal dung is used as the primary energy source in many developing countries but this causes air pollution and health problems although new burning techniques are helping. Renewable energy sources, mostly hydroelectric, account for 4–5% of the world's energy but solar and wind power in 2009, accounted for only 0.04% of the total.

Climate Change

Fossil fuel consumption and carbon dioxide emissions continue to grow especially in Asia and the United States (US). The level of consumption and emissions per capita is 10 times higher in the US than in the developing countries, and twice as high as in Europe. There are many signs of climate change, such as rising temperature, rising ocean levels, 40% melting of Arctic ice, and changing weather patterns including more intense droughts and more intense storms. Insurance payments from storm damage, has increased from $2 billion per year in the 80s to $30 billion in the 90s.

Health

Most deaths in the least developed countries are readily preventable. These deaths, often in childhood, are primarily due to communicable, environment-related diseases. Most common of these are due to lack of clean water and sanitation. In 2009, over one billion people still lack access to safe water and 2.5 billion lack adequate sanitation facilities with the great majority living in rural Africa and Asia.

Using the information contained in this lesson examine two websites, provided by your Proficiency Level Officer, on an important global issue such as those described above by first applying the **CAFÉ** strategy and then the **CARS** checklist to decide which of the two sites contains the more reliable source.

EVALUATING WEBSITES CHECKLIST

CRITERIA	SATISFACTORY	UNSATISFACTORY	COMMENT
Credibility			
Author information			
Organization's reputation			
Quality Control			
Accuracy			
Factual			
Up-to-date			
Truthful and detailed			
Reasonableness			
Balanced			
Logical presentation			
Unbiased attitude			
Lacks errors			
Support			
Documentary proof			
Links			
Contact information			
Putting it all Together			

Credibility. If your source contains author or organizational information which shows that they are reputable and also contains evidence of peer or editorial review …

Accuracy. If the information is factual, up to date, truthful and detailed …

Reasonableness. If the viewpoint appears to be logically presented without bias or errors …

Support. If your source contains proof of its claims and links to other sources with contact information then …

YOU MAY HAVE FOUND A RELIABLE SOURCE!

Congratulations, you have completed your self-study package on analyzing a global issue. Complete the exercise in Section 3, in your own time, and then hand the completed package to the Training / Proficiency Level Officer who will record your result in your logbook and training record.

ACTIVATE YOUR BRAIN ANSWER KEY

***Activate Your Brain #1*:**

Label the publications listed below as scholarly, news or general interest, popular or sensational. Write your response opposite the type of publication.

National Geographic	News and general interest
Reader's Digest	Popular
Journal of the Canadian Medical Association	Scholarly
The Globe and Mail	News and general interest
The National Examiner	Sensational
Sports Illustrated	Popular
Canadian Economic Review	Scholarly
The Star	Sensational

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COMMON TRAINING

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 1

EO M503.01 – CREATE A PROPOSAL

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-805/PG-001, *Proficiency Level Five 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 Create a Proposal worksheet located at Attachment A for each cadet.

Photocopy the Create a Proposal Aide-Mémoire located at Attachment B for each cadet.

Photocopy the table of contents of A-CR-CCP-030/PT-001, *Water Safety Orders* for each cadet.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for this lesson to orient the cadets to project management and the writing of a proposal.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall be expected to create a proposal.

IMPORTANCE

It is important for cadets to create a proposal as it is an important step in the achievement of a project. A well thought out proposal allows people to get a better understanding of the project's workload, the necessary requirements for the project and if the project is feasible in the first place.

Teaching Point 1 **Define project management.**

Time: 5 min Method: Interactive Lecture

PROJECT

A project always has the following components:

Specific outcomes. Product or result.

Defined start and end date. Projects do no go on forever. Projects are temporary and are created to achieve particular results. When the results are achieved, the project ends.

Established budgets. Required amount of people, funds, facilities, equipment, and information.

Projects vary:

- **Large or small.** Organizing an inter-squadron sports competition is a large project. Organizing a sports event for senior cadets is a small project.
- **Involve a large of limited number of people**. Planning a squadron sports event is a project that involves many people. Reorganizing the furniture in a bedroom is also a project even though it only involves a limited number of people.
- **"Business-related" or personal.** Organizing the squadron's annual Christmas dinner is a business-related project. Having a dinner party for 12 people is a personal project.

PROJECT MANAGEMENT

Project management is the process of guiding a project from its beginning to its end. Project management includes three basic operations:

- planning;
- organizing; and
- controlling.

No matter what size the project, what needs to be performed is the same. Large projects may require more time to prepare than small projects but both still need to be structured.

Every project entails five phases:

1. **Conceive: Coming up with the idea.** This is the stage during which project managers come up with the project idea. It is at this stage that they determine the project's feasibility, its benefits and its limitations. At the end of this stage, project managers submit their project for approval.
2. **Define: Developing a plan.** This is the stage during which a detailed plan is developed.
3. **Start: Forming a team.** It is at this stage that people who need to know about the project are informed of it and are informed of their tasks.
4. **Perform: Doing the work.** This is when the work of the plan is put into action. This is where supervisors collect information (supervise) to identify deviations from the plans in order to apply corrective measures. This ensures that the objectives are attained.
5. **Close: Ending the project.** This is where a meeting is held to recognize achievements and discuss lessons that can be applied to the next project.

For small projects, the entire process can take a few days; larger projects may take many years. No matter how simple or complex the project, the process is the same.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. What are the five phases of a project?

Q2. What is project management?

Q3. In what stage is the proposal developed?

ANTICIPATED ANSWERS:

A1. The five phases of a project are:

- Conceive: Coming up with the idea.
- Define: Developing a plan.
- Start: Forming a team.
- Perform: Doing the work.
- Close: Ending the project.

A2. Project management is the process of guiding a project from its beginning to its end.

A3. The proposal is developed during the first stage, which is the conceiving stage.

Teaching Point 2 **Explain the conceiving phase of a project.**

Time: 10 min Method: Interactive Lecture

All projects begin with an idea. Sometimes the organization has specific requirement for a project; sometimes there is more freedom in the choice.

CHOOSING A PROJECT

A project organized within the Canadian Cadet Organizations (CCO) should be in-line with its aim.

Ask the cadets to list the aim of the CCO.

The aim of the CCO is to:

1. Develop in youth the attributes of good citizenship and leadership.
2. Promote physical fitness.
3. Stimulate the interest of youth in the sea, land and air activities of the Canadian Forces.

Cadets may be asked to participate in the organization of an exercise.

Here are examples of exercises that cadets may choose to organize:

- community service,
- leadership,
- healthy living,
- fitness and sports,
- marksmanship,
- drill,
- CF familiarization,
- aviation,
- aviation technology,
- aerospace, or
- survival.

CHOOSING AN ACTIVITY OR ACTIVITIES

When the exercise is chosen, activities that relate to the exercise have to be generated. According to CATO 11-03, *Cadet Program Mandate*, the vision of the Cadet Program (CP) is "a relevant, credible, and proactive youth development organization, offering the program of choice for Canada's youth, preparing them to become better leaders of tomorrow through a set of fun, challenging, well-organized and safe activities." That vision should be kept in mind when determining activities for a cadet exercise.

A good method to generate ideas is brainstorming.

Ask the cadets to list some guidelines on how to carry out a brainstorming activity.

Here are some guidelines:

- Write everything that comes to mind.
- Critique is prohibited: all ideas are welcomed.
- Use others ideas to generate new ideas.
- Produce a maximum of ideas.

For example, if cadets choose a fitness and sports exercise, they may brainstorm activities, such as:

- a race,
- a swim session,
- a karate session,
- a downhill skiing day,
- a boxing training session, and
- a tabloid event.

Before making a final decision, it is important to consider a few factors:

- the activity's or activities' goals, and
- the limitations that may stop the exercise from happening.

The age of participants should also be taken into consideration. What may be fun for first year cadets may not be as fun for third year cadets.

DETERMINING THE ACTIVITY'S OR ACTIVITIES' GOALS

Each activity that is part of the exercise has to have a specific goal. The goal of each activity should meet the CCO's aim.

Goals should be specific, measurable, achievable, relevant, and timed. Having clear expectations makes it easier to ensure the project maintains the right direction.

Ask the cadets to explain the concept of making goals SMART.

- **Specific.** The aim of the goal must be defined and everyone involved must be aware of it.
- **Measurable.** A standard to assess achievement must be identified.
- **Achievable.** The goal must be realistic and all required resources must be accessible to accomplish it.
- **Relevant.** The goal must be worthwhile for the people involved
- **Timed.** The goal must be able to be completed within the given time.

DETERMINING LIMITATIONS

At this stage, project managers have to determine the limitations that may put a stop to their project.

Such limitations may include:

- policies, and
- resources, such as:
    - schedule / time,
    - personnel,
    - transportation,
    - finance, and
    - equipment.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. What is the aim of the CCO? Why is it important to know it?

Q2. What is a method of generating ideas for activities?

Q3. What are some limitations that may put a stop to a project?

ANTICIPATED ANSWERS:

A1. The aim of the CCO is to :

- Develop in youth the attributes of good citizenship and leadership.
- Promote physical fitness.
- Stimulate the interest of youth in the sea, land and air activities of the Canadian Forces.

It is important to know the aim of the CCO because a project organized within the Canadian Cadet Organizations (CCO) should be in-line with its aim.

A2. Brainstorming is a method of generating ideas for activities.

A3. Limitations that may put a stop to a project include:

- policies, and
- resources, such as:
  - schedule / time,
  - personnel,
  - transportation,
  - finance, and
  - equipment.

Teaching Point 3 **Explain the parameters of cadet activities with reference to policies.**

Time: 5 min Method: Interactive Lecture

A policy is a course or a principle of action created to guide leaders and to provide them with parameters for carrying out cadet activities. There are many policies and safety procedures to ensure cadets are participating in fun and challenging training safely. Those policies and procedures have to be taken into account when an exercise is being organized.

CADET ADMINISTRATIVE TRAINING ORDERS (CATOs)

CATOs contain a list of policies that apply to the administration and training of cadets across the country. Some policies restrict some activities and give guidance on others. For example, CATO 13-12, *Supervision of Cadets* describes the requirements for the number of instructors needed for each type of activity that may be carried out to ensure proper supervision.

WATER SAFETY ORDERS

Distribute the table of contents of A-CR-CCP-030/PT-001, *Water Safety Orders* to each cadet.

Water Safety Orders is a document that gives guidance on the organization of on-the-water (OTW) activities.

The document contains information on:

- water safety orders,
- powerboat safety orders,
- rowing safety orders,
- sailing safety orders,
- canoe / kayak safety orders,
- swimming safety orders, and
- scuba diving.

The information refers to floatation, the number of staff per cadet, wind, weather, equipment, clothing, night operation, wearing of shoes, capsize drills, etc.

Other documents exist to guide leaders when planning various activities. They include:

The DND/CF *General Safety Guide for the Cadet Program* has been produced to assist leaders in the fulfillment of their safety leadership responsibilities. It can be found online at http://www.cadets.ca/content-contenu.aspx?id=64062

The A-GA-135-001/AA-001*Flight Safety for the Canadian Forces* is an A–Z guide useable by companies, militaries, as well as countries, to start and run a flight safety program. It can be found online in the search section of www.airforce.forces.gc.ca

The A-CR-CCP-177/PT-001, *Cadet Marksmanship Program Reference Manual* contains guidance on the organization of marksmanship activities.

Some regions or detachments may have additional orders which amplify or clarify directives found in national documents.

CONFIRMATION OF TEACHING POINT 3

QUESTIONS:

Q1. Which documents contain a list of national policies that apply to the administration and training of cadets across the country?

Q2. What document must be used when organizing an activity on the water?

Q3. What type of information can be found in this document?

ANTICIPATED ANSWERS:

A1. CATOs.

A2. Water Safety Orders should be used when planning OTW activities.

A3. Information on the activities and the various safety procedures to be followed can be found in those documents.

Teaching Point 4 **Explain how to write a proposal.**

Time: 5 min Method: Interactive Lecture

A proposal should tell how, when, by whom, and for how much. It needs to contain enough information for the supervisor to either accept or refuse the project.

By writing a proposal, it becomes clear to supervisors what the project will produce and the resources needed to carry it out.

Distribute the Create a Proposal worksheet to the cadets.

The proposal should include the following information:

- project title (type of exercise),
- activities selected,
- objective(s) of each activity, and
- limitations, such as:
  - policies,
  - schedule / time,
  - personnel,
  - finance, and
  - equipment.

Distribute the Create a Proposal Aide-Mémoire to the cadets.

Once the proposal is complete, it is submitted to the appropriate authority for approval.

CONFIRMATION OF TEACHING POINT 4

QUESTIONS:

Q1. What information should be included in a proposal?

Q2. What are examples of limitations?

Q3. What needs to be done when the proposal is complete?

ANTICIPATED ANSWERS:

A1. A proposal should include the following information:

- project title (type of exercise),
- activities selected,
- objective(s) of each activity, and
- limitations.

A2. Some examples of limitations include:

- policies,
- schedule / time,
- personnel,
- finance, and
- equipment.

A3. Once the proposal is complete, it is submitted to the appropriate authority for approval.

END OF LESSON CONFIRMATION

The cadets' creation of a proposal will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

This EO is evaluated IAW A-CR-CCP-805/PG-001, *Proficiency Level Five Qualification Standard and Plan*, Chapter 3, Annex B, 503 PC.

CLOSING STATEMENT

Creating a proposal is an important step to making a project happen. The more thought put into the proposal, the more defined your ideas are, the easier the rest of the stages of the project should be. Creating a proposal clarifies the scope of the project and how much of a commitment is needed to make it happen.

INSTRUCTOR NOTES / REMARKS

Cadets will be given the opportunity to create a proposal, as a member of a group, as part of their OJT.

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CREATE A PROPOSAL

Group members: _____

Date: _____

PROJECT:			
Selected Activities	**Objectives**	**Limitations (Resources Required)**	**Others (Specify)**

Approximate time needed for planning and preparation: _____

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Create a Proposal Aide-Mémoire

Steps to follow to create a proposal

1. Choose the project.
2. Choose the activity or activities.
3. Determine the goal of each activity.
4. Determine the limitations of each activity.

Questions to help you create a proposal and make a plan

Here is a list of questions to keep in mind when planning an activity. Some apply to the proposal planning stage and some need to be taken into consideration later in the process. Either way, it is good to be aware of these questions throughout the entire process.

- Are there policies that apply to this activity (eg, supervision)?
- Are there specific safety procedures to follow?
    - fire regulations,
    - medical / emergency situations,
    - weather,
    - equipment, and
    - specialist instructor.
- What are the requirements (if applicable) for:
    - transportation,
    - facilities,
    - supervision,
    - equipment,
    - food and water,
    - time,
    - specialist instructors, and
    - hygiene maintenance?
- What are the costs associated with the activity?
- Is there the potential for a Plan B (eg, bad weather, insufficient number of instructors)?
- Are there particular requirements for the cadets:
    - for dress / clothing,
    - to bringing lunch, and
    - to have a specific level of fitness, knowledge, or ability?

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COMMON TRAINING

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 2

EO M503.02 – PREPARE AN 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-805/PG-001, *Proficiency Level Five 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 OHPs of Figures A-1 and A-2 located at Attachment A.

Photocopy Exercise Plan Example located at Attachment B for each cadet.

Photocopy Exercise Plan Template located at Attachment C for each cadet.

Photocopy the Guided Discussion Worksheet located at Attachment D.

PRE-LESSON ASSIGNMENT

Have the cadets bring their Aide-Mémoire of EO M503.01 (Create a Proposal) to the class.

APPROACH

An interactive lecture was chosen for TPs 1, 2 and 4 to orient the cadets to the planning and preparation of an exercise.

An in-class activity was chosen for TP 3 as it is an interactive way to provoke thought and stimulate interest about plan format.

A guided discussion was chosen for TP 5 as it allows the cadets to discuss sustaining motivation during a project by sharing opinions, knowledge and experience with the group. The instructor, through a series of guided and follow-up questions, is able to stimulate the cadet's interest in sustaining motivation during an activity. The guided discussion contributes to the cadets' listening skills and team development.

INTRODUCTION

REVIEW

QUESTIONS:

Q1. What is project management?

Q2. What are the three basic operations included in project management?

Q3. What are the five phases of project management?

ANTICIPATED ANSWERS:

A1. Project management is the process of guiding a project from its beginning to its end.

A2. Project management includes three basic operations:

- planning;
- organizing; and
- controlling.

A3. The five phases of a project are:

- conceive: coming up with the idea;
- define: developing a plan;
- start: forming a team;
- perform: doing the work; and
- close: ending the project.

OBJECTIVES

By the end of this lesson the cadet shall be expected to prepare an exercise.

IMPORTANCE

It is important for cadets to know how to prepare an exercise, as it is not only a transferable skill, but it also gives them the tool to take initiative in organizing various events that will benefit cadets in their squadron.

Teaching Point 1 **Explain the concept of a project audience.**

Time: 5 min Method: Interactive Lecture

A project audience is any person or group that supports, is affected by, or is interested in a project. A project audience can be inside or outside the organization.

Knowing your project's audience helps you to:

- plan whether, when and how to involve them; and
- determine whether the scope of the project is bigger or smaller than you originally had thought.

ACTIVITY

Time: 4 min

OBJECTIVE

The objective of this activity is to have the cadets see the scope a project audience can take.

RESOURCES

- Paper, and
- Pen / Pencil.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Have cadets take out a piece of paper and a pen / pencil.
2. Inform the cadets that you will read a question to which they will have two minutes to write as many answers as possible.
3. Read the following question: "The senior cadets from this squadron have decided to organize a sports competition between this squadron and two other squadrons in the area. They are hoping to hold the competition three months from now in a local school gym. The competition will start at 0800 hrs and end at 1600 hrs and lunch will be provided to the entire group (estimation 100 cadets). Who needs to be contacted or informed for this event to happen?"
4. Allow two minutes for cadets to write their answers.
5. Alternating, have each cadet share one answer from their list and why they believe that those people should be involved in or informed of the project.
6. Answers may include:
    - cadets from all squadrons,
    - officers from all squadrons,
    - parents from all squadrons,
    - squadron parents committee from all squadrons,

- school authorities,
- equipment related personnel (supply officer or equipment rental agency),
- restaurant personnel (if planning on ordering food for the group),
- cleaners, and
- cadet detachment.

The list is not exhaustive. Cadets may have provided other answers that are correct. If they can correctly justify why certain people are involved, then their answer should be accepted as correct.

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 defining the plan.**

Time: 25 min Method: Interactive Lecture

There are many steps that need to be taken when defining a plan. They are as follows:

1. developing a work-breakdown structure (WBS);
2. determining precedence;
3. developing a schedule;
4. determining team members' skills and knowledge;
5. defining team members' roles and responsibilities;
6. determining and planning non-personnel resources;
7. identifying risk;
8. preparing a tracking system; and
9. confirming team members' participation.

DEVELOPING A WORK BREAKDOWN STRUCTURE (WBS)

Psychologists say human brains can normally comprehend 7–9 items simultaneously. For that reason, a project with dozens or even thousands of tasks may often be overwhelming. Project managers can deal with such projects by organizing the numerous tasks into phases to make them more manageable.

The most important guideline when preparing an exercise is thinking in detail. Project managers often underestimate the time and resources they need because they do not recognize everything they have to do to complete their tasks.

The WBS is a representation of all the tasks that have to be completed. The WBS allows leaders to see all tasks in an organized manner.

Those representations may take various forms. They are often displayed in the form of a hierarchical tree, but they can also be in the form of a tabular list.

As examples, Figure 1 shows a WBS for a hypothetical banquet and Figure 2 shows a WBS for a report preparation.

Show the cadets the slide of Figure A-1 located at Attachment A.

Show the cadets the slide of Figure A-2 located at Attachment A.

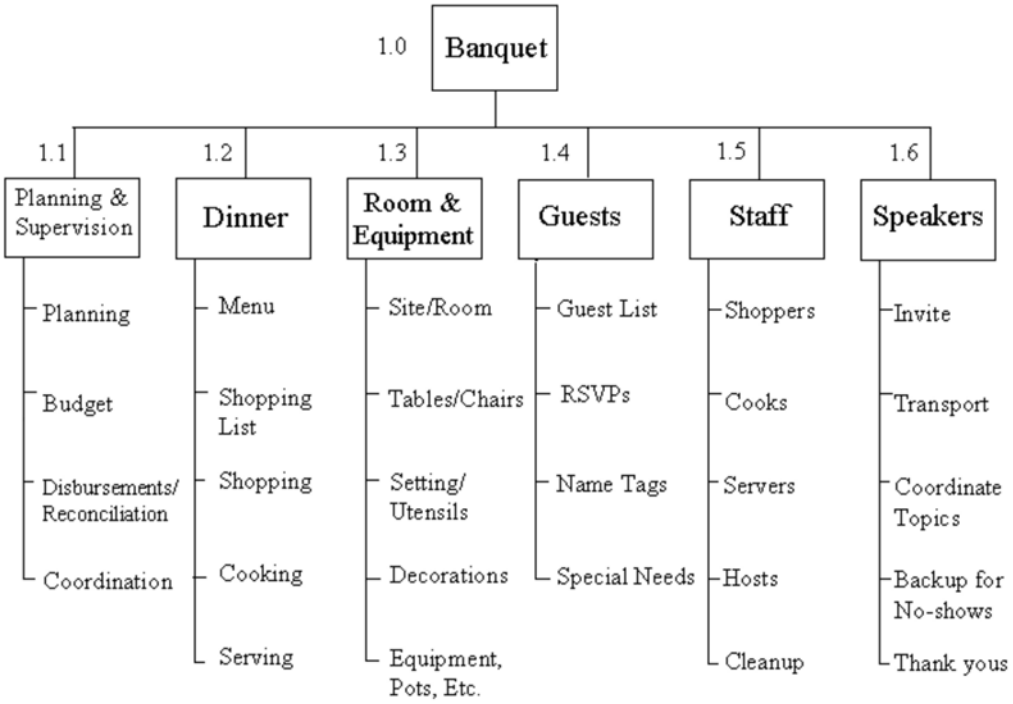


Figure 1 Banquet WBS

Note. From "Principle Based Project Management", 2007, *Work Breakdown Structure (WBS*). Retrieved October 16, 2008, from http://www.hyperthot.com/pm_wbs.htm

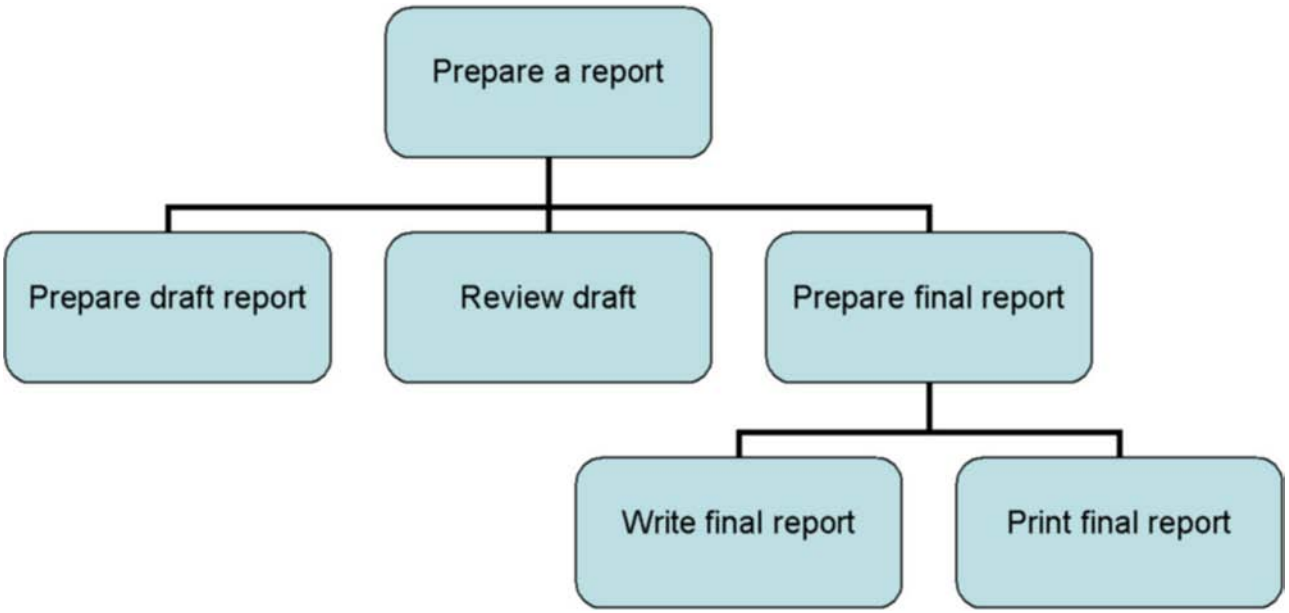


Figure 2 Report Preparation WBS

Note. From *Project Management for Dummies* (p.76), by S. E. Portny, 2007, Hoboken, NJ: Wiley Publishing.

Here is how to develop a WBS:

1. Brainstorm all the necessary tasks for the exercise.
2. Group the tasks into a few major categories with common characteristics.
3. Within each category, group together the tasks that have the same characteristics.

To determine if the work has been broken into small enough pieces, answer these questions:

- Can the resources needed for the exercise be accurately estimated (personnel, equipment, raw materials, money, facilities, information, etc.)?
- Can the time requirements for each activity be accurately estimated?
- If some tasks were to be assigned to a stranger, would that person have sufficient detail to understand exactly what to do?

Here are some tips to improve the quality of the WBS:

- Involve the people who will be doing the work.
- Review information from previous similar projects.
- Make assumptions when there is uncertainty about a certain activity. Do not forget to update the WBS (or the plan) when that uncertainty is clarified.

The WBS does not take into consideration the chronological order in which each event should be done.

At this stage, it can be beneficial to identify obstacles that may be encountered throughout the project, in order to generate some contingency plan ideas.

DETERMINING PRECEDENCE

Once all the tasks have been outlined, it has to be determined in which order they have to be completed. Also, it has to be determined which events do not depend on others because they may be able to get accomplished concurrently with other tasks.

DEVELOPING A SCHEDULE

Once the precedence of tasks has been determined, the duration of each task has to be estimated. This step allows leaders to visualize how much time is needed prior to the conduct of the exercise, during the exercise and after the exercise.

The information could be displayed as follows:

	Activity	Required Time	Comments
1			
2			
3			
4			
5			
6			

Note. Created by Director Cadets 3, 2010, Ottawa, ON: Department of National Defence.

DETERMINING TEAM MEMBERS' SKILLS AND KNOWLEDGE

To accomplish the most with a minimum of time and resources, each task must be done in the correct order and each person must work at peak efficiency.

To ensure this happens, leaders should:

- determine which skills and knowledge they require to get the tasks done; and
- determine who is available and what skills they have to offer.

DEFINING TEAM MEMBERS' ROLES AND RESPONSIBILITIES

A leader may assign tasks for various reasons, such as:

- the assigned person is the most qualified or efficient at that task;
- the assigned person needs further practice at that task; or
- the assigned person has expressed an interest for that task.

No matter how the task is assigned, a leader's main focus should be to ensure the project is going to move along smoothly. If someone has been assigned a task in which they have little experience, then a leader should ensure the person receives sufficient support in accomplishing that task.

A leader may be able to delegate but that doesn't mean they have nothing to do with the task anymore. A leader may transfer the decision-making power to someone else, but they still need to ensure that the desired results are achieved.

Delegating is important for three reasons:

- to allow the leader to do other tasks;
- to have the most qualified person make decisions; and
- to develop subordinates' ability to handle additional assignments prudently and successfully.

Leaders should never assign other people tasks that they cannot clearly define themselves.

DETERMINING AND PLANNING NON-PERSONNEL RESOURCES

To determine and plan non-personnel resources, a leader should:

- look at every task outlined in the WBS and determine the requirements for each task; and
- determine how those requirements are going to be met.

IDENTIFYING RISK

The first step toward controlling risks is identifying them. Not all risks cause the same degree of concerns. Risk has to be managed throughout the duration of the project, from its beginning to its end.

Here is a list of possible risk factors that may arise during a project:

- insufficient time to prepare,
- missing parts to the plan (eg, wet weather plan),
- replacement of team member / leader, and
- a supporting activity (i.e. meals or transportation) has no assigned leader.

Leaders have to be aware of what may happen. In some cases, the risks are such that they create a requirement for a contingency plan (also referred to as Plan B).

PREPARING A TRACKING SYSTEM

Before the project starts, the desired results and the measures taken to ensure the desired results are achieved, have to be determined. Throughout the duration of the project, leaders need to maintain control, to ensure work is getting done. Monitoring performance makes it easier to detect problems.

Leaders should follow these procedures throughout a project's life:

- At the start of a project, reconfirm with people their commitments.
- At the start of a project, ensure people understand what is expected of them.
- Have people keep track of the work they perform.
- At agreed-upon intervals during the project, confirm with people the work they have completed.
- At intervals during the project, compare actual performance with planned performance, identify any problems, formulate, take corrective actions, and keep people informed.

CONFIRMING TEAM MEMBERS' PARTICIPATION

Starting a project off correctly is the key to ultimate success. As a project is about to start, here are things that should be done:

- Inform the people that the project is going to go ahead, that the plan is finalized.
- Confirm they are still available to support the project.
- Reconfirm the work expect from them.
- Advise them of the pre-exercise meeting. They should get a copy of the plan for review before the meeting. This will be when everyone becomes aware of what everyone's tasks are and that clarifications from the plan are made.

At this point, it is also important to start the groundwork for the post-project evaluation. Here are some guidelines to follow:

- Inform the team that there will be a post-exercise meeting at the end of the project.
- Encourage team members to record their problems, challenges, ideas and suggestions throughout the project.
- Clarify the criteria that define your project's success by reviewing the latest version of the project's objectives with team members.
- Maintain a own project log (project issues and occurrences) and encourage team members to do the same.

Before the pre-exercise meeting, leaders should meet with their supervisors to have the plan reviewed and approved. Leaders should be open minded to supervisors' feedback.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. What are the steps to defining a plan?

Q2. What is a WBS?

Q3. What are some procedures that can be followed to ensure the work is getting done?

ANTICIPATED ANSWERS:

A1. The steps to defining a plan are:

1. developing a WBS;
2. determining precedence;
3. developing a schedule;
4. determining team members' skills and knowledge;
5. defining team members' roles and responsibilities;

6. determining and planning non-personnel resources;
7. identifying risk;
8. preparing a tracking system; and
9. confirming team members' participation.

A2. The WBS is a representation of all the tasks that have to be done. The WBS allows leaders to see all tasks in an organized manner.

A3. Some procedures that can be followed to ensure the work is getting done are:

- At the start of a project, reconfirm with people their commitments.
- At the start of a project, ensure people understand what is expected of them.
- Have people keep track of the work they perform.
- At agreed-upon intervals during the project, confirm with people the work they have completed.
- At intervals during the project, compare actual performance with planned performance, identify any problems, formulate, take corrective actions, and keep people informed.

Teaching Point 3 **Have the cadets create an exercise plan template.**

Time: 20 min Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets create an exercise plan template.

RESOURCES

- Exercise Plan Example located at Attachment B,
- Exercise Plan Template located at Attachment C,
- Paper,
- Pen / Pencil,
- Flip Chart paper, and
- Markers.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Divide the cadets in groups of no more than three.
2. Distribute paper, pen / pencil, flip chart paper and markers to each group.

3. Tell the cadets they have to create a plan template that included all the information to be included in a plan. It has to be a template they could use.

Encourage the cadets to use their Create a Proposal Aide-Mémoire (EO M503.01 Create a Proposal), as it contains information that may help.

4. Allow the cadets 10 minutes to work in groups.

5. Allow a total of five minutes for all the groups to present their final work to the class.

6. Distribute the Exercise Plan Example located at Attachment B and the Exercise Plan Template located at Attachment C and discuss elements that differ from the ones they have created.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 3

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

Teaching Point 4 **Explain starting the team.**

Time: 20 min Method: Interactive Lecture

It is important for people (especially cadets) to be informed at the appropriate time.

Review the concept of project audience.

Ask the cadets if they believe everyone in the project audience needs to be informed at the same time. Why or why not?

ANNOUNCING THE EXERCISE

The people affected by the exercise need to be informed at various times depending on the tasks or impact they have on the exercise.

Before announcing an exercise to cadets, leaders need to ask themselves if the time is appropriate to make an announcement. They can ask themselves questions, such as "Are we ready to make this announcement?" or, "Is this going to allow sufficient time for the cadets to prepare for the exercise?"

There are many ways to announce the exercise to the cadets, such as:

- email,
- a written announcement in the squadron's newsletter or monthly schedule,
- a verbal announcement at the end of a training session, or
- a formal meeting.

PLANNING A SUCCESSFUL PRE-EXERCISE MEETING

The information in a pre-exercise meeting must include:

- what has to be done;
- when it has to be done;
- how it has to be done;
- by whom it has to be done; and
- available resources.

To have a good meeting, there needs to be some preplanning. Here are some pointers:

Decide who needs to attend and why. People who have necessary information or the authority to make specific decisions should be in attendance.

Give plenty of notice of the meeting. This increases the chances that the people you want to attend will be available.

Let the people who should attend the meeting know its purpose. People are most likely to attend a meeting if they understand why their attendance is important.

Prepare a written agenda that includes topics and their allotted times. This document helps people see why attending the meeting is in their interests. It is also the guide to running the meeting.

Circulate the agenda and any necessary material (eg, plan) in advance. This gives everyone time to suggest changes to the agenda and to plan for the meeting.

Keep meetings to an hour or less. People can be forced to sit in a room for hours, but they cannot be forced to keep their minds on the activities and information. If necessary, several meetings of one hour or less to discuss complex issues or multiple topics can be scheduled.

Here are essentials for conducting a productive meeting:

Start on time, even if people are absent. When people see that a leader waits for latecomers, they have a tendency to show up late! When people see a leader that starts on time, they show up on time!

Assign a timekeeper. This person reminds the group when a topic has exceeded its allocated time.

Take detailed notes (minutes) of who attended, the items discussed, and the decisions and assignments the group made. This procedure allows people to review and clarify the information and serves as a reminder of actions to be taken after the meeting.

Keep a list of items that need further action (action list), and assign one person to be responsible for each item. This step helps ensure that when discussing these issues again, the right information and responsible people are present.

If you do not have the right information or the right people to resolve an issue, stop the discussion and put it on the action list. Discussing an item without having the necessary information or the right people present is just wasted time.

End on time. Meeting attendees may have other commitments that begin when the meeting is supposed to end. Not ending on time causes people to be late for their next commitments or to leave the meeting before it is over.

When a project runs over a long period of time, regularly scheduled meetings give members an opportunity to share progress and issues. Consulting with team members to develop a meeting schedule is a way to ensure meeting times are convenient for as many people as possible. For those meetings, it may be beneficial to create a progress report to give everyone a brief overview of how the project is coming together. That should be distributed beforehand with any other background information related to the topics on the agenda.

CONFIRMATION OF TEACHING POINT 4

QUESTIONS:

Q1. What are some ways to announce an exercise?

Q2. What information must be included a pre-exercise meeting?

Q3. What is a meeting agenda? Why is it important?

ANTICIPATED ANSWERS:

A1. There are many ways to announce an exercise, such as:

- email,
- written announcement in the squadron's newsletter or monthly schedule,
- verbal announcement at the end of a training session, or
- formal meeting.

A2. The information in a pre-exercise meeting must include:

- what has to be done;
- when it has to be done;
- how it has to be done;
- by whom it has to be done; and
- available resources.

A3. A written agenda is a guide for running the meeting. It is important because it helps people see why attending the meeting is in their interests. Circulating it in advance gives everyone time to suggest changes to the agenda and to plan for the meeting.

Teaching Point 5 **Have the cadets discuss sustaining motivation during a project.**

Time: 10 min Method: Guided Discussion

It is recommended that the facilitator review the instructional guide for EO M403.03 (Motivate Team Members) prior to conducting the guided discussion.

BACKGROUND KNOWLEDGE

The point of the guided discussion is to present the following information to the group using the tips for answering / facilitating discussion and the suggested questions provided.

The guided discussion is an instructional method where new material is presented to the group and specific learning objectives must be achieved. Unlike a group discussion, the group may not have any previous experience, opinion or training on the material.

The guided discussion focuses on the group determining the correct answers to specific questions through discussion as opposed to participating in a discussion to only voice an opinion or share an experience.

Facilitate the guided discussion and have an assistant record observations, comments and answers to focus on the discussion. The notes made by the assistant will then be used during the summary portion of the discussion to ensure that all learning objectives are met.

MOTIVATION

Even though motivation is a personal choice, leaders can create the opportunity for others to become motivated by giving them a sense of:

- desirability: giving value to achieving the goal;
- feasibility: having people believe the project can be done;
- progress: letting people know how they are doing; and
- recognition: recognizing work well done.

Desirability: Why should I want to do this project? How is this project beneficial to me?

When people feel a connection to the project, they are more inclined to work toward its accomplishment.

There are many ways for leaders to develop the notion that a project is personally beneficial. They can get team members to discuss:

- personal interests and goals and relating those to aspects of the project.
- past projects that they enjoyed and why they enjoyed them.
- some of the benefits that they hope to realize by working on the project and the value of those benefits.

Feasibility: Is this project even possible?

What seems impossible to one person can seem feasible to another. If a project does not seem possible, people are not going to give it their full effort.

The assessment of feasibility can become a self-fulfilling prophecy. If people think an assessment is feasible, they will work hard to complete it; if they encounter problems, they will try to work them out. However, if people really believe they have no chance of succeeding, they give up at the first sign of difficulty. Any problems just confirm what they already knew—the project was doomed from the start. Of course, as soon as they give up, they have no chance of succeeding, so their initial belief is that the project wasn't feasible has been confirmed. No matter how desirable people may feel a project is, they will give up more easily when they encounter any difficulties if they are convinced that nothing they do can cause it to succeed. People do not need a guarantee of success, but they must believe they have a chance.

To help people believe a project is feasible, leaders can:

- encourage members to identify potential concerns, so they can be addressed; or
- explain why they feel that targets and plans are feasible.

Progress: How I am doing so far?

People have to know how they are doing over time for various reasons, such as:

- achieving intermediate goals provides them personal satisfaction;
- recognizing their successes confirms they are on the right track; and
- successfully completing intermediate goals reinforces their beliefs that they can accomplish the final goals.

People tend to wait until the last minute when no other motivation comes their way.

To help keep people on track and excited about the project:

- establish meaningful and frequent intermediate goals;
- continually assess how people are doing;
- frequently share information with people about their performance; and
- continually reinforce the project's potential benefits.

Recognition: Am I being appreciated for all the hard work I have been doing?

People like to be recognized when they are working hard. However, leaders should be aware that there are guidelines to follow when formalizing that appreciation.

Rewards can take multiple forms, such as:

- talking with the person and expressing your appreciation;
- expressing appreciation in a written note or email;
- expressing appreciation in writing to the person's supervisor;
- issuing the person a certificate of appreciation; and
- taking the person out to lunch.

To make the rewards most effective:

- be sure that acknowledgment and appreciation is honest and sincere; and
- respect the person's personal style and preferences when giving the reward:
    - Some people enjoy receiving acknowledgments in front of their peers, while others prefer receiving them in private.
    - Some people appreciate receiving an individual award; others appreciate receiving an award presented to the entire team.

GUIDED 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.
- Additional questions should be prepared ahead of time.

Take time to introduce the material so the group is oriented for the discussion. The introduction can take the form of an introductory statement / paragraph or can be completed with an in-class activity or exercise prior to the guided discussion.

The introduction is only used to orient the group to the material and should not be used to issue control statements or set ground rules.

During the discussion, take notes on the Guided Discussion worksheet located at Attachment D.

INTRODUCTION

The aim of PO 503 is to provide the tools to take a project from its conception to its end, and that means through its execution. Since a project's success depends on the project manager's ability to organize, coordinate, and support a diverse team that is working toward a common goal, this lesson is going to allow discussing the execution of a plan, and specifically how to keep the members motivated throughout the duration of the project.

Develop other questions and answers throughout the guided discussion; however, it is important to use the prepared questions to ensure the learning objectives are met. Develop follow-up questions so knowledge can be confirmed or if time permits, deeper exploration of the topic can occur.

Reinforce those answers given and comments made during the guided discussion, ensuring each learning objective is achieved.

PREPARED QUESTION:

Q1. How is motivation created? Where does motivation come from?

ANTICIPATED ANSWER:

A1. Even though motivation is a personal choice, leaders can create the opportunity for others to become motivated by giving them a sense of:

- desirability: giving value to achieving the goal;
- feasibility: having people believe the project can be done;
- progress: letting people know how they are doing; and
- recognition: recognizing work well done.

Desirability

PREPARED QUESTION:

Q1. How do people react when they work on a project they believe is personally beneficial to them?

ANTICIPATED ANSWER:

A1. When people feel a connection to the project, they are more inclined to work toward its accomplishment.

Follow-Up Question if Required:

Q1. How can people develop the notion that a project is beneficial to them?

Follow-Up Answer if Required:

A1. There are many ways for leaders to develop the notion that a project is personally beneficial. They can get team members to discuss:

- personal interests and goals and relating those to aspects of the project.
- past projects that they enjoyed and why they enjoyed them.
- some of the benefits that they hope to realize by working on the project and the value of those benefits.

Feasibility

PREPARED QUESTIONS:

Q1. Do you believe feasibility is the same for everyone? How does it differ between individuals?

Q2. How does it affect the people's attitude towards a project? How do people react when they work on a project they believe is unfeasible in opposition to a project they believe is feasible?

ANTICIPATED ANSWERS:

A1. Of course, feasibility is a subjective assessment. What seems impossible to one person can appear feasible to another.

A2. Assessment of feasibility can become a self-fulfilling prophecy. If people think an assessment is feasible, they will work hard to complete it; if they encounter problems, they will try to work them out. However, if people really believe they have no chance of succeeding, they give up at the first sign of difficulty. Any problems just confirm what they already knew — the project was doomed from the start. Of course, as soon as they give up, they have no chance of succeeding, so their initial belief is that the project wasn't feasible has been confirmed. No matter how desirable people may feel a project is, they will give up more easily when they encounter any difficulties if they are convinced that nothing they do can cause it to succeed. People do not need a guarantee of success, but they must believe they have a chance.

Follow-Up Question if Required:

Q1. How can people develop the notion that a project is feasible?

Follow-Up Answer if Required:

A1. People can develop the notion that a project is feasible by:

- identifying potential concerns to the leader and getting them addressed; or
- having the leader explain why they feel that targets and plans are feasible.

Progress

PREPARED QUESTION:

Q1. Why should people be informed of how they are progressing?

ANTICIPATED ANSWER:

A1. People have to know how they are doing over for various reasons, such as:

- achieving intermediate milestones provides personal satisfaction;
- recognizing their successes confirms they are on the right track; and
- successfully completing intermediate steps reinforces their beliefs that they can accomplish the final goals.

Follow-Up Questions if Required:

Q1. How do you feel when someone takes some interest in the work you have done? That such and such an area needs improvement or that you have done a great job so far?

Q2. Have you ever seen a three-month project where all the major milestones occur in the last 3–4 weeks? When do you think people get serious about the project?

Q3. How could you have kept those people on track earlier in the process?

Follow-Up Answers if Required:

A1. Answers will vary.

A2. People tend to wait until the last minute, when no other motivation comes their way.

A3. Do the following to help keep people on track and excited about the project:

- establish meaningful and frequent intermediate milestones;
- continually assess how people are doing;
- frequently share information with people about their performance; and
- continually reinforce the project's potential benefits.

Recognition

PREPARED QUESTION:

Q1. What are forms of rewards that you can give people?

ANTICIPATED ANSWER:

A1. Rewards can take multiple forms, such as:

- talking with the person and expressing your appreciation;
- expressing appreciation in a written note or email;
- expressing appreciation in writing to the person's supervisor;
- issuing the person a certificate of appreciation; and
- taking the person out to lunch.

Follow-Up Question if Required:

Q1. What are ways to make those rewards most effective?

Follow-Up Answer if Required:

A1. To make the rewards most effective:

- be sure your acknowledgment and appreciation is honest and sincere.
- respect the person's personal style and preferences when giving the reward:
  - Some people enjoy receiving acknowledgments in front of their peers, while others prefer receiving them in private.
  - Some people appreciate receiving an individual award; others appreciate receiving an award presented to the entire team.

As a confirmation question, you can ask: "What are ways to encourage motivation?" Answers should include:

- desirability: giving value to achieving the goal;
- feasibility: having people believe the project can be done;
- progress: letting people know how they are doing; and
- recognition: recognizing work well done.

SUMMARY

The summary is used to cover all comments, answers, and discussion that developed throughout the guided discussion. The summary is not used as a confirmation of the material discussed. Use the notes from the Guided Discussion Worksheet to prepare the summary emphasizing points that support the learning objectives of the guided discussion.

Reinforce those answers given and comments made during the group discussion, ensuring the teaching point has been covered.

CONFIRMATION OF TEACHING POINT 5

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

END OF LESSON CONFIRMATION

The cadets' preparation of an activity will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

This EO is evaluated IAW A-CR-CCP-805/PG-001, *Proficiency Level Five Qualification Standard and Plan*, Chapter 3, Annex B, 503 PC.

CLOSING STATEMENT

Preparation is the key to success. A well thought plan allows operations to go smoothly. Being able to plan and prepare is a skill that may be used in many life opportunities, and is therefore a very important transferable skill set.

INSTRUCTOR NOTES / REMARKS

Cadets shall be given the opportunity to prepare a cadet exercise, as a member of a group, as part of their OJT.

REFERENCES

A0-200 B-GL-303-002/FP-000 Canadian Forces. (1995). *Operational staff procedures : Staff duties in the field. (Volume 2)*. Ottawa, ON: Department of National Defence.

C0-453 Doc Stoc. (2009). *Format for activity plan*. Retrieved November 1, 2009, from http://www.docstoc.com/docs/4977554/FORMAT-FOR-ACTIVITY-PLAN

C3-252 ISBN 978-0-470-04923-5 Portny, S. E. (2007). *Project management for dummies*. Hoboken, NJ: Wiley Publishing.

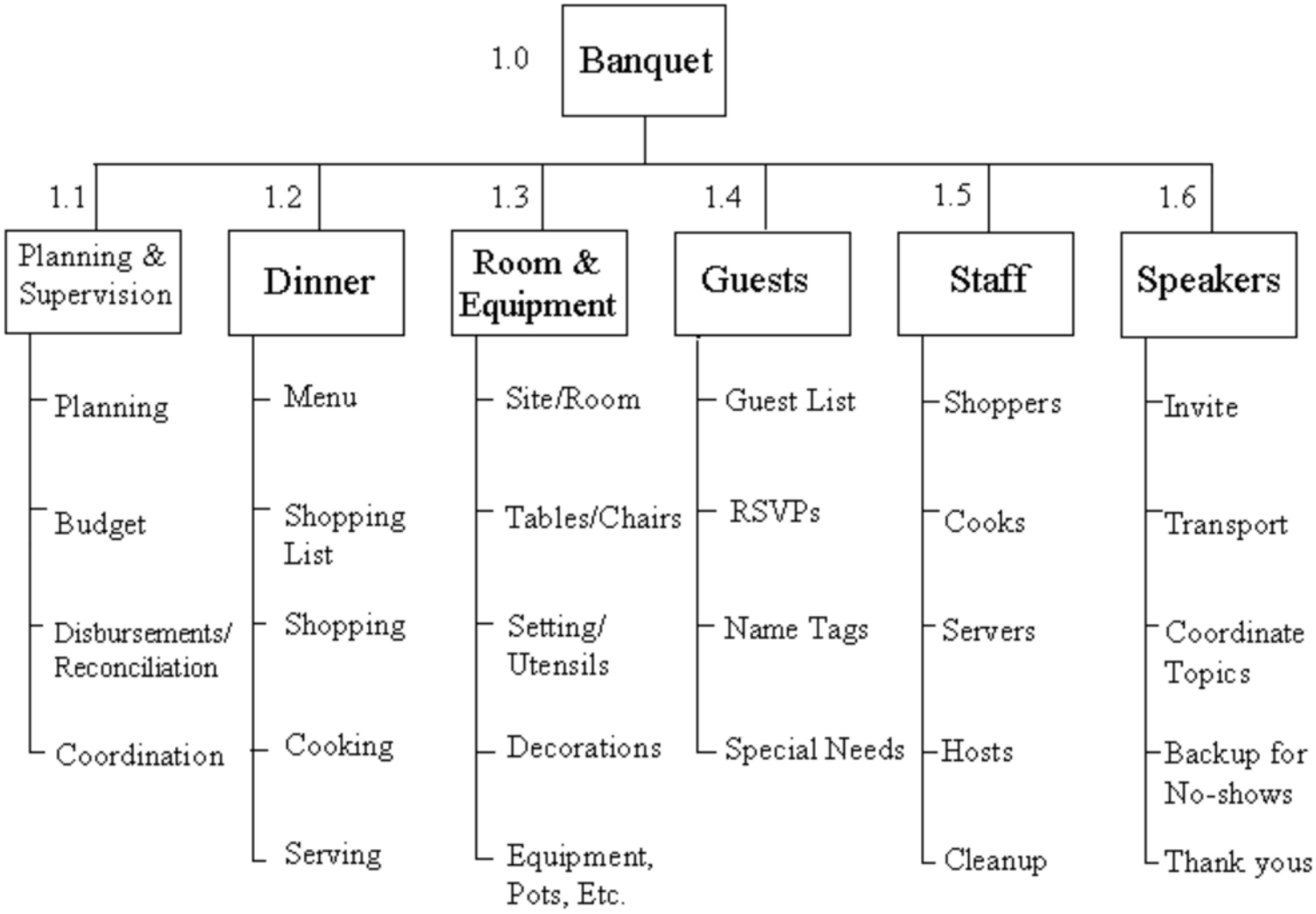


Figure A-1 Banquet WBS

Note. From "Principle Based Project Management", 2007, *Work Breakdown Structure (WBS*). Retrieved October 16, 2008, from http://www.hyperthot.com/pm_wbs.html

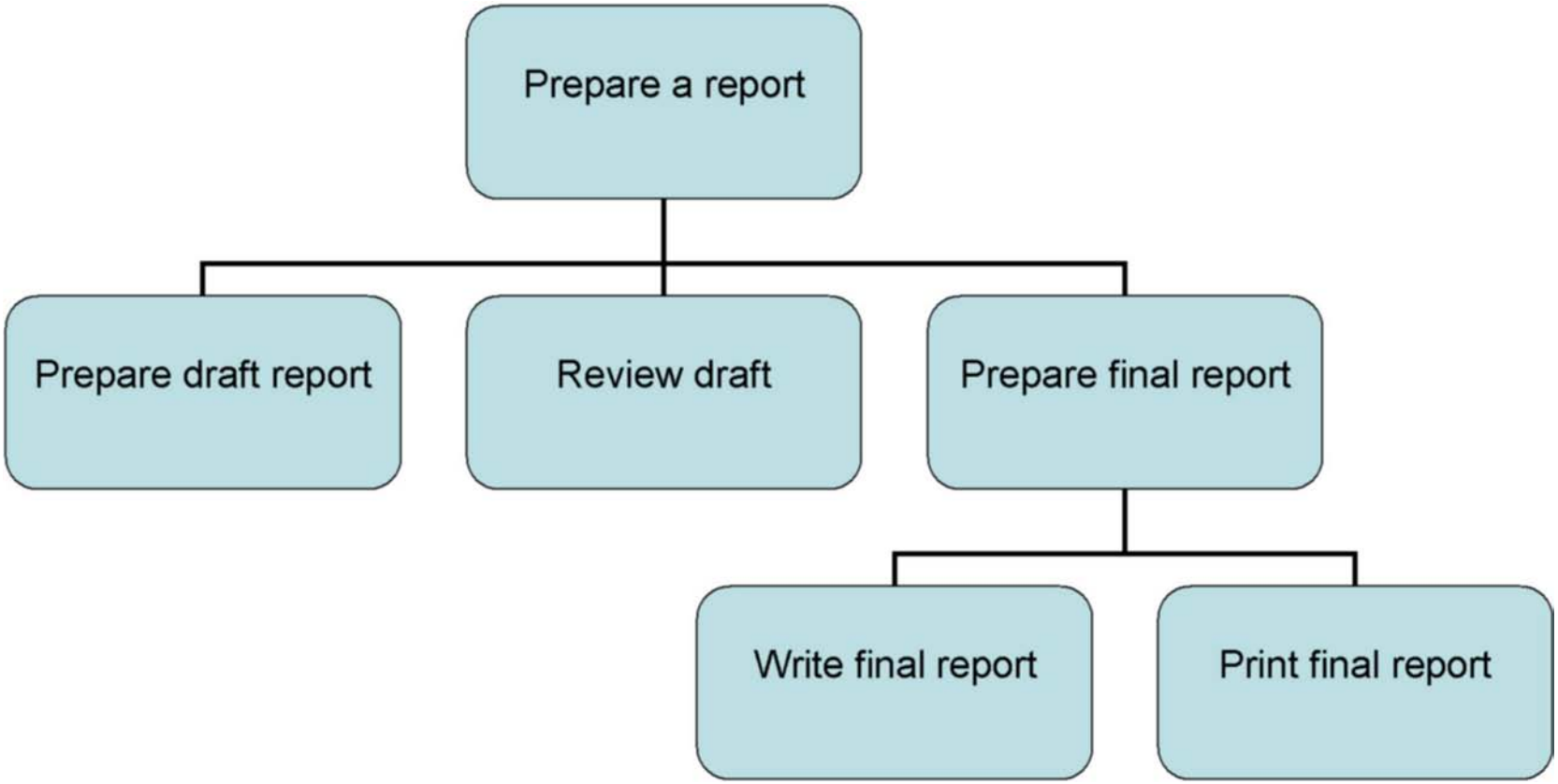


Figure A-2 Report Preparation WBS

Note. From *Project Management for Dummies* (p.76), by S. E. Portny, 2007, Hoboken, NJ: Wiley Publishing.

EXERCISE PLAN EXAMPLE

TITLE OF THE EXERCISE: SPORTS EVENT: OPERATION GET-YOUR-MOVE-ON

WHAT

Who is involved, what is going to happen, where and when?

Example: Unit 123 Moncton will participate in Operation GET-YOUR-MOVE-ON, a sports event to be conducted at the Moncton Everblue High School on 10 Mar 2012 from 0900 hrs–1600 hrs.

WHY

Why is this happening?

Example: Unit 123 Moncton will conduct the sports event to promote physical fitness amongst all cadets, to introduce them to various sports, and to develop leadership and refereeing skills in senior cadets. The event will take place over one day to allow the conduct of multiple sports.

HOW

A. General Outline

What are the main parts of the exercise?

Example: *This exercise will be conducted in five phases:*

1. Phase One – Administration

The pre-activity meeting will be conducted on 21 Feb 12 in the CO's office at 1730 hrs. All members will attend. Booking of facilities, administrative preparation and planning are being completed by the Training Officer.

2. Phase Two – Preparation of Facilities

Prior to the cadets' arrival, all sergeants are required to prepare the facilities. The equipment for all sports events is to be taken out of the supply room and placed in the appropriate area. Signs identifying bathrooms, water points, and safety points have to be put up. This should be completed NLT 0840 hrs.

3. Phase Three – Conduct of the Exercise

As per schedule. Will include safety briefing, warm-up, conduct of the sports, lunch, cool-down and activity debriefing. Cadets will be allowed to leave at 1600 hrs.

4. Phase Four – Return of Stores

Return of stores, clean-up of facilities.

5. Phase Five - Post-exercise meeting

Post-exercise meeting will be conducted on Monday 11 Mar 2012 at the CO's office from 1700 hrs to 1830 hrs. All senior cadets and officers will attend.

B. Groupings

Are there particular groups you need created?

Example: Cadets will be divided upon arrival into four different sports teams. WO1 Mackey will ensure this is done as soon as cadets are on ground.

C. Tasks

What are the tasks specific to each person?

WHO	TASKS
Capt Malloy	• Plan the sports event. • Book school facilities. • Deliver the safety briefing upon arrival. • Deliver the event's debriefing.
Lt Nixon	• Responsible for meal arrangements. • Responsible for all medical emergencies. First-aider for the event.
WO1 Mackey	• Responsible to ensure that equipment and signs are ready before 0840 hrs as per Annex C. • Responsible to ensure all activities are carried out safely and according to the timetable. • Responsible to have cadets divided into four sports teams.
WO2 Landry	• Responsible for the training and evaluation of all activity referees. • Offer feedback to activity referees. • Complete and submit an individual evaluation of all referees to the Training Officer.
FSgt Gagnon	• Responsible for the evaluation all activity referees. • Offer feedback to activity referees. • Complete and submit an individual evaluation of all referees to the Training Officer.
Sgt Penny	• Responsible for equipment set-up and tear-down • Become familiar with and referee soccer. • Become familiar with and referee volleyball.
Sgt Randell	• Responsible for equipment set-up and tear-down. • Become familiar with and referee soccer. • Become familiar with and referee volleyball.
Sgt Picard	• Responsible for equipment set-up and tear-down. • Become familiar with and referee ball hockey. • Become familiar with and referee badminton.
Sgt Clark	• Responsible for equipment set-up and tear-down. • Become familiar with and referee ball hockey. • Become familiar with and referee badminton.
Sgt Belliveau	• Responsible for set-up and tear-down. • Responsible to carry out the warm-up and the cool-down. • Responsible for the tug-of-war event.
All members	• All members are to look after safety. • Anything deemed unsafe should be stopped right away and rectified.

D. Timings

What are the timings of this event?

Example: See timetable in Annex A.

E. Dress

What should people wear to the event?

Example: Dress for the event will be suitable sports gear. No outdoor footwear shall be worn inside.

WITH WHAT - RESOURCES

What else do people need to know to put the plan into action?

Example:

Rations
Rations will be arranged by Lt Nixon.

Accommodations
Arrangements for the school are to be made by Capt Malloy.

Equipment
See Annex B for Equipment List.
See Annex C for Activity Layout.

Transport
Cadets are responsible for their own transportation to and from the school.

Emergency Procedures
All medical emergencies will be reported to Lt Nixon. First aid will be available on site, and will be given if necessary. Medical emergencies will be directed to 911.

Water
Water will be available at school fountains. All cadets are to bring a personal water bottle to have water on hand.

Hygiene
The school washrooms (toilets and showers) will be available.

CHAIN OF COMMAND

What is the chain of command in the event? Who is in charge of what?

Example:

Planning: Capt Malloy
Conduct: WO1 Mackey
Evaluation: WO2 Landry, FSgt Gagnon
Rations: Lt Nixon
First-Aider: Lt Nixon
Referees: Sgt Penny, Sgt Randell, Sgt Picard, Sgt Clark and Sgt Belliveau

Capt R. Malloy
TrgO
123 Moncton

Distribution List

Who needs to know about this plan?

Example:

CO
DCO
Capt Malloy
Lt Nixon
WO1Mackey
WO2 Landry
FSgtGagnon
Sgt Penny
Sgt Randell
Sgt Picard
Sgt Clark
Sgt Belliveau

List of Annexes

What annexes does your plan require?

Example:

Annex A - Timetable
Annex B - Equipment
Annex C - Exercise Layout

Annex A

TIMETABLE

Period	Time	What	Who	Comments
1	0810–0840 hrs	Set-up	All Sergeants	
2	0840–0900 hrs	Cadets arrival	All senior cdts	
3	0900–0910 hrs	Attendance		
4	0910–0920 hrs	Safety briefing	Capt Malloy	WO1 to divide teams at this time.
5	0920–0930 hrs	Warm up	Sgt Belliveau	
6	0940–1010 hrs	Game 1	Sgt Randell Sgt Penny	Soccer (Teams 1 vs 2) Volleyball (Teams 3 vs 4)
7	1010–1030 hrs	Break		
8	1030–1100 hrs	Game 2	Sgt Penny Sgt Randell	Soccer (Teams 1 vs 3) Volleyball (Teams 2 vs 4)
9	1100–1120 hrs	Break		
10	1120–1200 hrs	Game 3	TBD*	Soccer (Teams 3 vs 4) Volleyball (Teams 1 vs 2)
11	1200–1300 hrs	Lunch		
12	1300–1330 hrs	Game 4	Sgt Picard Sgt Clark	Hockey (Teams 1 vs 2) Badminton (Teams 3 and 4)
13	1330–1350 hrs	Break		
14	1350–1420 hrs	Game 5	Sgt Clark Sgt Picard	Hockey (Teams 3 vs 4) Badminton (Teams 1 and 2)
15	1420–1440 hrs	Break		
16	1440–1510 hrs	Game 6	TBD*	Hockey (Teams 1 vs 4) Badminton (Teams 2 and 3)
17	1510–1535 hrs	Tug of war	Sgt Belliveau	
18	1535–1545 hrs	Cool down	Sgt Belliveau	
19	1545–1600 hrs	Debriefing	Capt Malloy	
20	1600 hrs	Departure	All senior cdts	

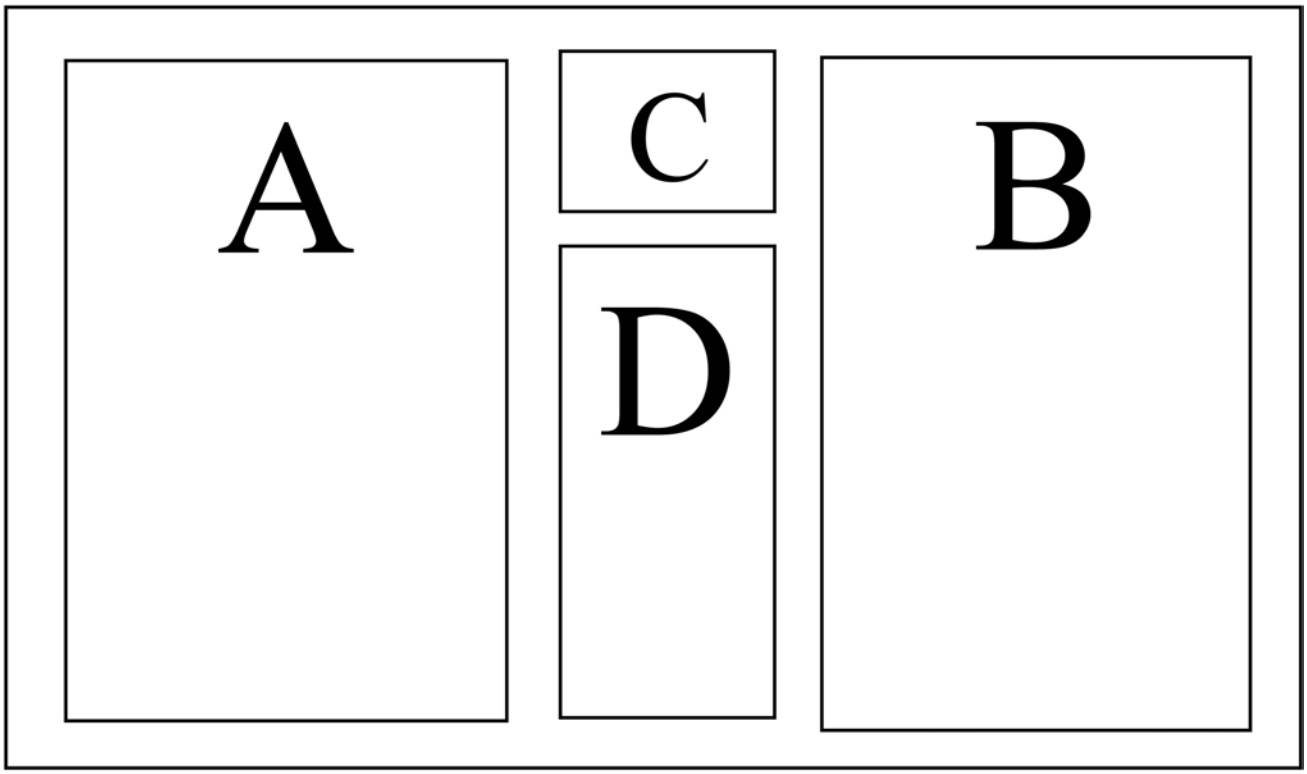
* Based on previous experience of both sports, determine who may need more practice and assign as appropriate.

Annex B

EQUIPMENT LIST

- Hockey sticks x 20
- Hockey masks x 20
- Hockey gloves x 20
- Protective goggles x 20
- Hockey nets x 2
- Pucks x 2
- Badminton rackets x 20
- Badminton birds x 6
- Badminton sets (nets and poles) x 3
- Pinnies x 20 of each colour (2 colours)
- Volleyball set (nets and poles) x 1
- Volleyball ball x 2
- Large 18-m (60-foot) rope x 1
- First aid kit x 2

EXERCISE LAYOUT



Legend:

A: Soccer / Hockey

B: Volleyball / Badminton

C: First Aid Station

D: Tug of War

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EXERCISE PLAN TEMPLATE

TITLE OF THE PROJECT: _____

WHAT

_____
_____
_____
_____

WHY

_____
_____
_____
_____

HOW

A. General Outline – Main Events

Phase____– _____
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Phase____ – _____
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Phase_____ – _____
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Phase____– _____
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Phase____– _____
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B. Groupings

_____
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_____
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C. Tasks

Who	Tasks	Comments

D. Timings

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E. Dress

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RESOURCES

1._____
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12. _____

CHAIN OF COMMAND

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By: _____
Position: _____
Unit: _____

Distribution List

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List of Annexes

Annex __ - _____
Annex __ - _____
Annex __ - _____
Annex __ - _____
Annex __ - _____
Annex __ - _____

GUIDED DISCUSSION WORKSHEET

TP 5: Discuss sustaining motivation during a project.

INTRODUCTION

The aim of PO 503 is to provide the tools to take a project from its conception to its end, and that means through its execution. Since a project's success depends on the project manager's ability to organize, coordinate, and support a diverse team that is working toward a common goal, this lesson is going to allow discussing the execution of a plan, and specifically how to keep the members motivated throughout the duration of the project.

GUIDED DISCUSSION

Prepared Content / Learning Objectives	Notes / Comments / Answers from the Guided Discussion for Summary
Motivation	
PREPARED QUESTION: Q1. How is motivation created? Where does motivation come from?	
ANTICIPATED ANSWER: A1. Even though motivation is a personal choice, leaders can create the opportunity for others to become motivated by giving them a sense of: • desirability: giving value to achieving the goal; • feasibility: having people believe the project can be done; • progress: letting people know how they are doing; and • recognition: recognizing work well done.	
Desirability	
PREPARED QUESTION: Q1. How do people react when they work on a project they believe is personally beneficial to them?	
ANTICIPATED ANSWER: A1. When people feel a connection to the project, they are more inclined to work toward its accomplishment.	

Prepared Content / Learning Objectives	Notes / Comments / Answers from the Guided Discussion for Summary
Follow-Up Question if Required: Q1. How can people develop the notion that a project is beneficial to them?	
Follow-Up Answer if Required: A1. There are many ways for leaders to develop the notion that a project is personally beneficial. They can get team members to discuss: • personal interests and goals and relating those to aspects of the project. • past projects that they enjoyed and why they enjoyed them. • some of the benefits that they hope to realize by working on the project and the value of those benefits.	
Feasibility	
PREPARED QUESTIONS: Q1. Do you believe feasibility is the same for everyone? How does it differ between individuals? Q2. How does it affect the people's attitude towards a project? How do people react when they work on a project they believe is unfeasible in opposition to a project they believe is feasible?	
ANTICIPATED ANSWERS: A1. Of course, feasibility is a subjective assessment. What seems impossible to one person can appear feasible to another. A2. Assessment of feasibility can become a self-fulfilling prophecy. If people think an assessment is feasible, they will work hard to complete it; if they encounter problems, they will try to work them out. However, if people really believe they have no chance of succeeding, they give up at the first sign of difficulty. Any problems just confirm what they already knew — the project was doomed from the start. Of course, as soon as they give up, they have no chance of succeeding, so their initial belief is that the project wasn't feasible has been confirmed.	

Prepared Content / Learning Objectives	Notes / Comments / Answers from the Guided Discussion for Summary
No matter how desirable people may feel a project is, they will give up more easily when they encounter any difficulties if they are convinced that nothing they do can cause it to succeed. People do not need a guarantee of success, but they must believe they have a chance.	
Follow-Up Question if Required: Q1. How can people develop the notion that a project is feasible?	
Follow-Up Answer if Required: A1. People can develop the notion that a project is feasible by: • identifying potential concerns to the leader and getting them addressed; or • having the leader explain why they feel that targets and plans are feasible.	
Progress	
PREPARED QUESTION: Q1. Why should people be informed of how they are progressing?	
ANTICIPATED ANSWER: A1. People have to know how they are doing over time for various reasons, such as: • achieving intermediate milestones provides personal satisfaction; • recognizing their successes confirms they are on the right track; and • successfully completing intermediate steps reinforces their beliefs that they can accomplish the final goals.	
Follow-Up Questions if Required: Q1. How do you feel when someone takes some interest in the work you have done? That such and such an area needs improvement or that you have done a great job so far? Q2. Have you ever seen a three-month project where all the major milestones occur in the last 3–4 weeks? When do you think people get serious about the project?	

Prepared Content / Learning Objectives	Notes / Comments / Answers from the Guided Discussion for Summary
Q3. How could you have kept those people on track earlier in the process?	
Follow-Up Answers if Required: A1. Answers will vary. A2. People tend to wait until the last minute, when no other motivation comes their way. A3. Do the following to help keep people on track and excited about the project: • establish meaningful and frequent intermediate milestones; • continually assess how people are doing; • frequently share information with people about their performance; and • continually reinforce the project's potential benefits.	
Recognition	
PREPARED QUESTION: Q1. What are forms of rewards that you can give people?	
ANTICIPATED ANSWER: A1. Rewards can take multiple forms, such as: • talking with the person and expressing your appreciation; • expressing appreciation in a written note or email; • expressing appreciation in writing to the person's supervisor; • issuing the person a certificate of appreciation; and • taking the person out to lunch.	
Follow-Up Question if Required: Q1. What are ways to make those rewards most effective?	
Follow-Up Answers if Required: A1. To make the rewards most effective: • be sure your acknowledgment and appreciation is honest and sincere.	

Prepared Content / Learning Objectives	Notes / Comments / Answers from the Guided Discussion for Summary
• respect the person's personal style and preferences when giving the reward: ○ Some people enjoy receiving acknowledgments in front of their peers, while others prefer receiving them in private. ○ Some people appreciate receiving an individual award; others appreciate receiving an award presented to the entire team.	

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COMMON TRAINING

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 3

EO M503.03 – CONDUCT AN 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-805/PG-001, *Proficiency Level Five 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 group discussion was chosen for TPs 1 and 3 as it allows the cadets to interact with their peers and share their knowledge, experiences, and opinions about beginning and ending activities and supervision an activity.

An interactive lecture was chosen for TPs 2 and 4 to orient the cadets to how to begin and end an exercise and how to supervise an exercise.

INTRODUCTION

REVIEW

QUESTIONS:

Q1. What is a project audience?

Q2. What is the approach of dividing an item into its component parts to describe the details of a project?

Q3. What is an important guideline to follow when assigning people tasks?

Q4. What information needs to be included in a pre-exercise meeting?

Q5. What are ways to encourage motivation?

ANTICIPATED ANSWERS:

A1. A project audience is any person or group that supports, is affected by, or is interested in a project.

A2. A work-breakdown-structure (WBS) is the approach of dividing an item into its component parts to describe the details of a project.

A3. An important guideline to follow when assigning tasks is "Leaders should never assign other people tasks that they cannot clearly define themselves."

A4. The information in a pre-activity meeting must include:

- what has to be done;
- when it has to be done;
- how it has to be done;
- by whom it has to be done; and
- available resources.

A5. Motivation can be encouraged through:

- desirability,
- feasibility,
- progress, and
- recognition.

OBJECTIVES

By the end of this lesson the cadet shall be expected to conduct an exercise.

IMPORTANCE

It is important for cadets to know how to conduct an exercise because monitoring and making changes as necessary are important steps in ensuring an exercise meets its goals. Also, announcing the activity at the appropriate time and holding a successful pre-exercise meeting allows people to prepare for the exercise.

Teaching Point 1 **Have the cadets discuss how to begin and end an activity.**

Time: 10 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.

ELEMENTS OF AN INTRODUCTION

Always have the area set up, including placement of resources, prior to the arrival of participants. Ask the following questions before participants arrive:

- Are all the required resources in place?
- Does everyone involved in conducting the activity have a clear understanding of their responsibilities?
- Is there sufficient space?
- If applicable, can the weather be relied on? If not, is the backup plan ready and achievable?

Getting the team's attention. To introduce an activity, the leader first gets the attention of the team. The leader gets the team's attention before continuing to introduce the activity. If one cadet is not paying attention, they could miss an important point that could affect their participation in the activity or the activity's outcome.

Explaining the goal of the activity. The goal of the activity should be explained to the team in general terms of what will be learned or accomplished. The context of the activity should be explained so the cadets know why their participation is essential and why the activity is a part of the day's agenda. It is important not to give too much detail at this point, as the leader should draw some points on the purpose of the activity from the cadets after the activity's completion.

Explaining the activity. The activity must be explained to the team prior to participating in the activity. The rules of the activity must be clearly outlined and understood by all cadets prior to commencement. The leader should ensure the activity is clearly understood.

Assigning tasks as necessary. If any specific tasks need to be performed throughout the activity, the leader should assign cadets to these tasks during the introduction of the activity.

Setting time limits. The leader is to set a time limit for the cadets to participate in the activity. The leader must factor in time for debriefing the cadets after completion of the activity.

Relaying safety concerns as necessary. If there are any safety concerns, the leader must pass these on to the team prior to the start of the activity.

Motivating the team. Prior to the start of the activity, the leader must motivate the team. The leader should be enthusiastic and share this enthusiasm with the cadets. The goal of the activity is important and there is a reason the activity is being performed. The cadets should be informed of this reason and be motivated toward achieving the goal.

ELEMENTS OF A DEBRIEFING

Reviewing the goal. After the completion of an activity, it is important to review what the goal of that activity was with the cadets. Cadets always want to know why they had to participate in an activity or learn about a specific topic, so reinforce why the learning was important.

Providing feedback. The leader should first ask for feedback from the group on the activity. This can be done through some preset questions, specifically about the activity. It is important to find out how the cadets felt about the activity (eg, did they feel it was useful, did they learn anything from participating in the activity, etc). The leader gains valuable insight from the cadets on the activity itself (eg, if they would use it again, how it could be conducted differently, what elements of the activity they would not change if they did the activity again, etc). The most important information to elicit from the cadets is if they felt the activity was worthwhile. The leader must also give feedback to the cadets. Whether the goal was met is an important point to focus on during this stage. Why was the goal met or why not? Was the activity completed and did this have an effect on the goal being met? The leader should also give and get feedback on how the group interacted throughout the duration of the activity. The leader tells the cadets how they viewed the groups' interactions and ask how the cadets felt they interacted with each other.

Re-motivating the team. The final step in debriefing a group after an activity has been completed is to re-motivate the cadets.

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 is the first thing you should do when starting an activity? Why?

Q2. Should the goal of the activity be explained prior to commencing the activity? Why or why not? How will the activity be affected if the goal is not explained?

Q3. What other considerations should be passed on during an introduction? Should safety concerns be passed on to the team or should they be left to figure them out as they proceed through the activity?

Q4. What is the purpose of reviewing the goal of the activity after the completion of the activity?

Q5. What feedback should be given from the group to the leader? How can this information be obtained? What feedback should the leader give to the group?

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.

CONFIRMATION OF TEACHING POINT 1

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

Teaching Point 2 **Explain how to begin and end an exercise.**

Time: 5 min Method: Interactive Lecture

Beginning and ending an exercise is very similar to beginning and ending an activity.

Ask the cadets to list actions that should be taken before cadets arrive.

Before cadets arrive, leaders should:

- inspect the exercise area for any damage or safety concerns;
- set up the exercise area; and
- ensure everyone involved has a clear understanding of their responsibilities.

When cadets arrive on grounds, leaders should hold an introductory meeting with the entire group to cover information that will be important throughout the exercise.

Ask the cadets to list information that should be included in an introductory meeting.

The introductory meeting should include information, such as:

- welcome to the participants,
- introduction of staff members,
- general outline of the exercise,
- safety concerns (eg, slippery floor, out-of bound areas, etc.),
- location of facilities (eg, washrooms, canteen, classes, gym, etc.),
- muster area in case of emergency, and
- first aid station.

At the end of the exercise, leaders should hold a conclusion meeting with the entire group to cover information that was relevant to the exercise.

Ask the cadets what information could be included in a conclusion meeting.

The conclusion meeting should include information, such as:

- conduct of the exercise (eg, competition winners);
- feedback from the instructors;
- feedback from the cadets; and
- recognition to individual or group contribution.

If leaders want more detailed feedback, they could get the cadets to write their feedback and submit it at the next training session.

After the cadets have left, leaders should:

- inspect the exercise area for any damage or safety concerns;
- tear down the exercise area;
- return stores.

Any damage to the exercise area or to the equipment need to be reported to the appropriate authority (eg, Training Officer, Commanding Officer, building management, Supply Officer, school administration, etc.).

One way to simplify the conclusion of an exercise is to include it in the WBS because it allows people to observe the importance of the final steps and maintain focus to the tasks that need to be carried out. It also ensures sufficient time and resources have been allocated for those activities to be performed.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. What are things that should be completed prior to the cadets' arrival?

Q2. What information should be included in an introductory meeting?

Q3. What information could be included in a conclusion meeting?

ANTICIPATED ANSWERS:

A1. Prior to the cadets' arrival, leaders should:

- inspect the exercise area has for any damage or safety concerns;
- set up the exercise area; and
- ensure everyone involved has a clear understanding of their responsibilities.

A2. The introductory meeting should include information, such as:

- welcome to the participants,
- introduction of staff members,
- general outline of the exercise,
- safety concerns (eg, slippery floor, out-of bound areas, etc.),
- location of facilities (eg, washrooms, canteen, classes, gym, etc.),
- muster area in case of emergency, and
- first aid station.

A3. The conclusion meeting should include information, such as:

- conduct of the exercise (eg, competition winners);
- feedback from the instructors;
- feedback from the cadets; and
- recognition to individual or group contribution.

Teaching Point 3 **Have the cadets review supervising an activity.**

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.

Cadets should have previous knowledge on the subject as this was taught in EO M303.05 (Supervise Cadets).

THE PURPOSES OF SUPERVISION

There are three main purposes of supervision.

To provide protection. Supervision ensures the safety and well-being of personnel. Safety is the number one issue in every aspect of the Cadet Program. When situations are not safe, they are stopped immediately. CATO 14-31, *Director Cadets and Junior Canadian Rangers General Safety Program*, outlines the requirements for a general safety program that must be incorporated in every aspect of cadet activities.

To provide support. Supervision ensures that all members of the team are assisted, provided for and encouraged during tasks. If cadets are not practicing intrapersonal management, interpersonal management, teamwork and effective communication, the supervisor must act on the situation.

To provide quality assurance. Supervision ensures the outcomes of a task meet expectations for that task. If cadets are not meeting their responsibilities in completing the task, the supervisor must act on the situation. No one likes to be over-supervised. It is important not to micromanage the team.

HOW TO SUPERVISE

As leaders, cadets are expected to supervise others. Supervision takes place during the entire task, not just at the beginning or end of the task. Although each situation where supervision takes place is unique, there are some common responsibilities that must be fulfilled. Leaders shall meet these responsibilities by:

Ensuring safety. Ensuring that every situation in the Cadet Program is carried out in a safe manner is the primary concern of all members involved.

Ensuring the well-being of cadets. The welfare of cadets within the Cadet Program is a primary concern in the execution of all training and administrative tasks.

Encouraging cadets. Encourage cadets to produce satisfactory work because they want to. Inspiring results through praise creates a positive outcome.

Adjusting responsibilities as required. Being able to adjust a cadet's responsibilities during tasks is important. Cadets with experience may need less supervision and may be given extra responsibilities.

Maintaining control of cadets. Keep cadets on task while they are producing satisfactory work. An effective supervisor is able to keep cadets focused.

Correcting errors as required. If mistakes are made, effective supervisors communicate this. They revise what and how it needs to be done and remedy errors.

Reporting misconduct as required. When cadets behave in a manner that is in inconsistent with the core leadership qualities of a cadet, these behaviours should be reported up the chain of command.

Ensuring completion of responsibilities assigned to cadets as required. When supervisors delegate or assign tasks to others, it is the supervisor's responsibility to ensure all delegated tasks are completed.

Successful supervisors are usually successful leaders.

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 are the purposes of supervision? When does supervision take place?

Q2. What do you think the responsibilities of an effective supervisor are?

Q3. Which responsibility do you find the most important? Why?

Q4. Which responsibility do you find the most difficult to apply? Why?

Q5. List some examples where you have seen leaders use various responsibilities.

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.

CONFIRMATION OF TEACHING POINT 3

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

Teaching Point 4 **Explain how to supervise an exercise.**

Time: 5 min Method: Interactive Lecture

Supervising an exercise is very similar to supervising an activity.

Ask the cadets to list the three main purposes of supervision.

There are three main purposes to supervision:

- to provide protection;
- to provide support; and
- to provide quality assurance.

The same way cadets are supervised by activity leaders, activity leaders should be supervised by exercise leaders. When exercise leaders are supervising, they should:

- ensure completion of tasks;
- ensure the activity leaders are providing challenging, fun and safe training;
- stop an activity when it is deemed unsafe; and
- provide guidance to activity leaders.

PROVIDING FEEDBACK

Guidance should be provided to activity leaders at the appropriate time and in an appropriate manner.

Ask the cadets to list the principles of effective feedback. The material was taught in more details during EO M403.04 (Provide Feedback to Team Members).

Feedback may be given to the team as a whole or it may be given to individual team members. Giving feedback well is a skill. When giving feedback, it should be:

- frequent,
- accurate,
- specific,
- timely.

Ask cadets to list the ground rules for providing feedback. The material was taught in more details during EO M403.04 (Provide Feedback to Team Members).

The following ground rules for providing feedback may enable the team leader to give helpful, constructive feedback, without creating conflict or confrontational behaviour with team members.

The ground rules are:

- focusing on what is observed;
- focusing on behaviour;
- keeping it neutral;
- using it to inform;
- making it supportive; and
- keeping it simple.

Ask cadets to list the steps for providing feedback. The material was taught in more details during EO M403.04 (Provide Feedback to Team Members).

The purpose for providing feedback is to let team members know how they are doing and when they are not meeting expectations. Leaders should ensure that feedback is given when team members meet and / or exceed their commitments, as well as when team members do not meet their commitments. There are five steps for providing feedback:

- planning what to say;
- providing examples of behaviours;
- allowing time for feedback;

- motivating; and
- setting a timeline for action and follow-up.

CONFIRMATION OF TEACHING POINT 4

QUESTIONS:

Q1. What are the three main purposes to supervision?

Q2. What should exercise leaders do when supervising?

Q3. What are the ground rules to providing feedback?

ANTICIPATED ANSWERS:

A1. There are three main purposes to supervision:

- to provide protection;
- to provide support; and
- to provide quality assurance.

A2. When exercise leaders are supervising, they should:

- ensure completion of tasks;
- ensure the activity leaders are providing challenging, fun and safe training;
- stop an activity when it is deemed unsafe; and
- provide guidance to activity leaders.

A3. The ground rules are:

- focusing on what is observed;
- focusing on behaviour;
- keeping it neutral;
- using it to inform;
- making it supportive; and
- keeping it simple.

END OF LESSON CONFIRMATION

QUESTIONS:

Q1. What elements should be included in an activity introduction?

Q2. What are actions leaders should take prior to cadets' arrival on an exercise?

Q3. What are the five steps for providing feedback?

ANTICIPATED ANSWERS:

A1. Elements that should be included in an activity introduction are:

- getting the team's attention;
- explaining the goal of the activity;
- explaining the activity;
- assigning tasks as necessary;
- setting time limits;
- relaying safety concerns as necessary; and
- motivating the team.

A2. Prior to cadets' arrival, leaders should:

- inspect the exercise area for any damage or safety concerns;
- set up the exercise area; and
- ensure everyone involved has a clear understanding of their responsibilities.

A3. The five steps for providing feedback are:

- planning what to say;
- providing examples of behaviours;
- allowing time for feedback;
- motivating; and
- setting a timeline for action and follow-up.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

This EO is evaluated IAW A-CR-CCP-805/PG-001, *Proficiency Level Five Qualification Standard and Plan*, Chapter 3, Annex B, 503 PC.

CLOSING STATEMENT

Once an exercise begins, there may be changes that need to be made. It is important for cadets to recognize the importance of supervising the activity to ensure it reaches its goals, goes as planned, and if not, that the appropriate changes are made.

INSTRUCTOR NOTES / REMARKS

Cadets shall be given the opportunity to conduct an exercise, as a member of a group, as part of their OJT.

REFERENCES

Nil.

COMMON TRAINING

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 4

EO M503.04 – CONCLUDE AN 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-805/PG-001, *Proficiency Level Five 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 an OHP of Attachment A.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TP 1 to orient the cadets to the conclusion of an exercise, the content of an after action report and the conduct of a debriefing.

An in-class activity was chosen for TP 2 as it is an interactive way to provoke thought and stimulate interest about after action report.

INTRODUCTION

REVIEW QUESTIONS:

Q1. What are the elements in an activity debriefing?

Q2. What actions have to be completed by exercise leaders after the cadets' departure?

Q3. List the supervision responsibilities that a leader should meet.

ANTICIPATED ANSWERS:

A1. The elements in an activity debriefing should include:

- reviewing the goal;
- providing feedback; and
- re-motivating the team.

A2. After the cadets have left, leaders should:

- inspect the exercise area for any damage or safety concerns;
- tear down the exercise area;
- return stores.

A3. The supervision responsibilities that a leader should meet are:

- ensuring safety;
- ensuring the well-being of cadets;
- encouraging cadets;
- adjusting responsibilities as required;
- maintaining control of cadets;
- correcting errors as required;
- reporting misconduct as required; and
- ensuring completion of responsibilities assigned to cadets as required.

OBJECTIVES

By the end of this lesson the cadet shall be expected to conclude an exercise.

IMPORTANCE

It is important for cadets to conclude an exercise as it is an important step in project management. Recognizing areas for improvement and successes will allow people to take this knowledge into their next project and improve its chances for success.

Teaching Point 1 **Explain the steps in the conclusion of an exercise.**

Time: 10 min Method: Interactive Lecture

CONDUCTING A DEBRIEFING

Having a debriefing with the personnel involved in the exercise is a crucial step in identifying the practices to keep and the practices to avoid in future projects from the experience gained during the current project. The people involved in the project can, by sharing their experiences, observations and suggestions, help a leader recognize the achievements and areas for improvement encountered during the various planning and conducting stages of the exercise.

Like any meeting, the debriefing should be preceded by an agenda that may include:

- purpose of the debriefing,
- goals of the activity or activities,
- highlights, such as:
    - results, schedules, and resources,
    - tracking systems and procedures,
    - communications, and
    - practices and effectiveness;
- discussion and recognition of special achievements,
- review of reactions to the activity (cadets or supervisors),
- discussion of problems and issues, or
- discussion of how to reflect experiences from this project in future efforts.

During the debriefing, the following issues should be discussed:

- what was accomplished and individuals' contributions;
- techniques and approaches that worked to ensure they will be used in the future;
- techniques and approaches that did not work to ensure they are not used in the future, or they are used only following appropriate adjustments.

Here are a few things to keep in mind when planning a debriefing:

Invite the right people. Invite people that were involved. If the list is too long, decide to meet with the subgroups, then hold a general session where everyone reviews the results of the smaller meetings and where final comments and suggestions are made.

Ensure everyone understands the purpose of the meeting is to learn, not to blame. The post project evaluation is a means to examine what has been done to improve it.

If anyone starts to attack or criticize other participants, the discussion needs to be brought back to order. This can be done by asking questions, such as:

- What can you yourself do in the future to deal more effectively with such situations?
- What can we do in the future to prevent such situations from occurring?

It can also be done by having personnel:

- identify what others did well; or
- examine their own performance and see how they could have handled situations differently.

Be sure to assign a person to take notes during the debriefing. Those notes will be useful when writing the after action report (AAR).

CREATING AN AFTER ACTION REPORT (AAR)

As soon as possible after the debriefing, prepare and distribute an AAR based on notes from the briefing.

The AAR should include the following information:

- practices to incorporate in future projects,
- steps to take to encourage these practices,
- practices to avoid on future projects, and
- steps to be taken to avoid these practices.

After (and during if possible) the completion of a project, recognize the individuals or groups who helped "make it happen". Whether it be announcements or a thank you to who made it possible, recognizing those who worked hard is important.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. What has to be accomplished after the conduct of an exercise?

Q2. What is the importance of the debriefing?

Q3. What elements are found in an AAR?

ANTICIPATED ANSWERS:

A1. After the conduct of an exercise, ensure the following tasks are completed:

- a tear down of the area,
- return of resources,

- debriefing, and
- AAR.

A2. Having a debriefing with the people involved in the exercise is a crucial step in identifying the practices to keep and the practices to avoid in future projects from the experience gained during the current project.

A3. The following elements are found in an AAR:

- practices to incorporate in future projects,
- steps to take to encourage these practices,
- practices to avoid on future projects, and
- steps to be taken to avoid these practices.

Teaching Point 2 **Conduct an activity where the cadets develop an after action report format.**

Time: 15 min Method: In-Class Activity

ACTIVITY

Time: 15 min

OBJECTIVE

The objective of this activity is to have the cadets develop their own AAR format.

RESOURCES

- Flip chart paper, and
- Markers.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Divide the class into two groups.
2. Distribute a flip chart paper and markers to each group.
3. Tell the cadets they have to create a template for an AAR that must contain all the necessary information.
4. Allow the cadets eight minutes to work on the assignment.
5. Allow each group two minute to present their work.
6. Have the cadets reflect on which format they prefer.

SAFETY

Nil.

Show the cadets Attachment A for an example of an AAR format that could be used.

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' conclusion of an activity will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

This EO is evaluated IAW A-CR-CCP-805/PG-001, *Proficiency Level Five Qualification Standard and Plan*, Chapter 3, Annex B, 503 PC.

CLOSING STATEMENT

It is important to properly close out an activity as the mistakes and success of an activity can be used when planning the next one. Leaders have to recognize the importance of taking a few moments to reflect on the learning experience from the activities they prepare and conduct.

INSTRUCTOR NOTES / REMARKS

Cadets shall be given the opportunity to conclude an exercise, as a member of a group, as part of their OJT.

REFERENCES

C3-252 ISBN 978-0-470-04923-5 Portny, S. E. (2007). *Project management for dummies*. Hoboken, NJ: Wiley Publishing.

AFTER ACTION REPORT

EVENT: _____

		SITUATION	SOLUTIONS & RECOMMENDATIONS
1.	**Training**		
	a. Time allocation	The time allocated for EO MXXX.XX was insufficient. Instructors did not have time to complete the class and had to leave out the last TP.	The class may be completed during a regular training night. Allow two periods for this class in next year's training schedule.
	b. …	…	…
2.	**Support**		
	a. Transportation	…	…
	b. Facilities	The facilities were great. There was a sufficient number of classrooms for the number of lessons to be carried out. Having showers available was very useful. The fact that cadets had a chance to freshen up after the sports event was very appreciated by all.	Keep the same facilities for a similar event in the future.
3.	**Other**		
	a. …	…	…
	b. …		
	c. …	…	…
4.	**Other**		
	a. …	…	…
	b. …	…	…

By: _____

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COMMON TRAINING

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 5

EO C503.01 – EXAMINE MEETING PROCEDURES

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-805/PG-001, *Proficiency Level Five Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the self-study package within the section for which they are required.

Self-study packages are intended to be completed by the cadet independently. More information about self-study packages can be found in the foreword and preface.

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

Photocopy the self-study package located at Attachment A for the cadet.

Photocopy the answer key located at Attachment B but **do not** provide it to the cadet.

For the final exercise located at the end of the self-study package, obtain a copy of an actual exercise plan or operations order (ops order) used by the squadron or photocopy the sample exercise located at Attachment C for the cadet.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A self study was chosen for this lesson as it allows the cadet to examine meeting procedures at their own learning pace. This encourages the cadet to become more self-reliant and independent by focusing on their own learning instead of learning directed by the instructor.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have examined meeting procedures.

IMPORTANCE

It is important for cadets to examine meeting procedures as the squadron will be participating in meetings to create proposals and prepare / conduct / conclude exercises.

SELF-STUDY PACKAGE INSTRUCTIONS

OBJECTIVE

The objective of this self-study package is to have the cadet examine meeting procedures.

RESOURCES

- Self-study package, and
- Pen / pencil.

ACTIVITY LAYOUT

Provide the cadet with a classroom or training area suitable to complete the self-study package.

ACTIVITY INSTRUCTIONS

1. Provide the cadet with a copy of the self-study package located at Attachment A and a pen / pencil.
2. Allow the cadet 90 minutes to complete the self-study package.
3. Provide assistance as required to the cadet.
4. Collect the self-study package once the cadet has finished.
5. Correct the self-study package with the self-study package answer key located at Attachment B.
6. Provide feedback to the cadet and indicate whether or not they have completed the Enabling Objective (EO).
7. Return the completed self-study package to the cadet for their future reference.
8. Record the result in the cadet's logbook and Cadet Training Record.

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadet’s completion of the self study package will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

By examining meeting procedures, you will have a better understanding of the benefits of meetings and on how to facilitate them to ensure their success.

INSTRUCTOR NOTES / REMARKS

This self study shall only be completed after the mandatory component of PO 503 (Lead Cadet Activities).

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Examine Meeting Procedures

SECTION: 1 IDENTIFY TYPES OF MEETINGS

SECTION: 2 EXAMINE HOW TO ORGANIZE MEETINGS

SECTION: 3 EXAMINE HOW TO FACILITATE MEETINGS

SECTION 1
IDENTIFY TYPES OF MEETINGS

TYPES OF MEETINGS

There are many types of meetings, such as two friends meeting over coffee or a session of the House of Commons. The two types of meetings that will be described here are the ones used most often within the Cadet Program: briefings and committee meetings.

BRIEFING

A briefing is a type of meeting used to convey what needs to be done during an exercise or to inform the participants of an activity and of the necessary details. There is little input from the group except asking clarifying questions.

Briefing. A meeting for delivering information or instructions.

As a cadet, a briefing is the most common type of meeting you would be expected to facilitate.

As a cadet, there are two types of briefings you may be asked to facilitate:

- **Information briefing.** The information briefing is intended to inform the listeners and to gain their understanding. The briefing deals primarily with facts. The briefer provides a brief introduction to define the subject and to orient the listener and then presents the information.
- **Staff briefing.** The staff briefing is intended to secure a coordinated or unified effort. This may involve the exchange of information, the making / announcement of decisions, the issuance of directives, or the presentation of guidance. The staff briefing may include characteristics of an information briefing.

Functions of a Briefing

A briefing needs to be clear, concise, and complete. It needs to be tailored to its audience; a briefing for the activity leaders of an exercise is different from the one you would give to the cadets participating in the exercise.

- **Communicating the overall plan.** Explain how the exercise will be carried out. Always include safety details that affect the whole exercise (eg, fire orders, muster points, first aid personnel, and boundaries). All team members should know what is involved. This may include identifying various stages and phases.
- **Communicating the tasks involved in the leadership appointment.** Explain the tasks involved within the exercise.
- **Assigning tasks to team members as applicable.** Assign team members tasks that must be completed within the scope of the exercise. Every team member should be actively engaged in a meaningful activity.
- **Ensuring the team members understand their tasks.** Confirm team members understand their tasks and ask the team members if they have any questions. The team leader should also ask questions of various team members to ensure comprehension. When team members are assigned specific tasks, it is important they understand what is expected of them.

Think about questions you could ask or actions you could take to ensure everyone has understood their tasks.

COMMITTEE MEETING

A committee meeting is used to plan and organize an exercise. Members' participation is necessary for this type of meeting to be successful.

Committee meeting. A group of people, nominally up to 12 members, headed by a chairperson, meeting for discussion and debate on subjects relevant to its members.

Now that you know that members' participation is necessary in a committee meeting, how would you ensure maximum participation in your meeting?

During your time in cadets, most of the meetings you have attended were briefings. Younger cadets have little input in the planning and organization of the activities in which they participate. As you have progressed through the Cadet Program, the tasks that you have been assigned to complete have progressed from leading a small group of cadets in setting up a classroom to leading a flight on parade.

Functions of a Committee Meeting

Meetings fulfill many functions for the team. The functions of a meeting include:

- defining the team;
- providing an opportunity where the team revises, updates, and adds to what it knows as a team;
- helping everyone to understand the collective aim of the team and the way in which their work contributes to the team's success;
- creating a commitment to the decisions it makes and the objectives it pursues; and
- creating an occasion where the team physically exists and works **as a group**, and the only time when the leader is the leader of the team and not just a person to whom individuals are responsible to.

Objective(s) of a Meeting

There are many reasons to have meetings. As part of Proficiency Level Five you will participate in meetings to create proposals and prepare / conduct / conclude exercises as part of PO 503 (Lead Cadet Activities). Here are some meeting objectives:

- **Legislative framework.** The objective of the meeting is to clarify the organizational makeup of the team; its rules, routines and procedures (eg, who is responsible to whom, how problems should be addressed, what tasks need to be completed) through which all action takes place.
- **Executive responsibilities.** The objective of the meeting is to determine who will be responsible for what tasks. Each member sees what others are doing and also understands how their roles / responsibilities fit into the whole project / exercise.
- **Constructive / originative.** The objective of the meeting is to guide a discussion where the knowledge, experience, judgment and ideas of the team are used to come up with or think through a proposal, project, exercise, etc.
- **Informative / digestive.** The objective of the meeting includes progress reports—to keep the team up-to-date on the current status of the tasks—and a review of the completed project to see what can be learned for the next time (eg, a meeting used to determine details of an After Action Report).

SECTION 2
EXAMINE HOW TO ORGANIZE MEETINGS

HOW TO ORGANIZE A BRIEFING

To organize your briefing, you will need the complete activity or exercise plan. It should state the who, what, where and when of the briefing.

Tell them what **they** need to know, **not** all **you** know!

Organizing a briefing requires four steps:

1. **Analyze the situation.** This includes analyzing the audience and the occasion by determining:
   - Who is to be briefed and why?
   - How much knowledge of the subject does the audience have?
   - What is expected of the briefer?
2. **Construct the briefing.** The construction of the briefing will vary with its type and purpose. The analysis provides the basis for this determination. The following are the major steps in preparing a briefing:
   a. Know the subject thoroughly.
   b. Isolate the key points.
   c. Arrange the key points in logical order.
   d. Select visual aids, if required.
   e. Establish the wording.
   f. Rehearse before a knowledgeable person who can critique the briefing.
3. **Deliver the briefing.** A successful briefing is dependent on how it is presented. A confident delivery, clearly enunciated and obviously based on full knowledge of the subject helps convince the audience. The briefer maintains a relaxed, but professional bearing using natural gestures and movement, but avoiding distracting mannerisms. The delivery is characterized by conciseness, objectivity, and accuracy. The briefer must be aware of the following:
   - The basic purpose is to present the subject as directed and to ensure that it is understood by the audience.
   - Brevity precludes a lengthy introduction or summary.
   - Interruptions and questions may occur at any point. If these interruptions occur, the briefer answers questions before proceeding or should indicate that questions will be answered later in the briefing. Do not permit questions to distract you from your planned briefing. If the question will be answered later in the briefing, the briefer should make specific reference to the earlier question when introducing that material. The briefer should anticipate possible questions and be prepared to answer them.
4. **Follow-up.** Ensure an understanding of the material. When the briefing is over, the briefer should elicit the opinion of a peer or superior for a critique.

HOW TO WRITE A BRIEFING

The following is a format used when writing an information briefing.

The Information Briefing

The information briefing should follow this format:

1. The introduction, to include:
    a. greeting,
    b. purpose and scope, to include:
        (1) giving the big picture first; and
        (2) explaining the purpose and scope of your briefing; and
    c. outline or procedure, to include:
        (1) summarizing the key points and your general approach; and
        (2) explaining any special procedures (eg, demonstrations).
2. The body, to include:
    a. arranging the main points in a logical sequence;
    b. using visual aids to emphasize your main points;
    c. planning effective transitions from one main point to the next; and
    d. being prepared to answer questions at any time.
3. The closing, to include:
    a. asking for questions;
    b. summarizing the key points and making a concluding statement; and
    c. announcing what will be happening next.

What to Consider When Writing a Staff Briefing

The staff briefing should include:

1. **General.** The staff briefing is an information briefing presented to the staff who are leading the activities or responsible for completing tasks for the exercise.
2. **Purposes of a staff briefing.** Give specific instructions, if required. The staff briefing serves to:
    - issue or elaborate on the exercise plan;
    - instil a general appreciation of the exercise;
    - review the key points of the exercise plan; and
    - ensure participants know the exercise's objective(s), problems that may arise, and ways to overcome them.
3. **Format.** A staff briefing is normally informal and has no set format.

***Activate Your Brain #1*:**

What are the four steps when organizing a briefing?

_____ _____

_____ _____

HOW TO ORGANIZE A MEETING

During EO M503.02 (Prepare an Exercise), a basic procedure on how to plan a pre-exercise meeting was described. The following (more formal and detailed) procedures on how to organize and facilitate a meeting are from *Robert's Rules of Order: Newly Revised in Brief*, more commonly known as Robert's Rules of Order.

Did you know?

When Henry Martyn Robert (an officer in the United States Army) was asked to preside over a church meeting, he realized he did not know how. He tried anyway and his embarrassment was supreme. This event, which may seem familiar to many, left him determined never to attend another meeting until he knew something about parliamentary law. He studied the books that were available on the subject, but soon realized that every part of the United States had differing ideas of the correct procedure. To bring order to the chaos, he decided to write *Robert's Rules of Order* (first published in 1876) which quickly became the most commonly used procedures for facilitating meetings in the country.

Duties of the Chairperson

It is the responsibility of the chairperson for all planning for a meeting, which includes:

- setting the timings for the meeting;
- creating the agenda;
- running the meeting;
- supervising debate;
- conducting any voting; and
- creating the minutes.

Setting the Timings for the Meeting

Team members shall be notified of meetings as soon as possible to allow the meeting to be more productive and allow all members to express their concerns.

Creating the Agenda

Every meeting must first be convened. This process should begin with an agenda. The most critical priority for a meeting must always be to avoid wasting members' time. An effective agenda is the best tool for that purpose.

The agenda structures the order of business for a meeting and is a guide for attendees to follow. When setting the agenda, think of it as a set of rules for a good meeting.

The agenda must provide the organization's name, the date, time and place of the meeting. It should also give a finish time and, where possible, an approximate time for each item, so that the chairperson can keep an effective rein on the meeting by using the time framework.

Standard agenda items and their suggested order are:

1. confirmation of the minutes from the previous meeting;
2. matters arising from the previous minutes (any matter that was raised at the previous meeting which needed follow-up action on a carried motion);
3. correspondence in and out;
4. reports (these could be from the team's various departments); and
5. general business (brief background information on agenda topics as required).

The chairperson can vary the order of business at the meeting if the meeting members agree.

An agenda is more effective if given to the members before the meeting rather then at the meeting.

Running the Meeting

All business is brought before the assembly in the form of a motion. Before members can make a motion or address the assembly they must obtain the floor using the following protocol:

1. The members will raise their hand and wait to be recognized.
2. The chairperson is addressed by title, “Mr. Speaker” or “Madame Speaker”.
3. The member introducing a motion has the first right to the floor.
4. Members who have not spoken to a motion shall have precedence over those who have.
5. The chairperson must recognize any member who seeks the floor while entitled to it.
6. Before a motion is open to debate it must (if required) be seconded and stated by the Speaker after which it is open to debate.
7. All important motions and amendments shall be in writing.
8. After the Speaker has stated a motion it is the property of the assembly and can only be withdrawn with unanimous consent or permission of the assembly.

Debate

Speeches shall conform to the following rules:

- Maximum speech length, as determined by assembly, will be respected.
- Decorum in debate will be maintained, to include:
    - remarks must be confined to the merits of the pending question;
    - attacks on a member's motives are not allowed;
    - all remarks must be addressed through the chairperson;

- the use of members' names will be avoided;
- refrain from speaking against one's own motion;
- stop speaking during an interruption by the chairperson; and
- refrain from disturbing the assembly.

- The chairperson is not to take part in the debate.
- When possible, the chairperson shall alternate the debate between those for and those against the motion.

Voting

Voting, if required, shall conform to the following rules:

- Procedures for voting shall be as the chairperson suggests.
- A member can change their vote until the time that the result is announced.
- A straw poll (an unofficial ballot taken as a test of opinion) is not in order for official purposes; a formal vote is required.

Did you know?

For a vote to be valid, a quorum must exist.

Quorum. The fixed minimum number of members that must be present to make the proceedings of an assembly, society, or meeting valid.

Creating the Minutes

Minutes. A brief summary of the proceedings of a meeting.

Minutes should be taken by someone other than the chairperson. This allows the chairperson to concentrate on facilitating the meeting. Minutes shall contain enough information to:

- maintain an accurate historical account of a meeting held; and
- allow for a clear understanding of the business that was conducted for those present and not present.

As a guideline, minutes should contain the following information:

- name of body, associated office, department or organization;
- date, time and location of the meeting;
- the list of attendees, guests and regrets (including the chairperson, and recording secretary);

Regrets. Expressing polite apologies for not being able to attend a meeting.

Members who cannot attend the meeting contact the chairperson with their reasons. The chairperson informs the recording secretary of those members who have sent regrets to distinguish them from members who did not contact the chairperson about their absence.

- a record of all motions that were presented;
- a clear distinction between open and closed sections of the meeting;
- consecutively numbered pages (use a header with meeting name, date, and page number);
- time of adjournment; and
- list of titles of any reports presented during the meeting.

Principles for effective minute-taking:

- BEFORE the meeting:
  - If possible, meet with the chairperson to set the agenda.
  - Learn what is expected to be included in the meeting minutes.
  - Use the agenda to make an outline for recording purposes.
  - Make sure there is a backup recording tool (eg, if taking minutes using a laptop computer, having pen and paper available if there are problems).
  - Make an extra copy of the agenda and / or materials to bring to the meeting.
  - Read and review all meeting materials.
  - Prepare an attendance sheet (know who is expected to attend and who sent regrets).
- DURING the meeting:
  - When possible, sit next to the meeting chairperson.
  - Follow the sequence of the meeting using the agenda.
  - Listen actively.
  - Focus on documenting the main ideas, processes and outcomes.
  - Record all motions and results (if not clear on the wording, ask for the motion to be repeated).
- AFTER the meeting, compose the minutes as follows:
  - If needed, ask the chairperson for clarification on any issues discussed.
  - Draft the minutes as soon as possible, while everything is still fresh.
  - Include only factual and concise statements about each issue discussed.
  - Omit unnecessary details.
  - Record in the past tense and in the third person.
  - Proofread, and then have the chairperson proofread.
  - Ensure the minutes, and amendments if required, are available for approval at the next meeting.

***Activate Your Brain #2*:**

What are the duties of the chairperson?

_____ _____

_____ _____

_____ _____

SECTION 3
EXAMINE HOW TO FACILITATE MEETINGS

FACILITATING THE MEETING

Remember the objective of the meeting and stay on track. The two most important things for this to happen are the agenda (for dealing with the subject) and the actions of the chairperson (for dealing with the people).

Dealing With the Subject

When planning the agenda, the placement or order of items to be discussed can be very helpful for dealing with the subject of the meeting.

For example, you could:

- place smaller items first on the agenda to build up a sense of success before dealing with the main item;
- place the main item first to ensure it is discussed, leaving the smaller items to be decided after or at another meeting; or
- place a contentious item last so it can not potentially disrupt the entire meeting.

Dealing With the People

Dealing with people is an important skill, especially when you are in a position of leadership. Chairpersons need to build trust between themselves and their followers. There are six critical areas:

- **Communication.** Must always be a two-way street.
- **Support.** Being approachable, helpful, and concerned, especially when things are not going well.
- **Respect.** A question of delegating authority and listening to what subordinates have to say.
- **Fairness.** Giving credit and assessing blame where they are due.
- **Predictability.** Being dependable and keeping promises.
- **Competence.** Knowing your own job and doing it well.

Leadership is influence and influence is exercised through communication. Like any skill, competent communication must be learned and developed over a lifetime. Communication skills permit the flow of ideas from one individual to another or to a group, and vice versa. The process of communication can include both verbal and non-verbal messages. Understanding the three styles of communication aids you when facilitating a meeting by knowing who to watch out for (aggressive), who to draw out (passive) and who to support (assertive).

The ability of the team to work during a meeting is determined by their ability to work together. This is the primary task of the chairperson. Your conduct, both verbal and non-verbal, will set the tone for the meeting.

LEADERSHIP APPROACHES

There are three main leadership approaches discussed in the Cadet Program. They are:

- control,
- coach, and
- empower.

Each leadership approach is based on balancing the concern for the relationship with team members for the concern for accomplishing the goal(s) of the meeting.

All leadership approaches may be required when facilitating a meeting. You have to rely on your training and experience to help you decide which approach is best for a given situation.

As a chairperson, this can be the most difficult part in running a meeting. Often, getting everyone to participate can be a challenge.

MEETINGS: WHAT CAN GO WRONG AND WHY

When you have a group of people together at a meeting, anything can happen. A **poorly** facilitated meeting quickly reinforces the idea that meetings are a waste of time. The following definitions describe how members may act / feel during meetings.

Passivity. The members are only attending because they have to. They feel that they have little to no input into the overall plan.

Boring. Most of the meeting has nothing to do with most of the members, so why are they here? The only part of the meeting that interests the member is theirs!

People don't listen. Listening is a skill and many people are poor listeners. This is understandable as people think faster than they can talk, creating down time for their brain; when listening to others the brain "fills" this down time between the speaker's words with their own thoughts. Another reason people don't listen is the subject; other members' ideas are not as good as theirs so why listen?

Grandstanding. Sometimes one or two members seem to dominate the discussion. This grandstanding has the effect of overwhelming the younger, less experienced and less aggressive members.

The power of the leader. It's hard to disagree with the leader. If you, as the chairperson, are seen as favouring one idea, the members are less likely to challenge / disagree with it.

Foregone conclusions. Members feel that a meeting is a waste of time if it appears the chairperson has already made a decision.

Not useful. Members' past experiences of finishing a meeting left them not sure exactly what was decided and what they are to do next. This gives them the opinion that the meeting was a waste of time.

Fear of exposure. If members talk about their ideas or express opinions, they expose themselves to public criticism. This can be devastating to a young person, especially when such criticism is done by someone they respect.

Potential conflict. Most people prefer to get along with others. When you disagree with someone, there is the potential for conflict. Members who disagree may feel isolated or unpopular and opt instead for the safety of silence. Also, some people enjoy provoking conflict and these people need to be watched out for.

Prior relationships brought to the meeting. Members who associate together are seen by other members as a clique. Such cliques are seen as supporting their own members, even over the good of the team. If there is more than one clique, there is a potential for rivalry to overshadow the meeting.

Concern about consequences. What will be required of the members when an idea is accepted? Will some members have to do more than others? What are the consequences of not being able to do my part? This anxiety can make attending a meeting a very unpleasant experience for some members.

Have you experienced any of the situations described above? What is your opinion about attending a meeting?

_____

_____

_____

_____

MEETINGS: WHY THEY ARE IMPORTANT

With all these problems is it even worth the effort to have meetings? Before you can make this decision, here are some of the reasons why meetings are important.

Getting a sense of the whole. So much work is done by individuals or small groups that it becomes vital for the team to see the big picture. This gives everyone a sense that their work is part of the plan, helping build morale and esprit de corps.

Comparing notes. By comparing notes, problems affecting one member may be solved by another member who had a similar problem.

Sharing information. Learning what others have done, hearing ways similar problems were solved, and being able to share something learned all builds toward a positive outcome for the meeting and the team.

Being visible to each other. Much of the team's work is done by individuals or small groups, so it can be difficult to actually be a team. Being together in a meeting allows the energy of the members to synergize the members into a team. It also allows the leader to be seen as a leader and not just someone that you report to.

Comfort of hearing others' opinions openly. It can be very uncomfortable discussing ideas and opinions one-on-one with the leader. However, if this is done by everyone as a team, there is less anxiety due to the fact that everyone is in the same boat. Such openness also create a norm of acceptable discussion.

Looking for solutions jointly. The saying "two heads are better than one" emphasizes the concept that there is usually more than one way to do something. Sometimes members get so caught up in their own thoughts and ideas that they don't see all the ways something can be done.

Group self-critique. If problems are aired by self-critique (eg, you talk about problems **you** are having), and everyone is doing it, it is easier to discuss the problems in a non-conflictive manner. By bringing up your own problems, you are trusting in the team to help you solve them. This also builds morale and esprit de corps.

Developing consensus. If there is consensus, the team as a whole gains a sense of ownership to the exercise. If everyone is in agreement, conflicts are resolved through solving the problem, not attacking the one who saw the problem.

Stimulating ideas. The atmosphere of the team focusing on one idea brings the creative level up for all the members. Discussing possible solutions stimulates other members to add to the idea to make it better.

In your opinion, why are meetings important?

_____

_____

_____

_____

THINGS TO WATCH OUT FOR DURING THE MEETING

As you have read, facilitating a meeting draws heavily on leadership principles and skills. The following are things to watch out for during the meeting.

Control the talkative. Some people can take a very long time to say very little. Remember, your meeting needs to stay on track. First try non-verbal cues (eg, staring the speaker in the eye) and, if necessary, verbal ones (eg, taking over the conversation by moving the discussion on) to control the talkative speaker.

Draw out the silent. Everyone's input is important, otherwise why are they at the meeting? However, for various reasons, most people remain silent throughout a meeting. People who are included in the planning / preparation of the project will usually work to make it successful.

***Activate Your Brain #3*:**

For the following phrases, which style of communication (aggressive / passive / assertive) do they most resemble?

Control the talkative _____

Draw out the silent _____

Protect the timid. The input of the younger / less experienced members of the group may provoke disagreement with their seniors, which is reasonable. However, if the disagreement escalates to personal attacks or suggestions that the younger / less experienced members should not contribute ideas, the morale of the team will quickly deteriorate. Successful participation in a productive meeting builds confidence for all, especially the younger / less experienced members.

Encourage the clash of ideas. If the goal is to have the best outcome, then all ideas need to be thoroughly discussed. However, this may become a clash of personalities (between those whose ideas are being discussed) instead of the ideas. As chairperson, you need to keep the tone of the discussion professional. Keep the discussion on the ideas, not the people promoting them.

Watch out for the suggestion-squashing reflex. If people feel that making a suggestion will provoke the negative reaction of being laughed at or squashed, they will soon stop suggesting ideas. This can be most destructive if it is done by the chairperson! Instead, take notice of all suggestions, especially if it is suggested by a younger / less experienced member of the team.

Come to the most senior people last. This serves several purposes. It allows the younger / less experienced members of the team the experience of participating in the discussion. It also allows these younger / less experienced members to present their ideas before hearing the ideas of the older / more experienced members.

Remember when you were the younger / less experienced member of a team? Did you experience anxiety when you were teamed with older / more experienced cadets?

Close on a note of achievement. Making a meeting worth the effort means ensuring that it is seen as a success. At the end of the meeting, make it a point of emphasizing all that was accomplished. Remember, as chairperson, it is your responsibility to ensure the meeting was a success!

Congratulations, you have completed your self-study package on EO C503.01 (Examine Meeting Procedures). Complete the following exercise and hand the completed package to the Training / Proficiency Level Officer and have them record the completion in your Proficiency Level Five Logbook.

FINAL EXERCISE
PREPARE A BRIEFING

Using the information briefing format, create a briefing for the provided exercise plan (Item #4 on the timetable).

Note. If there are more than five key points, use blank paper to complete.

INTRODUCTION

Greeting: _____

_____

_____

Purpose and Scope:

Give the big picture first. _____

_____

_____

Explain the purpose and scope of your briefing. _____

_____

_____

Outline or Procedure:

Briefly summarize the key points and your general approach. _____

_____

_____

_____

_____

Explain any special procedures (eg, demonstrations). _____

_____

_____

BODY

Point #1: _____

Visual Aid? No Yes Description: _____

Possible Questions: _____

Transition: _____

Point #2: _____

Visual Aid? No Yes Description: _____

Possible Questions: _____

Transition: _____

Point #3: _____

Visual Aid? No Yes Description: _____

Possible Questions: _____

_____

_____

Transition: _____

_____

Point #4: _____

_____

_____

Visual Aid? No Yes Description: _____

Possible Questions: _____

_____

_____

Transition: _____

_____

Point #5: _____

_____

_____

Visual Aid? No Yes Description: _____

Possible Questions: _____

_____

_____

Transition: _____

_____

CLOSING

Ask for Questions

Briefly recap key points:

Point #1: _____

_____

Point #2: _____

_____

Point #3: _____

_____

Point #4: _____

_____

Point #5: _____

_____

Make a Concluding Statement:

_____

_____

_____

Announce What Will Be Happening Next:

_____

_____

_____

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ACTIVATE YOUR BRAIN ANSWER KEY

***Activate Your Brain #1*:**

What are the four steps when organizing a briefing?

Analyze the situation.

Construct the briefing.

Deliver the briefing.

Follow-up.

***Activate Your Brain #2*:**

What are the duties of the chairperson?

- **setting the timings for the meeting**
- **creating the agenda**
- **running the meeting**
- **supervising debate**
- **conducting any voting**
- **creating the minutes**

***Activate Your Brain #3*:**

For the following phrases, which style of communication (aggressive / passive / assertive) do they most resemble?

Control the talkative **aggressive**

Draw out the silent **passive**

GUIDELINES FOR MARKING THE FINAL EXERCISE

When marking the final exercise, the following points should be considered:

- Is it legible?
- Are all sections complete?
- Could another person use this briefing effectively?

INTRODUCTION

- Did the cadet state their name in the greeting?
- Is the purpose and scope of the briefing explained?

BODY

- Are all key points of the exercise plan covered?
- Are all points organized in a logical order?
- Are all points clear and concise?
- Are visual aids planned?
    - If no, should a visual aid(s) have been planned?
    - If yes, was it appropriate?
- Are possible questions prepared for?
    - If no, have the cadet explain why not?
    - If yes, are they appropriate?
- Are transitions planned between points?

CLOSING

- Are all points recapped?
- Is the concluding statement motivational?
- Is the happening next announcement correct?

EXERCISE PLAN EXAMPLE

TITLE OF THE EXERCISE: SPORTS EVENT: OPERATION GET-YOUR-MOVE-ON

WHAT

Unit 123 Moncton will participate in Operation GET-YOUR-MOVE-ON, a sports event to be conducted at the Moncton Everblue High School on Saturday, 10 Mar 2012 from 0900 hrs–1600 hrs.

WHY

Unit 123 Moncton will conduct the sports event to promote physical fitness amongst all cadets, to introduce them to various sports, and to develop leadership and refereeing skills in senior cadets. The event will take place over one day to allow the conduct of multiple sports.

HOW

A. General Outline

Example: This exercise will be conducted in five phases:

1. Phase One – Administration

The pre-activity meeting will be conducted on 21 Feb 12 in the CO's office at 1730 hrs. All members will attend. Booking of facilities, administrative preparation and planning are being completed by the Training Officer.

2. Phase Two – Preparation of Facilities

Prior to the cadets' arrival, all sergeants are required to prepare the facilities. The equipment for all sports events is to be taken out of the supply room and placed in the appropriate area. Signs identifying bathrooms, water points, and safety points have to be put up. This should be completed NLT 0840 hrs.

3. Phase Three – Conduct of the Exercise

As per schedule. Will include exercise / safety briefing, warm-up, conduct of the sports, lunch, cool-down and activity debriefing. Cadets will be allowed to leave at 1600 hrs.

4. Phase Four– Return of Stores

Return of stores, clean-up of facilities.

5. Phase Five - Post-exercise meeting

Post-exercise meeting will be conducted on Sunday 11 Mar 2012 at the CO's office from 1700 hrs to 1830 hrs. All senior cadets and officers will attend.

B. Groupings

Cadets will be divided upon arrival into four different sports teams. WO1 Mackey will ensure this is done as soon as cadets are on ground.

C. Tasks

WHO	TASKS
Capt Malloy	• Plan the sports event. • Book school facilities. • Deliver the safety briefing upon arrival. • Deliver the event's debriefing.
Lt Nixon	• Responsible for meal arrangements. • Responsible for all medical emergencies. First-aider for the event.
WO1 Mackey	• Responsible to ensure that equipment and signs are ready before 0840 hrs as per Annex C. • Responsible to ensure all activities are carried out safely and according to the timetable. • Responsible to have cadets divided into four sports teams.
WO2 Landry	• Responsible for the training and evaluation of all activity referees. • Offer feedback to activity referees. • Complete and submit an individual evaluation of all referees to the Training Officer.
FSgt Gagnon	• Responsible for the evaluation all activity referees. • Offer feedback to activity referees. • Complete and submit an individual evaluation of all referees to the Training Officer.
Sgt Penny	• Responsible for equipment set-up and tear-down • Become familiar with and referee soccer. • Become familiar with and referee volleyball.
Sgt Randell	• Responsible for equipment set-up and tear-down. • Become familiar with and referee soccer. • Become familiar with and referee volleyball.
Sgt Picard	• Responsible for equipment set-up and tear-down. • Become familiar with and referee ball hockey. • Become familiar with and referee badminton.
Sgt Clark	• Responsible for equipment set-up and tear-down. • Become familiar with and referee ball hockey. • Become familiar with and referee badminton.
Sgt Belliveau	• Responsible for set-up and tear-down. • Responsible to carry out the warm-up and the cool-down. • Responsible for the tug-of-war event.
All members	• All members are to look after safety. • Anything deemed unsafe should be stopped right away and rectified.

D. Timings

See timetable in Annex A.

E. Dress

Dress for the event will be suitable sports gear. No outdoor footwear shall be worn inside.

F. Rations
Rations will be arranged by Lt Nixon.

G. Accommodations
Arrangements for the school are to be made by Capt Malloy.

H. Equipment
See Annex B for Equipment List.
See Annex C for Activity Layout.

I. Transport
Cadets are responsible for their own transportation to and from the school.

J. Emergency Procedures
All medical emergencies will be reported to Lt Nixon. First aid will be available on site, and will be given if necessary. Medical emergencies will be directed to 911.

K. Water
Water will be available at school fountains. All cadets are to bring a personal water bottle to have water on hand.

L. Hygiene
The school washrooms (toilets and showers) will be available.

CHAIN OF COMMAND

Planning: Capt Malloy
Conduct: WO1 Mackey
Evaluation: WO2 Landry, FSgt Gagnon
Rations: Lt Nixon
First-Aider: Lt Nixon
Referees: Sgt Penny, Sgt Randell, Sgt Picard, Sgt Clark and Sgt Belliveau

Capt R Malloy
TrgO
123 Moncton

Distribution List

CO
DCO
Capt Malloy
Lt Nixon
WO1 Mackey
WO2 Landry
FSgt Gagnon
Sgt Penny
Sgt Randell
Sgt Picard
Sgt Clark
Sgt Belliveau

List of Annexes

Annex A - Timetable
Annex B - Equipment
Annex C - Exercise Layout

Annex A

TIMETABLE

Period	Time	What	Who	Comments
1	0810–0840 hrs	Set-up	All Sergeants	
2	0840–0900 hrs	Cadets arrival	All senior cdts	
3	0900–0905 hrs	Attendance		
4	0905–0920 hrs	Exercise briefing	**YOU**	WO1 to divide teams at this time.
5	0920–0930 hrs	Warm up	Sgt Belliveau	
6	0940–1010 hrs	Game 1	Sgt Randell Sgt Penny	Soccer (Teams 1 vs 2) Volleyball (Teams 3 vs 4)
7	1010–1030 hrs	Break		
8	1030–1100 hrs	Game 2	Sgt Penny Sgt Randell	Soccer (Teams 1 vs 3) Volleyball (Teams 2 vs 4)
9	1100–1120 hrs	Break		
10	1120–1200 hrs	Game 3	TBD*	Soccer (Teams 3 vs 4) Volleyball (Teams 1 vs 2)
11	1200–1300 hrs	Lunch		
12	1300–1330 hrs	Game 4	Sgt Picard Sgt Clark	Hockey (Teams 1 vs 2) Badminton (Teams 3 and 4)
13	1330–1350 hrs	Break		
14	1350–1420 hrs	Game 5	Sgt Clark Sgt Picard	Hockey (Teams 3 vs 4) Badminton (Teams 1 and 2)
15	1420–1440 hrs	Break		
16	1440–1510 hrs	Game 6	TBD*	Hockey (Teams 1 vs 4) Badminton (Teams 2 and 3)
17	1510–1535 hrs	Tug of war	Sgt Belliveau	
18	1535–1545 hrs	Cool down	Sgt Belliveau	
19	1545–1600 hrs	Debriefing	Capt Malloy	
20	1600 hrs	Departure	All senior cdts	

* Based on previous experience of both sports, determine who may need more practice and assign as appropriate.

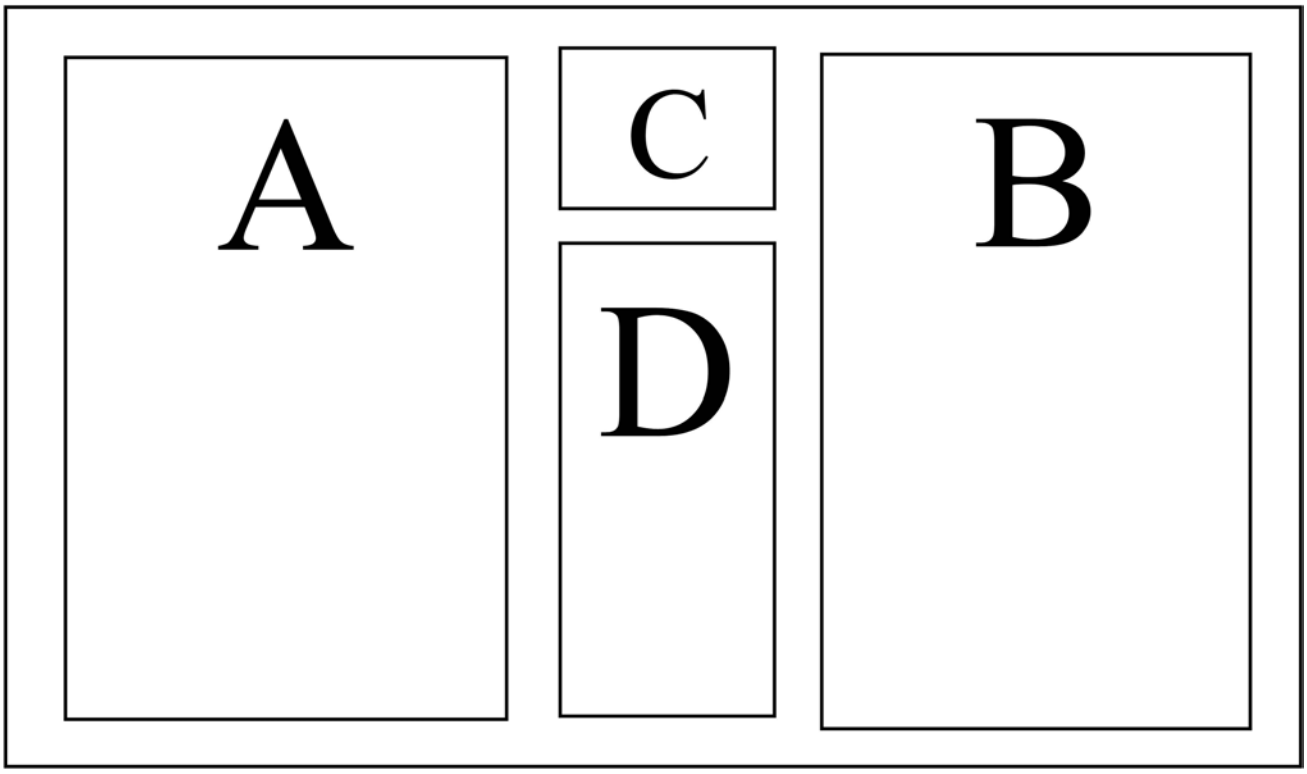
Annex B

EQUIPMENT LIST

- Hockey sticks x 20
- Hockey masks x 20
- Hockey gloves x 20
- Protective goggles x 20
- Hockey nets x 2
- Pucks x 2
- Badminton rackets x 20
- Badminton birds x 6
- Badminton sets (nets and poles) x 3
- Pinnies x 20 of each colour (2 colours)
- Volleyball set (nets and poles) x 1
- Volleyball ball x 2
- Large 18-m (60-foot) rope x 1
- First aid kit x 2

Annex C

EXERCISE LAYOUT



Legend:

A: Soccer / Hockey

B: Volleyball / Badminton

C: First Aid Station

D: Tug of War

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COMMON TRAINING

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 1

EO M504.01 – PARTICIPATE IN THE CADET FITNESS ASSESSMENT

Total Time:	2 x 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-805/PG-001, *Proficiency Level Five 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 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 and the *Cadet Fitness Assessment and Incentive Level Results* located at CATO 14-18, Annex B, Appendix 3 for each cadet.

The cadets will complete the Cadet Fitness Assessment in pairs. The 20-m Shuttle Run Test will be conducted first, with the remaining stations run as a circuit.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A practical activity was chosen for this lesson as it allows the cadets to participate in the Cadet Fitness Assessment in a safe and controlled environment.

INTRODUCTION

REVIEW

Review how to conduct the components of the Cadet Fitness Assessment.

OBJECTIVES

By the end of this lesson the cadet shall have participated in the Cadet Fitness Assessment.

IMPORTANCE

It is important for the cadets to participate in the Cadet Fitness Assessment to determine their personal fitness level. When conducted multiple times over the course of the year, the Cadet Fitness Assessment allows progress to be tracked. Determining personal fitness level will also allow the cadets to create personal goals and will assist with updating a personal activity plan.

Teaching Point 1 **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 session.

PURPOSE OF A WARM-UP

A warm-up session 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 physical 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

1. Arrange the cadets in either a warm-up circle or in rows (as illustrated in Figures 1 and 2).

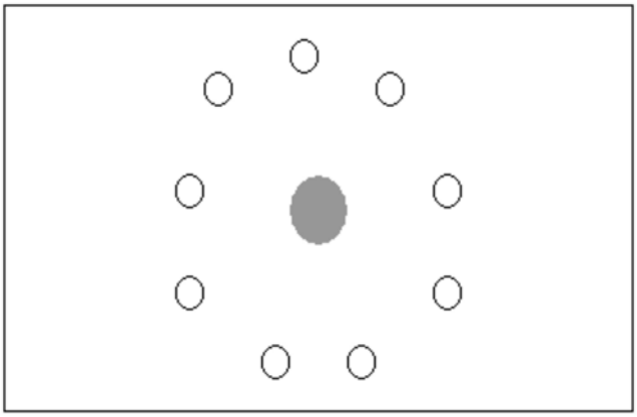


Figure 1 Instructor in the Centre of a Warm-Up Circle

Note. Created by Director Cadets 3, 2006, Ottawa, ON: Department of National Defence.

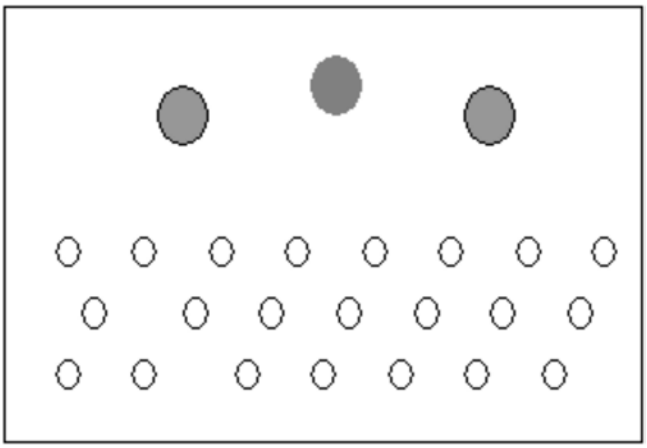


Figure 2 Instructor at the Front with Two Assistant Instructors

Note. Created by Director Cadets 3, 2006, Ottawa, ON: Department of National Defence.

2. Demonstrate before having the cadets attempt each stretch / light cardiovascular exercise.

3. Assistant instructors may help demonstrate the exercises and ensure the cadets are performing them correctly.

4. Have cadets perform each stretch / light cardiovascular exercise.

Light cardiovascular exercises 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 stretches 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 1

The cadets' participation in the warm-up session will serve as the confirmation of this TP.

Teaching Point 2 **Supervise while the cadets perform and score the Cadet Fitness Assessment.**

Time: 15 min Method: Practical Activity

The cadets will participate in the Cadet Fitness Assessment in pairs.

The 20-m Shuttle Run Test will be conducted before the other assessments.

The remaining fitness-area tests will be conducted as a circuit and are as follows:

1. the curl-up,
2. the push-up, and
3. choose two of the following:
   a. the trunk lift,
   b. the shoulder stretch, or
   c. the back-saver sit and reach.

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets perform and score 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,
- Paper,
- Metre sticks,
- Coins,
- Back-saver sit and reach test apparatuses,
- *Individual Score Sheet for the 20-m Shuttle Run Test*, and
- *Cadet Fitness Assessment and Incentive Level Results*.

ACTIVITY LAYOUT

IAW CATO 14-18, Annex A.

ACTIVITY INSTRUCTIONS

1. Divide the cadets into pairs.

The cadets will remain in pairs throughout the Cadet Fitness Assessment.

2. Distribute the *Individual Score Sheet for the 20-m Shuttle Run Test*, the *Cadet Fitness Assessment and Incentive Level Results*, and pens / pencils to one cadet from each pair.
3. Have the cadets with the score sheet print their partner's name on the score sheet and sit behind the starting line ready to record results.
4. Conduct the 20-m Shuttle Run Test IAW CATO 14-18, Annex A, Appendix 1.
5. Once completed, have the cadets who completed the 20-m Shuttle Run Test become the scorekeepers and the scorekeepers become the runners; and repeat Steps 2–4.
6. Conduct the remaining fitness-area tests as a circuit IAW CATO 14-18, Annex A.

SAFETY

- Ensure a designated first-aider and first aid kit are available.
- Ensure water is available for the cadets after they complete the 20-m Shuttle Run Test.

- Ensure that the curl-up and push-up are conducted using the proper position / form.
- The cadets shall not bounce or hyperextend their backs while performing the trunk lift.

CONFIRMATION OF TEACHING POINT 2

The cadets' participation in the Cadet Fitness Assessment will serve as the confirmation of this TP.

Teaching Point 3 **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 session.

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

1. Arrange the cadets in either a warm-up circle or in rows (as illustrated in Figures 1 and 2 of TP 1).
2. Demonstrate before having the cadets attempt each stretch / light cardiovascular exercise.

3. Assistant instructors may help demonstrate the movements and ensure the cadets are performing them correctly.

4. 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 1.

CONFIRMATION OF TEACHING POINT 3

The cadets' participation in the cool-down session will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the Cadet Fitness Assessment will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

The Cadet Fitness Assessment determines personal fitness level, and is an excellent tool for tracking progress in personal fitness.

INSTRUCTOR NOTES / REMARKS

The Cadet Fitness Assessment is an individual assessment used to set personal fitness goals. Results from this assessment shall not be used for competition or classification among cadets.

The Cadet Fitness Assessment shall be set up prior to conducting this EO.

This EO shall be conducted at the start and the end of the training year.

REFERENCES

C0-095 ISBN 0-7360-5962-8 The Cooper Institute. (n.d.). *Fitnessgram / activitygram test administration kit: Fitnessgram 8.0 stand-alone test kit*. Windsor, ON: Human Kinetics.

C0-167 ISBN 0-7360-5866-4 Meredith, M., & Welk, G. (Eds.). (2005). *Fitnessgram / activitygram: Test administration manual* (3rd ed.). Windsor, ON: Human Kinetics.

SAMPLE STRETCHES

a. Neck:

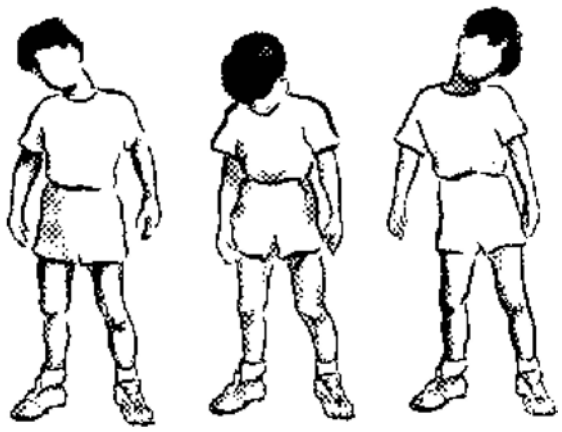


Figure A-1 Neck Stretch

Note. From *Moving on the Spot: A Collection of 5 Minute Stretch and Movement Sessions*, by B. Hanson, 1999, Toronto, Ontario: Toronto Public Health. Retrieved October 26, 2006, from http://www.lin.ca/resource/html/dn3.htm#l1

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

b. Shoulders:

 Figure A-2 Shoulder Push *Note*. From *Moving on the Spot: A Collection of 5 minute Stretch and Movement Sessions*, by B. Hanson, 1999, Toronto, Ontario: Toronto Public Health. Retrieved October 26, 2006, from http://www.lin.ca/resource/html/dn3.htm#l1	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 A-3 Shoulder Shrug *Note*. From *Moving on the Spot: A Collection of 5 minute Stretch and Movement Sessions*, by B. Hanson, 1999, Toronto, Ontario: Toronto Public Health. Retrieved October 26, 2006, from http://www.lin.ca/resource/html/dn3.htm#l1	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 A-4 Arm Circles *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	Hold your arms straight out, palms up. Make small circles with your arms, gradually increasing the size. Reverse the direction of your circles.
 Figure A-5 Shoulder Stretch *Note*. From *Smart Start: A Flexible Way to Get Fit*. Retrieved October 26, 2006, from http://www.in-motion.ca/walkingworkout/plan/flexibility/	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 the elbow lightly 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.

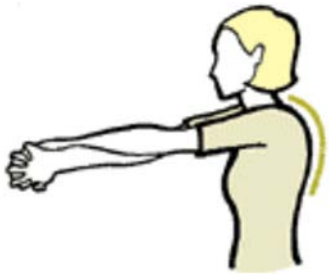
c. Arms:

 Figure A-6 Wrist Rotations *Note*. From *Exercises*. Copyright 1998 by Impacto Protective Products Inc. Retrieved October 26, 2006, from http://www.2protect.com/home.htm	Rotate your hands in circular motions at the wrist. Change direction and repeat on both sides.
 Figure A-7 Triceps Stretch *Note*. From *Smart Start: A Flexible Way to Get Fit*. Retrieved October 26, 2006, from http://www.in-motion.ca/walkingworkout/plan/flexibility/	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 A-8 Forearm Stretch *Note*. From *Exercise Programme for Squash, Tennis, Softball, Handball*. Retrieved October 26, 2006, from http://www.physionline.co.za/conditions/article.asp?id=49	In a kneeling position, place your hands on the floor in front of you with your fingers pointing toward your knees, and your thumbs pointing out. Keeping your hands flat on the floor, lean back. Hold this position for a minimum of 10 seconds.

d. Chest and Abdominals:

 Figure A-9 Chest Stretch *Note*. From *Smart Start: A Flexible Way to Get Fit*. Retrieved October 26, 2006, from http:// www.in-motion.ca/walkingworkout/plan/flexibility/	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 you chest. Hold this position for a minimum of 10 seconds and repeat on the opposite side.
 Figure A-10 Side Stretch *Note*. From *Moving on the Spot: A Collection of 5 minute Stretch and Movement Sessions*, by B. Hanson, 1999, Toronto, Ontario: Toronto Public Health. Retrieved October 26, 2006, from http://www.lin.ca/resource/html/dn3.htm#I1	Stand with your left arm up over your head. Bend at the waist towards the right side of your body. Hold this position for a minimum of 10 seconds and repeat on the opposite side.

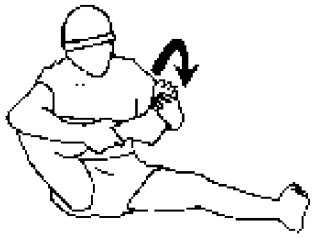
e. Back:

 Figure A-11 Lower Back Stretch *Note*. From *Smart Start: A Flexible Way to Get Fit*. Retrieved October 26, 2006, from http:// www.in-motion.ca/walkingworkout/plan/flexibility/	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 A-12 Upper Back Stretch *Note*. From *Smart Start: A Flexible Way to Get Fit*. Retrieved October 26, 2006, from http:// www.in-motion.ca/walkingworkout/plan/flexibility/	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:

 Figure A-13 Hamstring Stretch *Note*. From *Smart Start: A Flexible Way to Get Fit*. Retrieved October 26, 2006, from http://www.in-motion.ca/walkingworkout/plan/flexibility/	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 A-14 Inner Thigh Stretch *Note*. From *Smart Start: A Flexible Way to Get Fit*. Retrieved October 26, 2006, from http://www.in-motion.ca/walkingworkout/plan/flexibility/	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 A-15 Hip Flexor *Note*. From *Smart Start: A Flexible Way to Get Fit*. Retrieved October 26, 2006, from http://www.in-motion.ca/walkingworkout/plan/flexibility/	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:

 Figure A-16 Ankle Rotations *Note*. From *Running Exercises*. Retrieved October 26, 2006, http://www.physionline.co.za/conditions/article.asp?id=46	From a sitting position, rotate your foot in a clockwise, and then a counter-clockwise, direction. Switch and repeat on the opposite side.
 Figure A-17 Calf Stretch *Note*. From *Smart Start: A Flexible Way to Get Fit*. Retrieved October 26, 2006, from http://www.in-motion.ca/walkingworkout/plan/flexibility/	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 A-18 Quadriceps Stretch *Note*. From *Smart Start: A Flexible Way to Get Fit*. Retrieved October 26, 2006, from http://www.in-motion.ca/walkingworkout/plan/flexibility/	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 FIVE

INSTRUCTIONAL GUIDE

SECTION 2

EO M504.02 – UPDATE PERSONAL ACTIVITY PLAN

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-805/PG-001, *Proficiency Level Five 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 Attachment A (Sample Personal Activity Plan) and Attachment B (Personal Activity Plan) for each cadet.

Photocopy this instructional guide for each cadet.

Physical fitness resources can be printed or ordered from http://www.phac-aspc.gc.ca/pau-uap/fitness/downloads.html, through the Public Health Agency of Canada to be given as handouts to the cadets.

PRE-LESSON ASSIGNMENT

Ensure the cadets have a copy of their Proficiency Level Four Personal Activity Plan and their Cadet Fitness Assessment results to bring to this lesson.

APPROACH

A practical activity was chosen for this lesson as it is an interactive way to allow the cadets to update their Personal Activity Plan. This activity contributes to the development of personal fitness goals in a fun and challenging setting.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have updated their Personal Activity Plan (from Proficiency Level Four) for the current training year.

IMPORTANCE

In order to help achieve success in physical fitness, it is important to know how to set personal fitness goals and to create an activity plan that will help to achieve those goals. This is important as physical fitness is one of the aims of the cadet program.

Teaching Point 1 **Have the cadets update their Personal Activity Plan from Proficiency Level Four.**

Time: 25 min Method: Practical Activity

Describe the terms used in the Personal Activity Plan before having the cadets update their plan. Distribute the sample Personal Activity Plan handout located at Attachment A to each cadet.

A Personal Activity Plan is designed to identify current personal fitness level and to create individual goals to increase fitness level. There are a number of terms used within a Personal Activity Plan to describe type and intensity of activities.

TYPES OF ACTIVITIES

Rest activities. Activities that involve minimal physical effort (eg, homework, computer games and reading).

Lifestyle activities. Activities that are a part of a normal day (eg, walking, household chores and garbage sweeps).

Aerobic activities. Activities that improve aerobic fitness (eg, jogging, swimming and dancing).

Aerobic sports. Sports that involve a great deal of movement (eg, baseball, basketball and soccer).

Muscular activities. Activities that require strength (eg, weightlifting, wrestling and track and field sports).

Flexibility activities. Activities that involve stretching the muscles (eg, martial arts, stretching and yoga).

INTENSITY OF ACTIVITIES

Rest. Activities that involve sitting or standing, and little motion.

Light. Activities that involve slow movements, and are not tiring.

Moderate. Activities that are fairly intense (fall between light and vigorous).

Vigorous. Activities that involve quick movements or running, and increased respiration.

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets update their Proficiency Level Four Personal Activity Plan.

RESOURCES

- Personal Activity Plan handout located at Attachment B,
- Cadet Fitness Assessment results, and
- Pens / pencils.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Discuss how the results of the Cadet Fitness Assessment can be used to create goals.

The Cadet Fitness Assessment determines personal fitness level through raw scores.

A cadet who scored 5 on the push-up and 10 on the curl-up assessments, may wish to set a long-term goal to improve muscular fitness. Their short-term goal may be to complete 8 push-ups and 12 curl-ups on the next assessment.

2. Distribute the Personal Activity Plan handout, located at Attachment B, to each cadet.
3. Supervise and provide assistance while the cadets update their Personal Activity Plans for the current training year by:
   a. reviewing their Proficiency Level Four Personal Activity Plan;
   b. reviewing their Cadet Fitness Assessment results;
   c. listing current fitness and sports activities;
   d. identifying areas that need improvement;
   e. creating goals; and
   f. listing planned fitness and sports activities.

SAFETY

Nil.

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' updating their Personal Activity Plan will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

The cadets should follow their Personal Activity Plan throughout the training year. The Personal Activity Plan will be evaluated by the cadet each time they complete the Cadet Fitness Assessment.

METHOD OF EVALUATION

This EO is evaluated IAW A-CR-CCP-805/PG-001, *Proficiency Level Five Qualification Standard and Plan*, Chapter 3, Annex B, 504 PC.

CLOSING STATEMENT

One of the aims of the cadet program is physical fitness. A Personal Activity Plan is an important tool for creating and achieving goals, and will help to track progress in physical fitness.

INSTRUCTOR NOTES / REMARKS

This lesson shall follow the start of year Cadet Fitness Assessment (EO M504.01 [Participate in the Cadet Fitness Assessment]).

No time has been allocated for this EO. Cadets will update their personal activity plan independently during a training session.

Physical fitness resources can be printed or ordered from http://www.phac-aspc.gc.ca/pau-uap/fitness/downloads.html, through the Public Health Agency of Canada to be given as handouts to the cadets.

REFERENCES

C0-104 ISBN 0-662-26628-5 Public Health Agency of Canada. (1998). *Handbook for Canada's physical activity guide to healthy active living*. Ottawa, ON: Public Health Agency of Canada.

C0-105 ISBN 0-662-32897-3 Public Health Agency of Canada. (2002). *Teacher's guide to physical activity for youth 10–14 years of age*. Ottawa, ON: Her Majesty the Queen in Right of Canada.

C0-106 ISBN 0-662-32899-X Public Health Agency of Canada. (2002). *Let's get active! Magazine for youth 10–14 years of age*. Ottawa, ON: Her Majesty the Queen in Right of Canada.

C0-167 ISBN 0-7360-5866-4 Meredith, M., & Welk, G. (Eds.). (2005). *Fitnessgram / activitygram: Test administration manual* (3rd ed.). Windsor, ON: Human Kinetics.

C0-174 ISBN 978-0-7360-6828-4 Masurier, G., Lambdin, D., & Corbin, C. (2007). *Fitness for life: Middle school: Teacher's guide*. Windsor, ON: Human Kinetics.

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SAMPLE PERSONAL ACTIVITY PLAN

Name: Shepherd, John Date: 10 Sept

START OF YEAR

CADET FITNESS ASSESSMENT #1 RESULTS

Assessment	Score
Cardiovascular	
20-m Shuttle Run test	8
Muscular Strength	
Curl-up	20
Push-up	6
Muscular Flexibility	
Trunk Lift	6 inches
Shoulder Stretch	**Right**: Y
	Left: N
Back-Saver Sit and Reach	**Right**: 4 inches
	Left: 3 inches

CURRENT ACTIVITIES

List the activities that you participated in over the past week.

Date	Activity	Duration	Type of Activity	Intensity of Activity
Wednesday 3 Sept	Computer Games	3 hrs	Rest Activity	Rest
	Soccer	1 hr	Aerobic Sports	Moderate
	Stretching	15 min	Flexibility Activity	Light
Thursday 4 Sept	Soccer	1 hr	Aerobic Sports	Moderate
	Stretching	15 min	Flexibility Activity	Light
	Reading	2 hrs	Rest Activity	Rest
Friday 5 Sept	Yard Work	1 hr	Lifestyle Activity	Moderate
	Bike Riding	1 hr	Aerobic Activity	Moderate
	Watching Television	4 hrs	Rest Activity	Rest
Saturday 6 Sept	Bike Riding	1 hr	Aerobic Activity	Moderate
	Packing	3 hrs	Lifestyle Activity	Light
	Reading	1 hr	Rest Activity	Rest

Date	Activity	Duration	Type of Activity	Intensity of Activity
Sunday 7 Sept	Playing Video Games	2 hrs	Rest Activity	Rest
	Walking	30 min	Lifestyle Activity	Light
	Reading	1 hr	Rest Activity	Rest
Monday 8 Sept	Watching TV	3 hrs	Rest Activity	Rest
	Walking	1 hr	Lifestyle Activity	Light
	Reading	1 hr	Rest Activity	Rest
Tuesday 9 Sept	Sitting in Class	4 hrs	Rest Activity	Rest
	Reading	1 hr	Rest Activity	Rest
	Walking	1 hr	Lifestyle Activity	Light

Areas That Need Improvement:

1. 20-m shuttle run test score is low. Need to improve cardiovascular fitness.
2. Need to participate in more activities at a vigorous intensity.
3. Cut back on rest activities.

GOALS

Remember that goals must be:

- **S**pecific,
- **M**easurable,
- **A**chievable,
- **R**elevant, and
- **T**imed.

Long-term goal for the training year: To increase personal fitness level.

Short-term Goals:

Goal	Date to Achieve By	Date Achieved
Score 15 on the 20-m Shuttle Run test	Next Cadet Fitness Assessment	
Score 10 on the push-up assessment	Next Cadet Fitness Assessment	
Participate in five aerobic sports in the next week	17 Sept	

PLANNED ACTIVITIES

List the activities that you plan to participate in.

Week	Activity	Was the activity completed?	Why was the activity not completed?
11 Sept- 17 Sept	Soccer for 2 hrs		
	Walking for 30 min / day		
	Biking for 2 hrs / twice a week		
18 Sept- 24 Sept	Run for 1 hrs		
	Recreational Sports for 1 hr		
	Walking for 30 min / day		
25 Sept- 1 Oct	Soccer for 2 hrs		
	Walking for 30 min / day		
	Swimming for 1.5 hrs		
2 Oct- 8 Oct	Biking for 2 hrs / twice a week		
	Recreational Sports for 1 hr / twice a week		
	Walking for 30 min / day		
9 Oct- 15 Oct	Recreational Sports for 1 hr / twice a week		
	Running / Walking for 30 min / day		
	Biking for 2 hrs / twice a week		
16 Oct- 22 Oct	Recreational Sports for 1 hr / twice a week		
	Running / Walking for 30 min / day		
	Biking for 2 hrs / twice a week		
23 Oct- 29 Oct	Recreational Sports for 1 hr / twice a week		
	Running / Walking for 30 min / day		
	Biking for 2 hrs / twice a week		

Note. Created by Director Cadets 3, 2008, Ottawa, ON: Department of National Defence.

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PERSONAL ACTIVITY PLAN

Name: _____ Date: _____

START OF YEAR

CADET FITNESS ASSESSMENT RESULTS

Assessment	Score
Cardiovascular	
20-m Shuttle Run test	
Muscular Strength	
Curl-up	
Push-up	
Muscular Flexibility	
Trunk Lift	
Shoulder Stretch	**Right**:
	Left:
Back-Saver Sit and Reach	**Right**:
	Left:

CURRENT ACTIVITIES

List the activities that you participated in over the past week.

Date	Activity	Duration	Type of Activity	Intensity of Activity

Date	Activity	Duration	Type of Activity	Intensity of Activity

Areas That Need Improvement:

1. _____
2. _____
3. _____

GOALS

Remember that goals must be:

- **S**pecific,
- **M**easurable,
- **A**chievable,
- **R**elevant, and
- **T**imed.

Long-term goal for the training year: _____

_____

Short-term Goals:

Goal	Date to Achieve By	Date Achieved

PLANNED ACTIVITIES

List the activities that you plan to participate in.

Week	Activity	Was the activity completed?	Why was the activity not completed?

END OF YEAR

CADET FITNESS ASSESSMENT RESULTS

Assessment	Score
Cardiovascular	
20-m Shuttle Run test	
Muscular	
Curl-up	
Push-up	
Flexibility	
Trunk Lift	
Shoulder Stretch	**Right**:
	Left:
Back-saver Sit and Reach	**Right**:
	Left:

Areas That Need Improvement:

1. _____
2. _____
3. _____

Short-term Goals:

Goal	Date to Achieve By	Date Achieved

PLANNED ACTIVITIES

List the activities that you plan to participate in.

Week	Activity	Was the activity completed?	Why was the activity not completed?

REFLECTION

Was your long-term goal for the training year met? _____

If applicable, why was your long-term goal not met? _____

_____

What is your long-term goal following the completion of this training year? _____

_____

List some short-term goals that will help you achieve your long-term goal:

Goal	Date to Achieve By	Date Achieved

Note. Created by Director Cadets 3, 2008, Ottawa, ON: Department of National Defence.

COMMON TRAINING

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 3

EO M504.03 – EVALUATE PERSONAL ACTIVITY PLAN

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-805/PG-001, *Proficiency Level Five 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 practical activity was chosen for this lesson as it allows the cadets to evaluate their Personal Activity Plan in a safe and controlled environment.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have evaluated their Personal Activity Plan.

IMPORTANCE

It is important for cadets to evaluate their Personal Activity Plan to determine if goals were met and to track progress in personal fitness.

Teaching Point 1 **Have the cadets evaluate their Personal Activity Plan.**

Time: 25 min Method: Practical Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets evaluate their Personal Activity Plan.

RESOURCES

- Cadet Fitness Assessment results, and
- Personal Activity Plan from the start of the training year.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Distribute the cadet's Personal Activity Plan and Cadet Fitness Assessment results.
2. Have the cadets compare their start of year and end of year Cadet Fitness Assessment results.
3. Have the cadets compare their actual and planned fitness and sports activities.
4. Have the cadets complete the reflection portion of the Personal Activity Plan.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 1

The cadet's evaluation of their Personal Activity Plan will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadet's evaluation of their Personal Activity Plan will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

This EO is evaluated IAW A-CR-CCP-805/PG-001, *Proficiency Level Five Qualification Standard and Plan*, Chapter 3, Annex B, 504 PC.

CLOSING STATEMENT

Evaluating a Personal Activity Plan will help determine if goals were met and track progress in personal fitness. This lesson promotes physical fitness, meeting one of the aims of the cadet program.

INSTRUCTOR NOTES / REMARKS

This lesson shall follow the end of year Cadet Fitness Assessment (EO M504.02 [Participate in the Cadet Fitness Assessment]).

No time has been allocated for this EO. Cadets will evaluate their personal activity plan independently during a training session.

Physical fitness resources can be printed or ordered from http://www.phac-aspc.gc.ca/pau-uap/fitness/downloads.html, through the Public Health Agency of Canada to be given as handouts to the cadets.

REFERENCES

C0-104 ISBN 0-662-26628-5 Public Health Agency of Canada. (1998). *Handbook for Canada's physical activity guide to healthy active living*. Ottawa, ON: Public Health Agency of Canada.

C0-105 ISBN 0-662-32897-3 Public Health Agency of Canada. (2002). *Teacher's guide to physical activity for youth 10–14 years of age*. Ottawa, ON: Her Majesty the Queen in Right of Canada.

C0-106 ISBN 0-662-32899-X Public Health Agency of Canada. (2002). *Let's get active! Magazine for youth 10–14 years of age*. Ottawa, ON: Her Majesty the Queen in Right of Canada.

C0-167 ISBN 0-7360-5866-4 Meredith, M., & Welk, G. (Eds.). (2005). *Fitnessgram / activitygram: Test administration manual* (3rd ed.). Windsor, ON: Human Kinetics.

C0-174 ISBN 978-0-7360-6828-4 Masurier, G., Lambdin, D., & Corbin, C. (2007). *Fitness for life: Middle school: Teacher's guide*. Windsor, ON: Human Kinetics.

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COMMON TRAINING

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 1

EO C504.01 – EXAMINE THE USE OF TECHNOLOGY IN PHYSICAL FITNESS ACTIVITIES

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-805/PG-001, *Proficiency Level Five, Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the self-study package within the section for which they are required.

Self-study packages are intended to be completed by the cadet independently. More information about self-study packages can be found in the forward and preface.

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

Photocopy the self-study package located at Attachment A for each cadet.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A self study was chosen for this lesson as it allows the cadet to examine in greater detail the use of technology in physical fitness activities at their own learning pace. This encourages the cadet to become more self-reliant and independent by focusing on their own learning instead of learning directed by the instructor.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have examined the use of technology in physical fitness activities.

IMPORTANCE

It is important for cadets to examine the use of technology in physical fitness activities so they know about the advancement of technology, numerous programs and equipment and its use in physical activities.

SELF-STUDY PACKAGE INSTRUCTIONS

OBJECTIVE

The objective of this self-study package is to have the cadet examine the use of technology in physical fitness activities.

RESOURCES

- Self-study package, and
- Pen / pencil.

ACTIVITIY LAYOUT

Provide the cadet with a classroom or training area suitable to complete the self-study package.

ACTIVITY INSTRUCTIONS

1. Provide the cadet with a copy of the self-study package located at Attachment A and a pen / pencil.
2. Allow the cadet 90 minutes to complete the self-study package.
3. Provide assistance as required to the cadet.
4. Collect the self-study package once the cadet has finished.
5. Review the self-study package with the cadet.
6. Provide feedback to the cadet and indicate whether or not they have completed the Enabling Objective (EO).
7. Return the completed self-study package to the cadet for their future reference.
8. Record the result in the cadet's logbook and Cadet Training Record.

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadet’s completion of the self-study package will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

As cadets move from organized activities provided by cadet training to future education and / or work, the planning and scheduling of leisure time for fitness activities become the individual's responsibility. With the advancement of technology and its use in the applications reviewed in the self-study package, motivators and technical assistance is available for the individual wishing to continue their fitness activities.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

C0-431 Mobile & Peruasive. (2008). *A brief survey of physical activity monitoring devices*. Retrieved October 20, 2009, from http://www.icta.ufl.edu/projects/publications/chao08a.pdf

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C0-435 Defense Centers of Excellence. (2009). *Video games for physical and cognitive fitness*. Retrieved October 20, 2009, from http://www.dcoe.health.mil/blog/article.aspx?id=1&posted=16

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Technology in Physical Fitness

Section 1: ***Physical Fitness Equipment***

Section 2: ***Online and Software-Based Fitness Tools***

Section 3: ***Video Games That Promote Physical Fitness***

SECTION 1
PHYSICAL FITNESS EQUIPMENT

To support and encourage continuous fitness activity, technology provides numerous avenues to record and monitor physical activity. High caloric intake and low physical activity are recognized as key contributors of obesity, diabetes and other chronic health conditions.

Whether you use physical activity devices, online monitoring tools or video games that promote physical fitness, each has benefits to assist the user to achieve a level of fitness. How you monitor your physical activity can vary from using basic to complex equipment or a simple and enjoyable interactive personal computer (PC) program you use alone or with friends.

Let's unlock the information about the different types of equipment available for increasing one’s physical activity.

EXERCISE EQUIPMENT

Machines available include full size equipment, such as:

- treadmills,
- elliptical machines,
- rowing machines, and
- bicycles.

To intensify the workout, most equipment comes with electronic controls and built-in exercise programs that vary speed and intensity over a workout.

60 minutes of exercise burns varying amounts of calories depending on the exercise program. For more information, visit http://www.health-and-fitness-sourse.com/burning-calories.html

Treadmill

Figure A-1 Treadmill

Note. From "Exercise Equipment", 2009, *Smoothfitness*. Retrieved November 6, 2009, from http://www.smoothfitness.ca/treadmills

This is the most popular piece of exercise equipment used in North America. The treadmill is the most natural form of exercise as it allows you to walk or run at your own pace.

Machines may have:

- motion control hands-free speed adjustment,
- wireless heart rate control,
- various levels of incline,
- iFit® workout technology,
- iPod® / MP3 connections, and
- LCD flat-screen television.

Treadmills are more versatile for home gyms as some can be folded for storage.

Elliptical Trainer

The elliptical machine provides exercise workouts similar to combining biking, stair-climbing and cross-country skiing workouts.

This machine provides moderate to intense low-impact workouts for your legs and to a lesser degree, your arms. If the machine has reverse motion, you then exercise your buttock muscles.

This multipurpose machine is gaining popularity.
Machines may have:

- pre-set programs,
- heart rate controlled workout programs,
- varying levels of resistance change automatically,
- allows for forward and reverse motion,
- iPod® / MP3 docking station with speakers, and
- multi-color LCD display.

Figure A-2 Elliptical Trainer

Note. From "Exercise Equipment", 2009, *Smoothfitness*. Retrieved November 6, 2009, from http://www.smoothfitness.ca/ellipticaltrainer

An elliptical trainer provides:

- low-impact workouts,
- upper-body workouts, and
- lower-body workouts.

An elliptical trainer can not be folded for storage.

For calorie burning workouts, the treadmill and elliptical trainer are your best choices.

Exercise Bike

Exercise bikes can come with ports may have:

- iFit® workout technology,
- iPod® / MP3 connections,
- heart rate technology, and
- Gamefit™ interactive fitness games.

Figure A-3 Exercise Bike

Note. From "Exercise Equipment", 2009, *Smoothfitness*. Retrieved November 6, 2009, from http://www.smoothfitness.ca/exercisebike

Exercise bikes have been a popular form of exercise as they are simple to operate. They come with preprogrammed biking routines to provide various exercise workouts.

Some equipment can be plugged into televisions and video games to let you interactively pedal through the visual courses.

A variation to the standard exercise bike is the recumbent bike. It is best suited for individuals with lower back pain. This form of bike allows you to multi-task (take phone calls, read, etc.) during your exercise workout.

Rowing Machine

A rowing machine allows you to burn calories in a low-impact workout. The areas exercised include:

- arms,
- legs, and
- torso.

Machines can have a built-in PC interface to support software accessories.

Figure A-4 Rowing Machine

Note. From Concept Rowing, 2009, *Concept2: The World's Best Rowing Machine*. Retrieved November 12, 2009, from http://www.concept2.com/us/default.asp

PERSONAL DEVICES

Personal devices can be as small as a pedometer, accelerometer and multi-sensor activity tracking devices. The mechanisms can be as basic as counting footsteps to recording steps and the force of the stride while monitoring the heart rate.

Basic Pedometer

The pedometer is used to count steps while an individual walks or runs during an exercise period. People use this type of equipment for counting the number of steps during a day.

Modern day pedometers can be divided into five categories:

- spring-suspended lever arm with metal-on-metal contact,
- magnetic reed proximity switch,
- pendulum,
- accelerometer, and
- Global positioning system (GPS).

Figure A-5 Pedometer

Note. From "Amazon.com", 2009, *SportLine 340 Strider Pedometer: Sports & Outdoors*. Retrieved November 13, 2009, from http://www.amazon.com/SportLine-SP2795BK-340-Strider-Pedometer/dp/B0006VWRX6

The pedometer works by pendulum movement as the balanced weight activates to vertical motion which records steps and shows a digital record.

Most pedometers are clipped to the belt to be used during a low-impact exercise such as walking.

10,000 steps a day is the magic number recommended to achieve an active lifestyle. – www.physiotherapy.ca

Pedometer Watches

Pedometer watches come in three different varieties, which include:

- separate sensor to detect your steps and send data to a watch,
- GPS to measure the distance and speed you are travelling. It has a separate sensor. This system does not record the step count, only the distance travelled, and
- watch sensor to detect the arm motion rather than the steps.

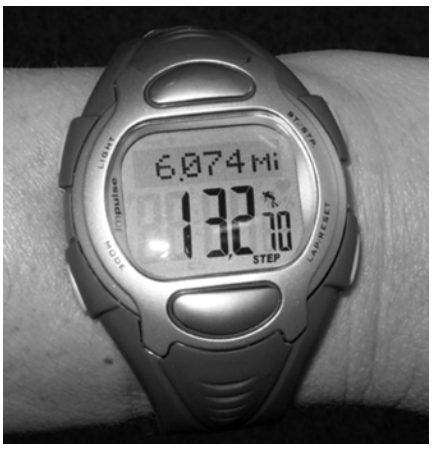

Figure A-6 Watch Pedometer

Note. From "Which Pedometer Design is Best?", by W. Bumgardner, 2009, *Heart Rate Monitor Pedometer Watch*. Copyright 2009 by W. Bumgardner. Retrieved November 13, 2009, from http://www.walking.about.com/od/pedometer1/ss/pedometerdesign_7htm?p=1

Accelerometer

Accelerometers are more than a pedometer because they use a precision motion sensor to measure calories burned during physical movement.

Figure A-7 Accelerometer

Note. From "thisnext", 2009, *Accelerometer–Measures Calories Burned From Physical Movement*. Retrieved November 13, 2009, from http://www.thisnext.com/item/75297326/6ECC67A9/Accelerometer-Measures-Calories

An accelerometer provides a quantitative measurement which counts:

- steps, and
- the force of a person's strides, providing more complex and precise measurements to analysis energy expended.

Did you know you can use your cell phone, iPod® and similar devices to record your exercise data?

List any device(s) you have. _____

_____

Advanced pedometers and accelerometers have been incorporated into modern cellular telephones and everyday devices including watches. These require you to stream the data to other sources.

The Nike+iPod® sport kit uses a small shoe sensor to record:

- steps,
- distance,
- time,
- pace, and
- calories expended.

The software is downloaded into an iPod® Touch or iPhone®. This sensor is placed in a special shoe or in your sock.

Figure A-8 Nike + iPod® Sports Kit Sensor

Note. From "Apple-Nike+iPod", 2008, *Nike+iPod*. Retrieved November 12, 2009, from http://www..apple.com/ipod/nike/

The iPod® Sports Kit sensor works with an iPod® Nano with a wireless receiver attached to the iPod® Nano. This receiver records the same functions as the iPhone® and iTouch®.

Figure A-9 Nike + iPod® Sports Kit Receiver Attached to iPod® Nano

Note. From "Apple-Nike+iPod", 2008, *Nike+iPod*. Retrieved November 12, 2009, from http://www..apple.com/ipod/nike/

You can download pedometer software to your iPhone®. The built-in accelerometer counts your steps.

The Nokia Sports® phone is more advanced in that it will record:

- steps,
- distance,
- pace, and
- calories expended.

More devices are being created to allow people to exercise and record their progress on electronic devices. List other devices similar to those presented that you have seen that have similar functions?

_____ _____
_____ _____
_____ _____

MULTI-SENSOR ACTIVITY TRACKING DEVICES

These devices record physical activities. Sensors are placed on various parts of the body and are exclusive to record different physiological measurements to provide a record of physical activities.

SenseWear Armband

The armband is a multi-sensor device, which is part of weight measurement and body monitoring solutions. It measures:

- skin temperature;
- physical movement;
- skin impedance, which reflects water content on body surface and constriction or dilation of vascular surface; and
- the rate at which heat is dissipated from the body.

This data can be used to calculate and report energy expenditure and physical activity.

BioTrainer Activity Monitor

This accelerometer-based device records both vertical and horizontal physical movement, recording the duration, intensity and frequency of physical activity.

Heart Rate Monitor

Figure A-10 Heart Rate Belt

Note. From "Vernier", 2009, *Exercise Heart Rate Monitor*. Retrieved November 16, 2009, from http://www.vernier.com/probes/her-bta.html

The exercise heart rate belt is used for an active individual to monitor the heart rate during exercise. The belt has a sensor but is not a stand alone device. The wireless transmitter sends information to a receiver plugged into the interface box on the machine being used.

It is important to collect activity data over multiple days and even weeks to get an accurate record of your exercise program and results.

SECTION 2
ONLINE AND SOFTWARE-BASED FITNESS TOOLS

If you are planning to document and analyze your daily physical activity, first check the device you are using for online support or software compatibility with your PC.

Most equipment can be linked to online or software programs which allow you to monitor your exercise program on a PC. The end result of the exercise program depends on the program you are using. The programs come in various workouts for all fitness levels and goals including:

- cardio,
- strength training,
- circuit training,
- fitness journals, and
- activity calorie calculators.

Many exercise machines have built-in workout technology. The level of exercise can be controlled by the machine depending on the program selected during the workout. A treadmill for example, has various levels of incline and the exercise bike has varying tension settings to simulate hills.

Figure A-11 Treadmill

Note. From "Exercise Equipment", 2009, *Smoothfitness*. Retrieved November 6, 2009, from http://www.smoothfitness.ca/treadmills

Many people use music to assist them during their fitness program. Using various types of music, a faster or slower pace can be maintained. When using equipment, an iPod® or MP3 can be connected to the machine with built-in speakers or just attached by an arm strap and headphones.

Fitness music programs can be obtained from online suppliers such as iTunes® or cadencerevolution.com. Other sources can be found online.

Want to learn more?

Visit www.cadencerevolution.com/index.php/2009/11/weekly-workout-142/. You will see a cycling workout with music.

Machines which use the iFit® workout technology, provide more variations of fitness workouts. Equipment comes with the port to insert the program required. The SD card with the program can be purchased from various companies. While a personal trainer verbally coaches you, the card controls the machine, to include adjusting:

- the speed and incline of the treadmill,
- the resistance of the elliptical, and
- the resistance of the bicycle.

Figure A-11 Card Reader

Note. From "iFit", 2009, *ifit.com.–Workout Sample Downloads*. Retrieved November 16, 2009, from http://www.ifit.com/workouts/downloads

Most software programs, including iFitness®, provide prepared workouts for beginners and more experienced individuals but you can create your own workout.

Varying routines are available to assist with:

- weight loss,
- strength,
- ab definition,
- golf program, or
- others.

The program logs, graphs and tracks progress. This type of program includes screens showing images of people doing over 230 exercises and includes full text instructions. Some programs include videos to show proper exercise execution. Timers are included to monitor the exercise and rest timings.

To track and store the exercise data, these types of programs include backup and restoration to the server.

Fitness programs are available for most equipment that have a built-in PC interface. This program can be ordered from companies and downloaded to a PC online or from a DVD. The range of data provided is similar to the SD card format. With video and audio capability, a personal trainer guides you through varying fitness programs.

Some commercially available software allows you to exercise in distance countries. Have you wanted:

- to walk,
- to run,
- to bike up the Alps; or
- to row:
    - distance waterways,
    - against others, or
    - with Olympic medalists?

Did you know?

Apps are program applications available from online resources such as iStore®.

The opportunity for personal fitness training continues to grow with the development of more Apps for the personal devices and DVDs. With continued development, the consumer options and needs provide more choices.

With a simple search on the Internet, numerous programs are available online. Whether you want to store the information with the organization or get assistance with your fitness activity, this information is found online.

Online services include:

- exercise workout online,
- workout training,
- fitness training,
- weight loss training,
- calories burned training,
- fitness calculator, and
- diet tracker.

The program you want to use may vary from those discussed here. Review fitness Apps online and choose the program best suited for your requirements. Some workouts are free and some require you to purchase the program.

SECTION 3
VIDEO GAMES THAT PROMOTE PHYSICAL FITNESS

Do you play video games? What are some of your favourite video games?

_____ _____
_____ _____
_____ _____

Computer games have been around for some time. From the comfort of a chair or couch, individuals have been able to play against a PC in various single player or team sports or adventure activities. However, little exertion of energy is involved in standard arcade games.

The newer generation of wireless-based computer platforms provides more elaborate and realistic games and activities. Computer games, like TV shows, come in various ratings, depending on the age of the user.

Do you know the rating of your computer games? Mark the rating (s) appropriate for you and then rate the games you listed at the start of this section.

EC	Early childhood, suitable for children age 3 and over.	_____
E	Everyone, suitable for children older than 6 and may contain a minimal amount of cartoon violence and / or mild language.	_____
E 10+	Everyone 10+, suitable for children over 10 and may contain fantasy violence and increased mild language and some suggestive themes.	_____
T	Teen, suitable for teenagers and may contain some blood and violence, crude humour, strong language and simulated gambling.	_____
M	Mature, not meant for children and should only be played by people older than 17. Contain greater amounts of violence, blood and gore, sexual content and stronger language.	_____
AO	Adult only and contains prolonged scenes of violence and / or sex.	_____

A system that makes advances using educational, physical and cognitive fitness games is being introduced into business and organizations. Although more research and development is needed to focus on using video games to provide specific cognitive, motor and educational goals, some off the shelf programs have been introduced and show progress in these areas.

With opportunities to de-stress using activity promoting computer games during lunch and work breaks, workers are showing more productivity and creativity. The gaming system has the user moving and exercising.

By combining video games with exercise, young people may be more active.

GAMING PLATFORMS

The Nintendo Wii™ has provided individuals with the opportunity to exercise with its use of interactive exergames. Wii Sports™ and Wii Fit™ have the player actively participating in sports as if playing real games including:

- boxing,
- tennis,
- baseball,
- golf,
- yoga,
- strength training,
    - push-ups,
    - stretches, and
    - ab exercises;
- aerobatics, and
- balance games,
    - skiing,
    - snowboard, and
    - walking a tightrope.

The intensity of the fitness workout depends on the game level achieved. Beginners start with the strength training exercise and graduate to the more demanding cardio exercises which include:

- running on a track;
- punching targets / a heavy bag;
- inline skating with jumps; and
- playing tennis.

Wii Fit™ shows your body age. As you progress, the body age and the chronological age should synchronize and you may even show a younger age.

As a motivator, Wii™ has the player create their own avatar. The avatar has customized hair colour, face shape, eye colour and more. The body shape represents the player's own. If the balance board is being used, it measures the weight and the player enters their own height. The game calculates their body mass index (BMI) and as weight is lost, the game adjusts the body shape.

Business executives, who use gaming platforms for exercise at work, create their own avatar for the program being used. Do you have your avatar created?

The PlayStation Xbox™ and Wii™ have young people up and moving to Dance Dance Revolution. The individuals move their feet as required on the dance pad while watching the actions of a character on a screen.

Stationary bikes have been connected to gaming systems such as PlayStation2™ requiring the player to peddle and stir with the handles to activate a car in the game.

Does activity promoting computer games make a difference in the energy (kj) expended? A study made by the Research Institute for Sport and Exercise Sciences in Liverpool, England, found the type of activity completed over a 60-minute period showed varying results. Baseline resting energy expenditure is 300 kj (72 cal).

Sports and Activities	Gaming Sports and Activities
• Sitting playing board games–400 kj (96 cal)	• Xbox 360™ games–450 kj (107 cal)
• bowling–800 kj (191 cal)	• Wii Sports™ bowling–700 kj (167 cal)
• tennis (doubles)–1330 kj (318 cal)	• Wii Sports™ tennis–750 kj (179 cal)
• boxing (punching bag)–1600 kj (382 cal)	• Wii Sports™ boxing–730 kj (174 cal)
• boxing (sparring)–2410 kj (575 cal)	

The energy expended playing gaming sports and activities is noticeably lower than participating in the real activity.

The enhanced interactive effects of active gaming produces varying degrees of energy expended. The more active and fit an individual is, the more progress and advancement to the next level.

Many corps and squadrons are purchasing gaming consoles which use the active gaming platforms. Does your squadron offer any type of gaming programs? If so, describe the games and purpose and if not, what would you like to see at your squadron?

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

CONCLUSION

As you move to future education and / or work from organized activities provided by cadet training, the planning and scheduling of leisure time for fitness activities becomes your responsibility. With the advancement of technology and its use in the applications reviewed in this self-study package, motivation and technical assistance is available for the individual wishing to continue their fitness activities.

Whether the individual uses exercise equipment, small devices, online and software-based fitness tools or interactive exergames, it is the individual's responsibility to monitor and participate in their own program. Individuals can use the services of a fitness gym, YMCA, and personal gym to access numerous exercise equipment. Something as simple as walking and running using the smaller devices can be completed routinely without membership fees to a gym.

As you progress into future training and education, the benefits of continued fitness activity will assist you to maintain a healthy lifestyle.

Congratulations, you have completed your self-study package on EO C504.01 (Examine the Use of Technology in Physical Fitness Activities). Complete the following exercise and hand your completed package to the Training Officer / Proficiency Level Officer who will record your completion in your Proficiency Level Five logbook.

FINAL EXERCISE

What is your fitness activity? Do you use any device or program discussed in this self-study package? Mark an X in the box beside the equipment or program you use. If you do not presently use any of these pieces of equipment, mark an X in those boxes that interests you.

	Use	Interest
	☐	☐

Figure A-12 Treadmill

Note. From "Exercise Equipment", 2009, *Smoothfitness*. Retrieved November 6, 2009, from http://www.smoothfitness.ca/treadmills

	☐	☐

Figure A-13 Elliptical Trainer

Note. From "Exercise Equipment", 2009, *Smoothfitness*. Retrieved November 6, 2009, from http://www.smoothfitness.ca/ellipticaltrainer

Use Interest

Figure A-14 Exercise Bike

Note. From "Exercise Equipment", 2009, *Smoothfitness*. Retrieved November 6, 2009, from http://www.smoothfitness.ca/exercisebike

Figure A-15 Rowing Machine

Note. From Concept Rowing, 2009, *Concept2: The World's Best Rowing Machine*. Retrieved November 12, 2009, from http://www.concept2.com/us/default.asp

Use Interest

Figure A-16 Pedometer

Note. From "Amazon.com", 2009, *SportLine 340 Strider Pedometer: Sports & Outdoors*. Retrieved November 13, 2009, from http://www.amazon.com/SportLine-SP2795BK-340-Strider-Pedometer/dp/B0006VWRX6

Figure A-17 Watch Pedometer

Note. From "Which Pedometer Design is Best?", by W. Bumgardner, 2009, *Heart Rate Monitor Pedometer Watch*. Copyright 2009 by W. Bumgardner. Retrieved November 13, 2009, from http://www.walking.about.com/od/pedometer1/ss/pedometerdesign_7htm?p=1

Use Interest

Figure A-18 Accelerometer

Note. From "thisnext", 2009, *Accelerometer–Measures Calories Burned From Physical Movement*. Retrieved November 13, 2009, from http://www.thisnext.com/item/75297326/6ECC67A9/Accelerometer-Measures-Calories

Figure A-19 Nike + iPod® Sports Kit Sensor

Note. From "Apple-Nike+iPod", 2008, *Nike+iPod*. Retrieved November 12, 2009, from http://www..apple.com/ipod/nike/

Figure A-20 Nintendo Wii™ Gaming Platform

Note. From "Sears", 2009, *Nintendo Wii Game System Console*. Retrieved November 12, 2009, from http://www..sears.ca/product/wii-8482-bundle/57542790?ptag=1

COMMON TRAINING

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 1

EO M507.01 – DEVELOP A PERSONALIZED SCHEDULE

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-805/PG-001, *Proficiency Level Five 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 year four CSTC training opportunities found at CATO 51-01 *Air Cadet Program Outline*, as the prerequisites for training may change.

Review CSTC advanced training - staff cadet opportunities found at CATO 13-28, *Advanced Training–Staff Cadets*, as the prerequisites for positions may change.

Photocopy Attachment A for each cadet.

PRE-LESSON ASSIGNMENT

Nil

APPROACH

An interactive lecture was chosen for TPs 1, 2 and 5 to orient the cadets to and generate interest in Proficiency Level Five mandatory and complementary training opportunities as well as the On-the-Job Practical Requirements (OJPR) and OJPR Logbook.

A group discussion was chosen for TPs 3 and 4 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions, and feelings about summer training opportunities, leadership assignments and leadership appointments at the squadron.

An in-class activity was chosen for TP 6 as it is an interactive way to provoke thought and stimulate interest among the cadets as they develop a personalized schedule.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have identified the training opportunities in Proficiency Level Five and have developed a personalized schedule for the training year(s).

IMPORTANCE

It is important for cadets to know what training will be conducted during Proficiency Level Five to give them an overview of what the training year(s) will entail. This lesson will help generate interest in the topics and provide a basis on which the cadet will balance school, work, personal and cadet commitments to establish a personalized schedule.

Teaching Point 1 **Identify Proficiency Level Five mandatory training common to the sea, army and air elements of the CCO.**

Time: 10 min Method: Interactive Lecture

OVERVIEW

The training program is broken into performance objectives (POs), which are the overall subjects, and enabling objectives (EOs), which are the topics within each PO. Training is conducted as mandatory and complementary components. Proficiency Level Five also sees the addition of two new topic areas, Professional Development and Personal Development.

MANDATORY TRAINING

Mandatory training encompasses the EOs that all cadets must complete throughout the training year(s). Proficiency Level Five mandatory training is common for sea, army and air cadets. The number of periods allocated for mandatory training is minimal, to allow cadets more free time to tailor their training year(s) to suit their individual circumstances.

Citizenship – PO 501 (Explain Global Citizenship)

The aim of Proficiency Level Five citizenship is to introduce the cadet to their roles and responsibilities as a citizen in a globalized world.

Community Service – PO 502 (Perform Community Service)

The aim of Proficiency Level Five community service is to encourage the cadet to be an active citizen through participation in local community service activities. Cadets are expected to complete a prescribed number of hours of community service to satisfy the requirements of this PO.

Leadership – PO 503 (Lead Cadet Activities)

The aim of Proficiency Level Five leadership is to provide the cadet with knowledge and skills to practice leadership during naturally occurring leadership assignments, structured leadership appointments, and a team leadership project. The cadet, as a member of a team, will:

- propose an exercise;
- plan an exercise;
- conduct an exercise; and
- conclude an exercise.

Personal Fitness and Healthy Living – PO 504 (Adopt an Active Lifestyle)

The aim of Proficiency Level Five personal fitness and healthy living is to encourage the cadet to set and pursue personal goals that contribute to an active lifestyle. No structured time has been allocated for PO 504. Proficiency Level Five cadets may choose to complete the Cadet Fitness Assessment during another Proficiency Level's scheduled periods. They may also choose to complete it independently on free time during a training session. The cadet will:

- participate in the Cadet Fitness Assessment,
- update Personal Activity Plan, and
- evaluate Personal Activity Plan.

Cadets are expected to complete a prescribed number of hours of physical fitness to satisfy the requirements of this PO.

General Cadet Knowledge – PO 507 (Serve in an Air Cadet Squadron)

The aim of Proficiency Level Five general cadet knowledge is to provide the cadet with information on the opportunities inherent in the Air Cadet Program and prepare the cadet for Proficiency Level Five assessment of learning requirements. Cadets will identify the training opportunities available in Proficiency Level Five.

Instructional Techniques – PO 509 (Instruct Cadets)

The aim of Proficiency Level Five instructional techniques is to refine the cadet's skills in instructing a 30-minute lesson. Cadets are required to be successful on at least one assessment of their instructional skills during Proficiency Level Five. Since Proficiency Level Five cadets will normally be the primary instructors at the local squadron, many opportunities exist for them to develop their skills. Lessons can also be delivered at other locations, such as at Cadet Summer Training Centres (CSTCs), gliding centres, etc.

Professional Development – PO 513 (Attend a Workshop)

The aim of PO 513 (Attend a Workshop) is to provide the cadet with professional development to enhance common training skills. Workshops are intended to be tri-service and provide the opportunity for cadets to participate in consolidated training with peers from different corps and squadrons on a variety of topics related primarily to leadership and instructional techniques. Proficiency Level Five cadets are expected to complete two days of workshops to successfully complete this PO.

Personal Development – PO 514 (Pursue Individual Learning)

The aim of PO 514 (Pursue Individual Learning) is to provide the cadet an opportunity to pursue an Air Cadet Program topic area using a personal learning plan to develop specialist skills. The participation and / or performance requirements are defined through an individual learning plan (ILP) that outlines a series of objectives to be met within the cadet's area of interest. The ILP is developed by the cadet in consultation with the Proficiency Level Officer and Squadron Training Officer and approved by the Commanding Officer (CO). The provision of a goal setting opportunity allows the cadet to pursue an area of personal interest related to the CP.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. What is the aim of Proficiency Level Five citizenship training?

Q2. When may Proficiency Level Five cadets complete the Cadet Fitness Assessment?

Q3. Will workshops be elemental or tri-service?

ANTICIPATED ANSWERS:

A1. The aim of Proficiency Level Five citizenship is to introduce the cadet to their roles and responsibilities as a citizen in a globalized world.

A2. Proficiency Level Five cadets may choose to complete the Cadet Fitness Assessment during another proficiency level's scheduled periods. They may also choose to complete it independently on free time during a training session.

A3. Workshops are intended to be tri-service and provide the opportunity for cadets to participate in consolidated training with peers from different corps / squadrons on a variety of topics related primarily to leadership and instructional techniques.

Teaching Point 2 **Identify Proficiency Level Five complementary training opportunities.**

Time: 10 min Method: Interactive Lecture

PROFICIENCY LEVEL FIVE COMPLEMENTARY TRAINING

Proficiency Level Five complementary training has been designed to be self-directed, self study and three periods (90 minutes) in length. The cadet will complete a minimum of three complementary packages. At least one package shall be elementally-specific. While the packages are self study, they are not intended to be treated as take home assignments. Instead, cadets shall be given time during a regular training session or day to complete the packages (eg, on a parade night when the cadet is not scheduled to instruct or lead an activity). There is nothing precluding a cadet from completing additional self-study packages at any time, should they choose to do so.

COMMON COMPLEMENTARY TRAINING

Common complementary training self study packages are available in four topic areas.

Citizenship – PO 501 (Explain Global Citizenship)

C501.01 (Reflect on Individual Global Citizenship) examines the impact of globalization on the lives of young people today and the unique perspective they have on the world.

C501.02 (Analyze a Global Issue) provides the cadets with an opportunity to develop their critical thinking / reading skills.

Personal Fitness and Healthy Living – PO 504 (Adopt an Active Lifestyle)

C504.01 (Examine the Use of Technology in Physical Fitness Activities) provides the cadets a chance to examine how new forms of technology has changed the way fitness is maintained in today's world.

General Cadet Knowledge – PO 507 (Serve in an Air Cadet Squadron)

C507.01 (Identify Service Opportunities as a Cadet Instructors Cadre [CIC] Officer) examines the choices available to a senior cadet who, upon leaving the CP, chooses to enroll as a member of the CIC. Service opportunities range from local corps / squadron participation to supervising national activities.

C507.02 (Identify Volunteer Opportunities with the Air Cadet League League of Canada [ACLC]) examines the options available to a senior cadet who, upon leaving the CP, chooses to support it by volunteering with the ACLC. This option may suit youth who cannot or do not wish to enrol in the CIC. This self study package includes the opportunity to meet with a member of the squadron’s sponsoring committee.

C507.03 (Reflect on the Cadet Experience) provides the tools for a cadet to discover the skills and experience the CP has provided them. It also examines the need to set goals, both short and long term and how to achieve them using an action plan.

Instructional Techniques – PO 509 (Instruct Cadets)

C509.01 (Monitor Instruction) provides cadets with the knowledge and tools to evaluate instruction. This is accomplished though self study and the practical observation of a class.

ELEMENTAL COMPLEMENTARY TRAINING

Elemental training self-study packages are available in four topic areas.

Airmanship – PO 530 (Fly a Cross-Country Flight Using a Flight Simulator)

C530.01 (Fly a Cross-Country Flight Using a Flight Simulator) provides cadets with an opportunity to fly a cross-country flight using a flight simulator. Within this activity, cadets will plot a visual flight rules (VFR) flight on a VNC and determine aircraft speed.

Aerospace – PO 540 (Reflect on Canada's Contribution to Aerospace Technology)

C540.01 (Reflect on Canada's Contribution to Aerospace Technology) provides cadets with an opportunity to learn about Canada’s aerospace technology accomplishments up to the cancellation of the Avro Canada CF-105 Arrow Project and examine the achievements of Avro Canada Limited personnel. Additionally, cadets will reflect on Canada’s contribution to the space program and aircraft development.

Aerodrome Operations – PO 560 (Participate in an Aerodrome Operations Activity)

C560.01 (Examine Aspects of Flight Safety [FS]) provides cadets with an opportunity to learn about the role of the Flight Safety Officer (FSO) in the Air Cadet Flying Program (ACFP) and to examine the reporting process and investigation procedures.

C560.02 (Examine the Canadian Bush Pilot Industry) provides cadets with an opportunity to examine the origin and development of bush flying in Canada and to compare aircraft flown.

Aircraft Manufacturing and Maintenance – PO 570 (Examine Aspects of Aircraft Manufacturing and Maintenance Through the Development of Aerobatic Aircraft)

C570.01 (Examine Aspects of Aircraft Manufacturing and Maintenance Through the Development of Aerobatic Aircraft) provides cadets with an opportunity to examine the origin of acrobatic flight, aircraft development, modern aerobatic displays and Canadian aerobatic teams.

Aircrew Survival – PO 590 (Analyze an Aircrew Survival Case Study)

C590.01 (Analyze an Aircrew Survival Case Study) provides cadets with an opportunity to, using a case study of a real incident, analyze the cause of the accident, examine the survival situation, investigate the actions of the crew and analyze the outcome.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. How is Proficiency Level Five complementary training designed?

Q2. Describe C507.01 (Identify Service Opportunities as a Cadet Instructors Cadre [CIC] Officer).

Q3. Describe C560.02 (Examine the Canadian Bush Pilot Industry).

ANTICIPATED ANSWERS:

A1. Proficiency Level Five complementary training has been designed to be self-directed, self study and three periods (90 minutes) in length.

A2. C507.01 (Identify Service Opportunities as a Cadet Instructors Cadre [CIC] Officer) examines the choices available to a senior cadet who, upon leaving the CP, chooses to enrol as a member of the CIC. Service opportunities range from local corps / squadron participation to supervising national activities.

A3. C560.02 (Examine the Canadian Bush Pilot Industry) provides cadets with an opportunity to examine the origin and development of bush flying in Canada and to compare aircraft flown.

Teaching Point 3 **Review summer training opportunities.**

Time: 5 min Method: Group Discussion

BACKGROUND KNOWLEDGE

The point of the group discussion is to review summer training opportunities using the tips for answering / facilitating discussion and the suggested questions provided.

STAFF CADET ADVANCED TRAINING

The information below provides a brief introduction of what advanced training - staff cadet is and the types of opportunities exist. To obtain more detailed and up-to-date information, CATO 13-28, *Advanced Training–Staff Cadets* should be consulted prior to conducting this lesson.

CATO 13-28, *Advanced Training–Staff Cadets*, defines staff cadets as follows:

- Staff cadets are appointed to such rank as is authorized by the CO of a CSTC established to conduct summer training.
- On the authority of the CO of the CSTC, staff cadets may be requested to participate in advanced training, including instructional, supervisory or administrative functions that are approved by the Regional Cadet Support Unit (RCSU) CO for that training centre.
- Staff cadets may not be less than 16 years of age as of the first day of January of the year of advanced training.
- Staff cadets are not employees. Participation by the staff cadet during authorized CSTC summer training constitutes advanced training.

While staff cadets are not considered employees, they do receive pay during their time at a CSTC. Each position has a designated rank that corresponds to a pay incentive. For more details see Annexes B and E of CATO 13-28, *Advanced Training–Staff Cadets*.

Staff cadet classifications are divided into two distinct categories:

- Type 1—Training (eg, flight staff, instructor), and
- Type 2—Training Support (eg, administration clerk, supply clerk, accommodation, canteen).

Prerequisites are outlined in CATO 13-28, *Advanced Training–Staff Cadets* for each individual position.

A cadet who has attended one of these courses could be asked to speak about their experience during this TP.

CADET SUMMER TRAINING CENTRE (CSTC) COURSES

COMMON COURSES

Common courses are available to air, army, and sea cadets.

Refer to CATO 51-01, *Air Cadet Program Outline* for prerequisites.

Military Band–Advanced Musician. The aim of this course is to improve the cadets' music knowledge and skills and to prepare the cadets to assist in the delivery of music training for military band.

Pipe Band–Advanced Musician. The aim of this course is to improve the cadets' music knowledge and skills and to prepare the cadets to assist in the delivery of music training for pipe band.

ELEMENTAL COURSES

Power Pilot Scholarship. The Power Pilot Scholarship is a seven-week course of ground and flying training designed to qualify air cadets for a Transport Canada Private Pilot Licence in accordance with Canadian Air Regulations. Training is conducted by member flying schools or clubs of either the Air Transport Association of Canada or l'Association québécoise des transporteurs aériens.

International Air Cadet Exchange. The purpose of the exchange is to promote friendship and goodwill among air cadets of the participating countries, to encourage participants to develop an interest in international affairs and to reward those air cadets who have rendered outstanding service to their squadrons over a period of years. It is intended only for senior cadets who will represent Canada with distinction.

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 is the age requirement for advanced training – staff cadet?

Q2. What common CSTC courses are available to Proficiency Level Five cadets?

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.

CONFIRMATION OF TEACHING POINT 3

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

Teaching Point 4 **Review leadership assignment and leadership appointment opportunities at the squadron.**

Time: 5 min Method: Group Discussion

BACKGROUND KNOWLEDGE

The point of the group discussion is to review leadership assignment and appointment opportunities in the squadron using the tips for answering / facilitating discussion and the suggested questions provided.

LEADERSHIP ASSIGNMENT

A leadership assignment is a specific, short or long-term practical leadership opportunity. The team leader must apply their leadership skills. The team leader will have temporary team members either within or outside their peer group. The team will accomplish a single minor duty or task.

Leadership assignments in Proficiency Level Five may be the same as Proficiency Level Three or of longer duration / complexity. Each cadet should have already completed at least three leadership assignments during Proficiency Level Three and Proficiency Level Four.

LEADERSHIP APPOINTMENT

A leadership appointment is a long-term practical leadership opportunity. The team leader must apply their leadership knowledge and skills and display the core leadership qualities of a cadet. The team leader will have an assigned, established team of cadets outside their peer group. These may be organizational appointments (eg, Flight Commander), training appointments (eg, Proficiency Level Instructor) or supplementary appointments (eg, Drill Team Commander). These appointments must be based on the frequency and duration of the major duties or tasks. The team leader must meet with their team on a number of occasions. Leadership appointments may be held by a single Proficiency Level Five cadet (eg, Drill Team Commander) or cadets may rotate through a position (eg, canteen clerk).

The team leader must supervise team members, communicate with team members and solve problems, strive to meet the needs and expectations of team members, motivate team members, and provide feedback to team members. The team leader must attempt to develop the skills and knowledge of their team members.

Direction for the leadership appointment must be given by a superior usually an activity leader or activity manager.

During Proficiency Level Five training, each cadet will be assessed at least once on a leadership assignment and once while fulfilling a leadership appointment.

Ensure a list of leadership appointments has been developed by the Training Officer before instructing this class. Below is a sample list of leadership appointments

SAMPLE PROFICIENCY LEVEL FIVE LEADERSHIP APPOINTMENTS

Organizational Appointments include:

- Flight Sergeant,
- Flight Commander,
- Squadron Commander,
- Drum Major, and
- Flag Party Commander.

Training Appointments include:

- Proficiency Level Instructor,
- Fitness and Sports Instructor,
- Drill and Ceremonial Instructor,
- Aviation Instructor, and
- Aircrew Survival Instructor.

Supplementary Appointments include:

- Drum Major,
- Band Section Leader,
- Canteen Steward,
- Drill Team Commander,
- Marksmanship Team Captain,
- Range Assistant,
- First Aid Team Captain,
- Biathlon Team Captain, and
- Sports Team Captain.

Proficiency Level Five cadets will typically be assigned the leadership appointments of Squadron Warrant Officer or supplementary appointments. As required, Proficiency Level Five cadets may be assigned various other organizational and training appointments.

For the purposes of PO 503 (Lead Cadets), Proficiency Level Five cadets will be required to fulfill a leadership appointment that meets the criteria defined above. This requires that the appointment involves an assigned, established team of cadets outside the Proficiency Level Five Cadet's peer group. In some circumstances, some of the examples given may not meet these criteria (eg, a smaller squadron that only have one cadet assigned to Supply).

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 is the difference between a leadership assignment and a leadership appointment?

Q2. What leadership appointments are available at the squadron?

Q3. Do you have any concerns knowing that you will fill a leadership appointment during this training year?

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.

CONFIRMATION OF TEACHING POINT 4

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

Teaching Point 5 **Explain the OJPR and Proficiency Level Five Logbook.**

Time: 20 min Method: Interactive Lecture

On-the-Job Training (OJT)

To provide a suitably flexible and dynamic structure to OJT, the traditional period allocation and scheduling employed in previous levels of the CP does not apply. The cadet participates in authorized sessions and training days / weekends with the squadron. Within the 30 sessions and 10-day construct of the Squadron Program, all time beyond that required to complete mandatory and complementary training is allocated to OJT and completion of the different components of the Assessment of Learning Plan.

Under the supervision of the Proficiency Level Officer, or designated representative, the cadet completing OJT is responsible for performing a variety of leadership appointments, leadership assignments, leadership projects and instructional responsibilities. Cadets may also be assigned general administrative, support and supervision roles and responsibilities. While the unique nature of each squadron dictates the exact OJT experience a cadet will have, at a minimum the cadet shall be provided with suitable assessment for learning and assessment of learning opportunities as outlined in the Assessment of Learning Plan.

On-the-Job Practical Requirements (OJPR)

OJPR are the set of practical requirements needed to satisfy the assessment of learning plan. Practical requirements are a component of the following POs.

PO 502 (Perform Community Service)

The cadet is required to develop a community service plan describing how they will perform community service over the training year(s). The assessment of learning requires that cadets complete at least 45 hours of community service to complete this practical requirement without difficulty. If cadets complete 70 hours or more of community service, they have exceeded the standard.

PO 503 (Lead Cadet Activities)

The cadet is required to complete at least one leadership assignment, leadership appointment and leadership project during the training year(s). The assessment of learning provides details on how each task is evaluated. In addition to the three formal assessments, cadets are provided additional leadership assignments, appointments and projects through the course of their normal duties at the squadron.

PO 504 (Adopt an Active Lifestyle)

The cadet is required to develop a physical activity plan describing how they will participate in physical activities throughout the training year(s). The assessment of learning requires that cadets complete an average of 7 hours of physical activity per week over 16 consecutive weeks to complete this practical requirement without difficulty. If the hours of physical activity are met but the time frame is exceeded the cadet will be assess as completed with difficultly. If cadets complete an average of 7 hours of physical activity per week over 24 consecutive weeks, they have exceeded the standard.

PO 509 (Instruct Cadets)

The cadet is required to complete at least one formally assessed period of instruction during Proficiency Level Five. The assessment of learning provides details on evaluation. In addition to this formal assessment, cadets will be provided many additional opportunities to instruct through the course of their normal duties at the squadron.

PO 513 (Attend a Workshop)

The cadet will complete 18 periods of regionally facilitated workshops conducted during two full days, four half days or other equivalent combination of training.

PO 514 (Pursue Individual Learning)

The cadet is required to complete a minimum of one ILP over the course of the training year(s). The assessment of learning provides details on evaluation. The cadet's ILP must meet the criteria set out within the assessment activity instructions by identifying learning needs, learning activities, target dates, learning resources, measures of success and a final report description.

OJPR Logbook

A-CR-CCP-805/PW-001, *Royal Canadian Air Cadets Proficiency Level Five Logbook*, is provided to the cadet as a tool to help guide and track their progress. This tool serves as both an aide-memoire and personal log. The content of the Proficiency Level Five Logbook consists of a summary of pertinent information regarding OJT, OJPR, and requirements of the Assessment of Learning Plan and Assessment Instruments. It is intended that Proficiency Level Five cadets keep their logbook updated and seek guidance from their supervisor(s) to obtain the required signatures. Once completed, the Proficiency Level Five Logbook is retained by the cadet to record future service.

CONFIRMATION OF TEACHING POINT 5

QUESTIONS:

Q1. Is Proficiency Level Five training scheduled in the same manner as previous years?

Q2. What are the OJPR for PO 502 (Perform Community Service)?

Q3. What will cadets do with their Proficiency Level Five Logbook upon completion of Proficiency Level Five?

ANTICIPATED ANSWERS:

A1. No, to provide a suitably flexible and dynamic structure to OJT, the traditional period allocation and scheduling employed in previous levels of the cadet program do not apply.

A2. The cadet is required to develop a community service plan describing how they will perform community service over the training year(s). The assessment of learning requires that cadets complete at least 45 hours of community service to complete this practical requirement without difficulty. If cadets complete 70 hours or more community service, they have exceeded the standard.

A3. Once completed, the Proficiency Level Five Logbook is retained by the cadet to record future service.

Teaching Point 6 **Have the cadets develop a personalized schedule.**

Time: 30 min Method: In-Class Activity

ACTIVITY

Time: 30 min

OBJECTIVE

The objective of this activity is to have the cadets develop a personalized schedule.

RESOURCES

- Proficiency Level Five Logbook,
- Current squadron training schedule, and
- Pen / pencil.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Provide each cadet with a pen / pencil, current squadron training schedule and Proficiency Level Five Logbook.
2. Have the cadets complete the agenda section of their Proficiency Level Five Logbook, filling in the dates and months and year.
3. Have the cadets record the date(s) they are required to instruct at the squadron for the training year. Remind cadets that this information is subject to changes in the training schedule and should be updated as required.
4. Have the cadets record any other squadron commitments where they are required to attend. For example, they may be appointed marksmanship assistant as a leadership appointment and marksmanship practices occur each week on Wednesday evenings.
5. Have cadets record their school, work or extracurricular activities as required.
6. Discuss with the cadets the importance of managing their time effectively and using their agenda to record other commitments as they occur. The date and time of community service commitments, when they will work on their leadership project with their team and milestones of their ILP can all be recorded in the agenda.
7. Allow the cadets the remaining time to add other items to their personalized schedule while providing assistance and guidance as required.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 6

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

END OF LESSON CONFIRMATION

The cadets' production of a personalized schedule will serve as the confirmation of the lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Being aware of the topics to be covered during Proficiency Level Five training will help generate interest in the training year. Being aware of the time requirements needed to complete Proficiency Level Five will ensure you are able to balance the cadet activities with other activities and achieve success in both.

INSTRUCTOR NOTES / REMARKS

This EO should be scheduled as early as possible in the training year.

REFERENCES

A0-035 CATO 13-28 Director Cadets 2. (2006). *Advanced training–Staff cadet*. Ottawa, ON: Department of National Defence.

A0-096 CATO 11-04 Director Cadets 3. (2007). *Cadet program outline*. Ottawa, ON: Department of National Defence.

A3-029 CATO 51-01 Director Cadets Senior Staff Officer Air Cadets. (2009). *Air cadet program outline*. Ottawa, ON: Department of National Defence.

A3-184 A-CR-CCP-805/PW-001 Director Cadets 3. (2009). *Royal Canadian Air Cadets proficiency level five logbook*. Ottawa, ON: Department of National Defence.

A3-185 A-CR-CCP-803/PG-001 Director Cadets 3. (2008). *Royal Canadian Air Cadets Proficiency Level Three Qualification Standard and Plan*. Ottawa, ON: Department of National Defence.

A3-186 A-CR-CCP-804/PG-001 Director Cadets 3. (2009). *Royal Canadian Air Cadets Proficiency Level Four Qualification Standard and Plan*. Ottawa, ON: Department of National Defence.

PROFICIENCY LEVEL FIVE POs AND EOs	
Citizenship PO 501 (Explain Global Citizenship)	
M501.01	Define Global Citizenship
C501.01	Reflect on Individual Global Citizenship
C501.02	Develop an Awareness of Global Issues
Community Service PO 502 (Perform Community Service)	
Leadership PO 503 (Lead Cadet Activities)	
M503.01	Create a Proposal
M503.02	Prepare for an Exercise
M503.03	Conduct an Exercise
M503.04	Conclude an Exercise
C503.01	Analyze an Exercise Plan
Personal Fitness and Healthy Living PO 504 (Adopt an Active Lifestyle)	
M504.01	Participate in the Cadet Fitness Assessment
M504.02	Update the Personal Activity Plan
M504.03	Evaluate the Personal Activity Plan
C504.01	Examine the Use of Technology in Physical Fitness Activities
General Cadet Knowledge PO 507 (Serve in an Air Cadet Squadron)	
M507.01	Develop a Personalized Schedule
C507.01	Identify Service Opportunities as a Cadet Instructors Cadre Officer
C507.02	Identify Volunteer Opportunities With the Air Cadet League of Canada (ACLC)
C507.03	Reflect on the Cadet Experience
Instructional Techniques PO 509 (Instruct Cadets)	
C509.01	Monitor Instruction
Professional Development PO 513 (Attend a Workshop)	
Personal Development PO 514 (Pursue Individual Learning)	
Airmanship PO 530 (Fly a Cross-Country Flight Using a Flight Simulator)	
C530.01	Fly a Cross-Country Flight Using a Flight Simulator
Aerospace PO 540 (Reflect on Canada's Contribution to Aerospace Technology)	
C540.01	Reflect on Canada's Contribution to Aerospace Technology
Aerodrome Operations PO 560 (Participate in an Aerodrome Operations Activity)	
C560.01	Examine Aspects of Flight Safety (FS)
C560.02	Examine the Canadian Bush Pilot Industry

PROFICIENCY LEVEL FIVE POs AND EOs	
Aircraft Manufacturing and Maintenance PO 570 (Examine Aspects of Aircraft Manufacturing and Maintenance Through the Development of Aerobatic Aircraft)	
C570.01	Examine Aspects of Aircraft Manufacturing and Maintenance Through the Development of Aerobatic Aircraft
Aircrew Survival PO 590 (Analyze an Aircrew Survival Case Study	
C590.01	Analyze an Aircrew Survival Case Study

COMMON TRAINING

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 2

EO C507.01 – IDENTIFY SERVICE OPPORTUNITIES FOR A CADET INSTRUCTORS CADRE (CIC) OFFICER

Total Time:	90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the completion of this self-study package are listed in the lesson specification located in A-CR-CCP-805/PG-001, *Proficiency Level Five Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the self-study package within the section for which they are required.

Self-study packages are intended to be completed by the cadet independently. More information about self-study packages can be found in the foreword and preface.

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

Photocopy the self-study package located at Attachment A for each cadet.

Photocopy the answer key located at Attachment B but **do not** provide it to the cadet.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A self study was chosen for this lesson as it allows the cadet to examine in greater detail service opportunities for a CIC officer at their own learning pace. This encourages the cadet to become more self-reliant and independent by focusing on their own learning instead of learning directed by the instructor.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall be expected to have identified service opportunities for a CIC officer.

IMPORTANCE

It is important for cadets to be aware of the various service opportunities for a CIC officer if they choose to enrol as a CIC officer. By being aware of these opportunities, they will be able to make a more informed decision about enrolling and what direction they want their service to take.

SELF-STUDY PACKAGE INSTRUCTIONS

OBJECTIVE

The objective of this self-study package is to have the cadet identify service opportunities for a CIC officer.

RESOURCES

- Self-study package, and
- Pen / pencil.

ACTIVITY LAYOUT

Provide the cadet with a classroom or training area suitable to complete the self-study package.

ACTIVITY INSTRUCTIONS

1. Provide the cadet with a copy of the self-study package located at Attachment A and a pen / pencil.
2. Allow the cadet 90 minutes to complete the self-study package.
3. Provide assistance as required to the cadet.
4. Collect the self-study package once the cadet has finished.
5. Correct the self-study package with the self-study package answer key located at Attachment B.
6. Provide feedback to the cadet and indicate whether or not they have completed the Enabling Objective (EO).
7. Return the completed self-study package to the cadet for their future reference.
8. Upon competition of the self-study package, record the result in the cadet's logbook and Cadet Training Record.

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadet's completion of the self-study package will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

A decision to serve in the Canadian Forces (CF) must not be made lightly. A decision to serve as a CIC officer can be made easier by identifying the various ways that CIC officers are employed.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A0-096 CATO 11-04 Director Cadets 3. (2007). *Cadet program outline*. Ottawa, ON: Department of National Defence.

A0-194 CATO 23-01 Director Cadets 6. (2007). *Recruitment / enrolment–Officers of the cadet instructors cadre (CIC)*. Ottawa, ON: Department of National Defence.

A0-195 CATO 21-03 Director Cadets 2. (2007). *Corps / squadron establishments staffing priorities and authorized paid days*. Ottawa, ON: Department of National Defence.

A0-196 CATO 23-11 Director Cadets 6. (2007). *Cadet instructors supporting cadet activities without pay*. Ottawa, ON: Department of National Defence.

A0-197 CATO 23-10 Director Cadets 2. (2006). *Reserve service opportunity selection process*. Ottawa, ON: Department of National Defence.

A0-198 Department of National Defence. (2009). *Reserve service opportunities*. Retrieved October 29, 2009, from http://www.cadets.ca/employment-emploi.aspx

A0-199 Department of National Defence. (2009). *CIC–Cadet instructors cadre*. Retrieved October 29, 2009, from http://www.vcds.forces.gc.ca/cic/index-eng.asp

A1-066 CATO 31-03 Director Cadets Senior Staff Officer Sea Cadets. (2008). *Sea cadet program outline*. Ottawa, ON: Department of National Defence.

A2-031 CATO 40-01 Director Cadets Senior Staff Officer Army Cadets. (2009). *Army cadet program outline*. Ottawa, ON: Department of National Defence.

A3-029 CATO 51-01 Director Cadets Senior Staff Officer Air Cadets. (2009). *Air cadet program outline*. Ottawa, ON: Department of National Defence.

Identify Service Opportunities for a Cadet Instructors Cadre (CIC) Officer

SECTION 1: ENROLMENT STANDARDS FOR THE CIC

SECTION 2: CORPS / SQUADRON SERVICE OPPORTUNITIES

SECTION 3: REGIONAL SERVICE OPPORTUNITIES

SECTION 4: CADET SUMMER TRAINING CENTRE (CSTC) SERVICE OPPORTUNITIES

SECTION 5: NATIONAL SERVICE OPPORTUNITIES

SECTION 1
ENROLMENT STANDARDS FOR THE CIC

THE CIC MILITARY OCCUPATION STRUCTURE IDENTIFICATION (MOSID)

The CIC is a Personnel Branch of the Canadian Forces (CF). It celebrated its 100th anniversary in 2009 making it one of the oldest components of the CF. Every member of the CF belongs to an occupation or trade and CIC officers are no exception. Each trade is assigned an identification code. The Cadet Instructors Cadre officers' MOSID is 00232-01 for naval elemental officers, 00232-02 for army elemental officers and 00232-03 for air elemental officers.

Figure A-1 CIC Branch Flag

Note. From Cadets Canada, 2010, *CIC Branch Flag*. Retrieved February 19, 2010, from http://www.cadets.ca/content-contenu.aspx?id=80615

The CIC is the largest Personnel Branch of the CF with numbers in excess of 6000 members. Officers of the CIC, as CF members, fall under the authority of the *National Defence Act*, the law which governs Canada's military, and are subject to the same rules and regulations as any other member of the reserve force or regular force. This obligation to maintain a high standard of personal conduct is important as in many communities throughout Canada, the CIC may be the only uniformed members of the CF, and as such, reflect the CF as a whole.

Have any of your friends enrolled in the CIC?

_____

_____

_____

CADET ORGANIZATIONS ADMINISTRATION AND TRAINING SERVICE (COATS)

The CF is composed of two main forces: the regular force and the reserve force . The regular force (Reg F) consists of full-time members of Canada's military. The reserve force consists of members who, while still members of the military, serve part-time. The reserve force is composed of the Primary Reserve (P Res), Supplemental Reserve (Supp Res), Canadian Rangers (Rangers) and COATS. Members of the P Res are trained in similar occupations available to Reg F members. The Supp Res acts as a holding list of recently released CF members who may, in the event of a national emergency or as operationally required, be recalled to active service. Rangers provide a military presence in remote, isolated and coastal communities of Canada. Its members are trained to perform their unique roles as the eyes and ears of the CF in those areas. COATS consists of members of the CIC as well as other members of the CF not belonging to the CIC MOSID who work with the Canadian Cadet Organizations (CCO). In addition to the CIC MOSID, COATS includes two other occupations: General Service Officer (COATS GS-OFF) and General Service Non-Commissioned Member (COATS GS-NCM). COATS GS-OFF and COATS GS-NCM MOSIDS exist to allow Reg F and P Res officers and NCMs to transfer to another sub-component for employment in support of the Cadet Program (CP). This ensures the CF that these trained and experienced members can be retained to assist with the management, administration and delivery of the CP.

BASIC ENROLMENT STANDARDS

To be eligible for enrolment within a CIC MOSID, an individual must:

- be a Canadian citizen;
- be of good character and standing in the community and recommended by a cadet organization commanding officer, parent committee or the corresponding provincial league;
- have reached the minimum enrolment age of 18 and be able to complete at least one year of service before reaching the CIC Compulsory Retirement Age (CRA) of 65;
- meet the medical standards prescribed in CANFORGEN 070/07. Normally, the applicant must have a medical category no lower than V4 CV3 H3 G3 O3 A5. An applicant with a medical category below this standard but not lower than V4 CV3 H4 G4 O4 A5 may be accepted if the command surgeon approves the medical limitations and certifies that any medical condition will not be aggravated by military service; and

Did you know?

The Medical Category System in the CF assigns numerical values to Visual Acuity (V), Color Vision (CV), Hearing (H), Geographical Factor (G), Occupational Factor (O) and Air Factor (A). A lower value indicates a higher ability within the category. The CIC Medical Category is therefore less restrictive than, for example, a pilot for which V1 CV2 H2 G2 O2 A1 is the lowest acceptable category.

- have a high school diploma or equivalent. In exceptional circumstances, with the approval of Director Cadets and Junior Canadian Rangers (D Cdts & JCR), an applicant who does not hold a high school diploma may be enrolled. Education waivers shall only be granted in situations where the CCO benefits.

***Activate Your Brain #1*:**

Are CIC officers members of the CF?

_____

_____

_____

***Activate Your Brain #2*:**

What education requirements are needed for enrolment in the CIC?

_____

_____

_____

SECTION 2
CORPS / SQUADRON SERVICE OPPORTUNITIES

CORPS / SQUADRON

Corps / Squadron Establishments

The majority of CIC officers serve within corps and squadrons across Canada. Each corps / squadron has an authorized establishment, a collection of all military and civilian positions within an authorized organizational structure of the Department of National Defence (DND). Corps / squadron establishments are linked to corps / squadron quotas as determined by CATO 12-21, *Cadet Corps / Squadrons Annual Report*. The number of allocated positions on a corps / squadron establishment as determined by corps / squadron quota can be found in CATO 21-03, *Cadet Corps / Squadron Establishments Staffing Priorities and Authorized Paid Days*.

Corps / Squadron Quota as determined by CATO 12-21	Cadet Corps / Squadron Automated Establishment Report (AER)– Authorized Paid CIC Positions by Rank			Total Number of Paid CIC Positions on AER	Authorized Specialist Days
A	**B**	**C**	**D**	**E**	**F**
	Maj/LCdr	Capt/Lt(N)	Capt/Lt(N)/ Lt/ SLt / 2Lt/ASlt / OCdt / NCdt		
< 30		1	4	5	5 days
30–59		2	4	6	6 days
60–89		2	5	7	7 days
90–119	1	2	5	8	8 days
120–149	1	3	5	9	9 days
150–179	1	3	6	10	10 days
180–209	1	4	6	11	11 days
210–239	1	4	7	12	12 days
240–269	1	4	8	13	13 days
270–299	1	5	8	14	14 days
> 300	1	6	8	15	15 days

Figure A-2 CIC Paid Positions Scale–Corps/Squadron Establishments and Specialist Days

Note. From *Cadet Corps / Squadron Establishments Staffing Priorities and Authorized Paid Pays* (p. A-1/2), by Director Cadets 2, 2007, Ottawa, ON: Department of National Defence.

If a cadet corps / squadron has a vacancy on their establishment, a new CIC officer can be enrolled and fill one of these positions. If no position exists, the new CIC officer may be enrolled and fill a position on a regional / detachment holding list and volunteer with the cadet corps / squadron.

Figure A-3 CIC Corps / Squadron Officer

Note. From Cadets Canada, 2010, *About the CIC*. Retrieved February 19, 2010, from http://www.cadets.ca/assets/0/121/401/2421/3811/a75e2dac-7cd5-4914-82b6-553ee43f0c80.jpg

Paid Days

Commanding officers of a corps / squadron can be paid up to 35 days per year with all other officers on strength being eligible for 25 days per year. CIC officers on holding lists / regional establishments that are volunteering at a corps / squadron are only paid when hired for service outside the corps / squadron. As positions on a corps / squadron establishment become available volunteering CIC officers may be transferred to it. In addition to the maximum paid days for corps / squadron training, a CIC officer may be paid for additional Class A or Class B reserve service while attending a course or performing other duties.

Did you know?

There are three classes of reserve service.

- **Class A Service.** Class A service is used for periods of employment not exceeding 12 days. CIC officers are frequently employed on Class A service, for example, corps / squadron pay each month, working two days at a marksmanship competition, etc.
- **Class B Service.** Class B service is used for periods of employment over 13 days. For any Class B Service over 90 days a job posting message must be advertised to allow qualified individuals to express their interest in the position. CIC officers are sometimes employed on Class B service, for example, attending a CIC training course (for 15 days), working at a CSTC (for more than 12 days), working a four-month temporary position at a regional headquarters, assuming a full-time position of Area Cadet Officer (ACO) at a detachment / region, etc.
- **Class C Service.** Class C service is used when P Res members employed full time in an operational capacity. It may also be used, under exceptional circumstances, when a reservist is serving in a non-operational Reg F position. CIC officers are never employed on Class C service and even P Res members require approval from the Vice-Chief of Defence Staff (VCDS).

TECHNICAL TRAINING ESTABLISHMENTS

Technical training establishments are training centres that are required to augment the corps / squadron program by providing specialized training not available at each corps / squadron. Without technical training establishments, cadets would not be able to satisfy the minimum requirements of mandatory training. Each technical training establishment is run by a coordinator, selected by the region, to plan and deliver training at their centre. Most of these coordinators are also corps / squadron CIC officers. They select and hire other CIC officers on Class A service as staff.

Regional Cadet Sailing Schools (Sail Centres)

Sail centres augment sea cadet phase training by providing sail training and on-the-water opportunities not available at a corps. Opportunities exist at sail centres for CIC officers to be employed as sail centre coordinators or sail centre instructional staff. The maximum number of paid days varies by region and position. Each sail centre uses the same instructional staff to maintain continuity and to build a pool of experienced instructors familiar with the specific centre.

Figure A-4 Sail Centre Training

Note. From Regional Cadet Support Unit (Eastern), 2010, *Eastern Region Nautical Training*. Retrieved February 19, 2010, from http://cms.cadets.gc.ca/assets/0/121/423/427/443/3403/3421/3423/3439/a409501d-5351-4a6c-be4a-952fcfdb5e8f.jpg

Regional Army Cadet Expedition Centres (Expedition Centres)

Expedition centres augment the army cadet star program by providing navigation training and expedition opportunities not available at a corps. Opportunities exist at expedition centres for CIC officers to be employed as expedition centre coordinators or instructional staff. The maximum number of paid days varies by region and position. Each expedition centre uses the same instructional staff to maintain continuity and to build a pool of experienced instructors familiar with the specific centre.

Figure A-5 Expedition Centre Training

Note. From Regional Cadet Support Unit (Prairie), 2010, *Program Description*. Retrieved February 19, 2010, from http://www.cadets.ca/assets/0/121/379/3617/9166/e1eb1423-e31f-4f23-a707-e0fc93ef52ec.jpg

Regional Cadet Air Operations (Gliding Centres)

Gliding centres operate year-round in support of the squadron program and summer training. Gliding centres augment the air cadet proficiency level program by providing aviation training and gliding opportunities not available at a squadron. Opportunities exist at gliding centres for CIC officers to be employed as gliding centre coordinators, pilots, ground crew or instructional staff. The maximum number of paid days varies by region and position. Each gliding centre uses the same instructional staff to maintain continuity and to build a pool of experienced instructors familiar with the specific centre. During the summer months, the 5 regional centres operate as CSTCs and are responsible for delivering programs which may include Basic Aviation, Advanced Aviation, Glider Pilot Scholarship and Power Pilot Scholarship.

Figure A-6 Gliding Centre Training

Note. From Cadets Canada, 2010, *Air Cadet 2009 CSTC Course Listings*. Retrieved February 19, 2010, from http://www.cadets.ca/assets/0/121/401/2421/3811/79dc086b-d5f2-4ee6-9526-81c7492440c1.jpg

Have any of your friends worked at a technical training establishment?

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***Activate Your Brain #3*:**

How many paid positions are there on the establishment of a corps / squadron with less than 30 cadets?

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***Activate Your Brain #4*:**

What is Class A service?

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SECTION 3
REGIONAL SERVICE OPPORTUNITIES

REGIONALLY DIRECTED ACTIVITIES (RDAs)

RDAs are activities that Regional Cadet Support Unit (RCSU) COs conduct annually within their regions. RDAs augment the corps / squadron program by maintaining the cadets' interest in specific areas of cadet training and allow RCSU COs to tailor the overall CP to match regional interests and capitalize on regional opportunities and resources. RDAs fall into two categories: non-discretionary and discretionary. Many RDAs require the support of corps / squadron officers to plan and implement and are hired on Class A service.

Figure A-7 Provincial Biathlon Championships

Note. From Trek Earth, 2010, *Photos*. Retrieved February 19, 2010, from http://www.trekearth.com/gallery/photo320887

Non-discretionary

Non-discretionary RDAs include regional activities used to select cadets for national competitions and as such must be funded and conducted. Non-discretionary RDAs include:

- zone, provincial and / or regional marksmanship championships,
- zone, provincial and / or regional biathlon championships,
- inter-provincial exchanges,
- sea cadet program zone, provincial and / or regional regattas, and
- army cadet program regional expeditions.

For regions to facilitate these events, CIC officers are hired on Class A service. In many cases, individuals selected for service are asked to return in future years based on performance, as well as a need to train a base of experienced personnel.

Discretionary

In addition to activities programmed in the corps / squadron program, other activities may be organized, funded and conducted under the supervision of the RCSU, as determined by the RCSU CO. Selected activities must be focused on achieving the CP aim. Possible activities include:

- drill and ceremonial activities, such as ceremonial parades and / or drill competitions;
- leadership training activities, such as senior cadet training concentrations or effective speaking competitions;
- recreational sports activities, such as inter-corps / squadron competitions, tabloid sports, etc;
- air rifle marksmanship activities, such as training sessions, competitions and / or civilian events;
- additional summer / winter biathlon activities, such as training sessions, competitions and / or civilian events;
- music training activities, such as training sessions, honour bands, and / or band competitions for both military bands and pipe bands;
- first aid activities, such as training courses and / or competitions;
- CF familiarization activities, such as visits to CF facilities, C7 rifle firing, attending CF displays or demonstrations, interacting with CF members or units, etc;
- Duke of Edinburgh's Award Program activities, such as briefings or presentations to corps / squadron staff.

Now that you know what RDAs are, list the ones you've participated in during your cadet training.

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As with non-discretionary RDAs, in order for regions to facilitate these events, CIC officers are hired on Class A service. In many cases, individuals selected for service are asked to return in future years based on performance as well as a need to train personnel.

***Activate Your Brain #5*:**

What is the difference between non-discretionary and discretionary RDAs?

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CADET DETACHMENT / REGIONAL CADET SUPPORT UNIT (RCSU)

Many of the positions at cadet detachments / RCSUs are filled by CIC officers who perform full-time Class B service. They are selected based on their qualifications and experience with the CP. They assist in the management of CP on behalf of the RCSU CO and work alongside other Reg F and P Res members.

Cadet Detachment

Cadet detachments are found in some regions and serve as a way to better manage cadet corps / squadrons. Detachments are led by a detachment commander who manages a staff of officers and NCMs who are responsible for all the cadet corps / squadrons in that area. The cadet detachments are primarily involved in the implementation of the CP within the region and their staff perform tasks, such as claims, travel arrangements and approving training activities proposed by corps / squadron commanding officers.

Positions at cadet detachments that CIC officers could fill include ACO, Detachment Movements Officer or Detachment Commander. Positions will vary by region and detachment.

Regional Cadet Support Unit (RCSU)

The CP in Canada is delivered by six RCSUs spread across the country.

- RCSU (Atlantic)–RCSU (A) includes all cadet units in the provinces of Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland and Labrador,
- RCSU (Eastern)–RCSU (E) includes all cadet units in the province of Quebec and Air Cadet Squadrons in the Ottawa Valley area,
- RCSU (Central)–RCSU (C) includes all cadet units in the province of Ontario except Air Cadet Squadrons in the Ottawa Valley and all corps / squadrons in northwestern Ontario,
- RCSU (Prairie)–RCSU (Pra) includes all cadet units in the provinces of Manitoba, Saskatchewan and Alberta and all corps / squadrons in northwestern Ontario,
- RCSU (Pacific)–RCSU (P) includes all cadet units in the province of British Columbia, and
- RCSU (Northern)–RCSU (N) includes all cadet units in the territories of Yukon, Northwest Territories and Nunavut).

Regions are led by a CO who manage a staff of officers and NCMs that are responsible for all the cadet corps / squadrons in that region. RCSUs are primarily involved in the management and financial budgeting of the CP within the region and their staff performs tasks, such as pay, human resource management, budgets, staff selections and directing training activities for both the corps / squadron program, as well as the CSTC program.

Positions at RCSUs that CIC officers could fill include Regional Training Officer(s), Regional Common Training Officer, Regional Movements Officer or Regional Administration / Human Resources Officer. Positions will vary by region as each RCSU is organized differently.

***Activate Your Brain #6*:**

What types of positions could a CIC officer fill at an RCSU?

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Regional Cadet Instructor School (RCIS)

Each region, with the exception of Northern, has a school for the training of CIC officers: RCIS (A) for Atlantic region, RCIS (E) for Eastern region, etc. Although each school is organized slightly differently, there are many similar positions available to CIC officers. A commandant oversees all aspects of the school and performs full-time Class B service. At most RCISs, a Standards Officer and Administration Officer also perform full-time Class B service. To augment this core staff, CIC officers are hired for either part-time or full-time Class A or Class B service to act as Directing Staff (DS) for courses being conducted.

Figure A-8 RCIS Training

Note. From Regional Cadet Support Unit (Pacific), 2010, *LTQ Course Info*. Retrieved February 19, 2010, from http://cms.cadets.gc.ca/assets/0/121/381/1607/5120/6830/2bfaa598-e73e-4a55-9ea3-678859fa4159.jpg

CIC officers selected to serve as DS at an RCIS are chosen for their knowledge and skill in presenting creative and effective lessons to the CIC officers on course. Depending on the course being presented, DS are selected for their specific expertise in an area of the CP (such as orienteering, paddling, abseiling, flying, sailing, etc.) Serving as DS at an RCIS may be a long-term or short-term service opportunity and is an excellent tool to develop as a CIC officer.

Did you know?

As a CIC officer, the first training course you complete is the Basic Officer Training Course (BOTC). BOTC provides new CIC officers with the training required to function as a member of the CIC within the CF and covers policies, regulations, drill, etc. RCISs offer the BOTC several times throughout the year.

SECTION 4
CADET SUMMER TRAINING CENTRE (CSTC) SERVICE OPPORTUNITIES

CSTC Service Opportunities

The CSTC program is integral to the overall CP and focuses on giving a portion of the cadet population instruction and opportunities to develop advanced knowledge and skills in specialized activities. It also develops instructors / leaders for these specialized activities for all components of the CP. CSTCs are staffed by CIC officers on Class B service who administer and supervise all aspects of the training centre. Some CSTCs have a small number of full-time staff officers that work during the training year to ensure the CSTC is ready to train cadets during the summer.

Each region selects CIC officers for CSTCs. A list of available positions is published in the fall and applications are sought from CIC officers interested in employment. During the winter, selection boards are held to sort through applications and decide which applicants are best suited for the various positions. In the spring, a list of those CIC officers selected for employment is published.

Figure A-9 CSTC Training

Note. From HMCS ACADIA, 2010, *Photo Gallery*. Retrieved February 19, 2010, from http://www.cadets.ca/cstc/acadia/photogallery.aspx#ctl00_ContentPlaceHolder1_ImageGallery1_ImageDirectory

As the requirements of each CSTC are different, positions available will differ. General categories of jobs; however, are universal and may include:

- Divisional Officers / Platoon Commanders / Flight Commanders are responsible for the day-to-day supervision and instruction of cadets attending a course at a CSTC. They deal with a range of issues and they are the first contact for cadets' problems. Most first-year CIC officers are employed as Divisional Officers / Platoon Commanders / Flight Commanders.

- Duty Officers / Accommodations Officers / Barracks Supervisors are responsible for supervising cadets during non-training hours. They are usually organized in shifts and may work days or nights. First-year CIC officers are commonly employed as Duty Officers / Accommodations Officers / Barracks Supervisors as the experience in supervising develops their abilities and prepares them for further employment in positions of greater responsibility.
- Training Support positions often fall outside the various training departments / companies / squadrons and serve to augment the division / platoon / flight staff when conducting specialized training. Some CSTCs have training support positions in fitness and sports, range, drill and ceremonial, adventure training, canoeing, flight operations, sea operations, etc.
- Service Support positions comprise all the other logistical and administrative jobs required to operate the CSTC. Some examples of Service Support positions include supply, administration, banking / pay, food services, transportation, etc.

Many CIC officers choose to augment their service at a corps / squadron by serving at a CSTC. While not required, it can be an effective way to further one's own knowledge of the CP.

***Activate Your Brain #7*:**

What are some examples of Training Support positions at a CSTC?

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SECTION 5
NATIONAL SERVICE OPPORTUNITIES

NATIONALLY DIRECTED ACTIVITIES (NDAs)

NDAs are activities that D Cdts & JCR and the elemental program Senior Staff Officers (SSOs) chose to institute at a national level. NDAs augment the corps / squadron program by maintaining the cadets' interest in specific areas of cadet training and allow elemental SSOs to tailor the overall CP to match elemental interests, capitalize on national and international opportunities and resources. Many NDAs require the support of corps / squadron officers to plan and implement and are hired on Class A service.

Established NDAs include, but are not limited to:

- the national cadet air rifle championship;
- the national cadet winter biathlon championship;
- sea, army and air cadet international exchange programs;
- sea cadet deployments on board Her Majesty's Canadian Ships (HMCS), Coast Guard Ships, etc.;
- the national sea cadet regatta;
- the sea cadet national tall ship deployment;
- the sea cadet seamanship concentration;
- the army cadet program domestic expedition;

- the army cadet program international expedition; and
- the air cadet program Oshkosh Trip.

All CIC officers are eligible for employment on NDAs and are selected based on their knowledge and experience in the NDA's subject material.

Figure A-10 National Marksmanship Championships

Note. From Cadets Canada, 2010, *National Cadet Marksmanship Championship 2009*. Retrieved February 19, 2010, from http://www.cadets.ca/uploadedImages/Cadet_Websites/National/Competitions/Marksmanship/Daily_Updates/15%20may%20daily%20update(1).JPG?n=4681

Now that you know what NDAs are, have you participated in any during your cadet training? If so, list them.

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DIRECTORATE CADETS AND JUNIOR CANADIAN RANGERS (D CDTS & JCR)

D Cdts & JCR is the national organization that administers, designs, coordinates and provides national support to all aspects of the CP in Canada. As well, it decides policy and designs and coordinates training for CIC officers. Its staff are comprised of Reg F, P Res officers and NCMs, as well as many CIC officers. CIC officers within D Cdts & JCR work on full-time Class B service and perform duties ranging from CP development to infrastructure management. At times, the D Cdts and JCR permanent staff are augmented by CIC officers, from across the country, to work on various focus groups, design projects and writing boards. These additional opportunities range from a few weeks to several months in length.

***Activate Your Brain #8*:**

For what is D Cdts and JCR responsible?

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Congratulations, you have completed your self-study package on EO C507.01 (Identify Service Opportunities for a Cadet Instructors Cadre (CIC) Officer). Complete the following exercise and hand your completed package to the Training Officer / Proficiency Level Officer who will record your completion in your Proficiency Level Five logbook.

FINAL EXERCISE

Cadet's Name: _____ Date: _____

1. What are the basic enrolment standards for members of the CIC?

2. How many paid positions are there on the establishment of a cadet corps / squadron with 100 cadets?

3. Define Class B service.

4. What is the purpose of a gliding centre?

5. What positions are available at a cadet detachment for a CIC officer?

6. List six NDAs.

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ACTIVATE YOUR BRAIN ANSWER KEY

***Activate Your Brain #1*:**

Are CIC officers members of the CF?

The CIC is the largest Personnel Branch of the CF with numbers in excess of 6000 members. Officers of the CIC, as CF members, fall under the authority of the *National Defence Act*, the law which governs Canada's military, and are subject to the same rules and regulations as any other member of the reserve force or regular force.

***Activate Your Brain #2*:**

What education requirements are needed for enrolment in the CIC?

To be eligible for enrolment in the CIC you must have a high school diploma or equivalent. In exceptional circumstances, with the approval of Director Cadets and Junior Canadian Rangers (D Cdts & JCR), an applicant who does not hold a high school diploma may be enrolled. Education waivers shall only be granted in situations where the CCO will benefit.

***Activate Your Brain #3*:**

How many paid positions are there on the establishment of a corps / squadron with less than 30 cadets?

There are five paid positions on the establishment of a corps / squadron with less than 30 cadets.

***Activate Your Brain #4*:**

What is Class A service?

Class A service is used for periods of employment not exceeding 12 days. CIC officers are frequently employed on Class A service, for example, corps / squadron pay each month, working two days at a marksmanship competition, etc.

***Activate Your Brain #5*:**

What is the difference between non-discretionary and discretionary RDAs?

Non-discretionary RDAs include regional activities used to select cadets for national competitions and as such must be funded and conducted. In addition to activities programmed in the corps / squadron program, other activities may be organized, funded and conducted, under the supervision of the RCSU, as determined by the RCSU CO. These activities are considered discretionary.

***Activate Your Brain #6*:**

What types of positions could a CIC officer fill at an RCSU?

Positions at RCSUs that CIC officer could fill include Regional Training Officer(s), Regional Common Training Officer, Regional Movements Officer or Regional Administration / Human Resources Officer. Positions will vary by region as each RCSU is organized differently.

***Activate Your Brain #7*:**

What are some examples of Training Support positions at a CSTC?

Training Support positions often fall outside the various training departments / companies / squadrons and serve to augment the division / platoon / flight staff when conducting specialized training. Some CSTCs have training support positions in fitness and sports, range, drill and ceremonial, adventure training, canoeing, flight operations, sea operations, etc.

FINAL EXERCISE ANSWER KEY

1. What are the basic enrollment standards for the CIC?

To be eligible for enrollment within the CIC MOSID an individual must be a Canadian citizen, of good character and standing in the community and recommended by a cadet organization commanding officer, parent committee or the corresponding provincial league, have reached the minimum enrolment age of 18 and be able to complete at least one year of service before reaching the CIC Compulsory Retirement Age (CRA) of 65, meet the medical standards prescribed in CANFORGEN 070/07 and have a high school diploma or equivalent.

2. How many paid positions are there on the establishment of a cadet corps / squadron with 100 cadets?

There are eight paid positions on a 100-member corps / squadrons' establishment.

3. Define Class B service.

Class B service is used for periods of employment over 13 days. For any Class B Service over 90 days a job posting message must be advertised to allow qualified individuals to express their interest in the position. CIC officers are sometimes employed on Class B service, for example, attending a CIC training course (for 15 days), working at a CSTC (for more than 12 days), working a four-month temporary position at a regional headquarters, assuming a full-time position of Area Cadet Officer (ACO) at a detachment / region, etc.

4. What is the purpose of a Gliding Centre?

Gliding centres operate year-round in support of the squadron program and summer training. Gliding centres augment the air cadet proficiency level program by providing aviation training and gliding opportunities not available at a squadron. Opportunities exist at gliding centres for CIC officers to be employed as gliding centre coordinators, pilots, ground crew or instructional staff. The maximum number of paid days varies by region and position. Each gliding centre uses the same instructional staff to maintain continuity and to build a pool of experienced instructors familiar with the specific centre. During the summer months, the 5 regional centres operate as CSTCs and are responsible for delivering programs which may include Basic Aviation, Advanced Aviation, Glider Pilot Scholarship and Power Pilot Scholarship.

5. What positions are available at a cadet detachment for a CIC officer?

Positions at cadet detachments that CIC officers could fill include Area Cadet Officer (ACO), Detachment Movements Officer or Detachment Commander. Positions will vary by region and detachment.

6. List six NDAs.

Established NDAs include but are not limited to:

- the national cadet air rifle championship;
- the national cadet winter biathlon championship;
- sea, army and air cadet international exchange programs;
- sea cadet deployments on board Her Majesty's Canadian Ships (HMCS), Coast Guard Ships, etc.;
- the national sea cadet regatta;
- the sea cadet national tall ship deployment;
- the sea cadet seamanship concentration;
- the army cadet program domestic expedition;
- the army cadet program international expedition;
- the air cadet program Oshkosh Trip; and
- the air cadet program York Soaring Award.

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 3

EO C507.02 – IDENTIFY VOLUNTEER OPPORTUNITIES WITH THE AIR CADET LEAGUE OF CANADA (ACLC)

Total Time: 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this self-study package are listed in the lesson specification located in A-CR-CCP-805/PG-001, *Proficiency Level Five Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the self-study guide within the section for which they are required.

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

Self-study packages are intended to be completed by the cadet independently. More information about self-study packages can be found in the foreword and preface.

No less than 14 days prior to the cadet attempting this self-study package, contact the ACLC Squadron Advisor to schedule a 30-minute meeting between an ACLC member and the Proficiency Level Five cadet.

Photocopy the self-study package located at Attachment A for the cadet.

Photocopy the answer key located at Attachment B but **do not** provide it to the cadet.

Photocopy the Speaker's Notes / Agenda located at Attachment C and provide it to the ACLC member prior to the meeting date.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A self study was chosen for this lesson as it allows the cadet to examine in greater detail volunteer opportunities with the ACLC at their own learning pace. This encourages the cadet to become more self-reliant and independent by focusing on their own learning instead of learning directed by the instructor.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have identified volunteer opportunities with the ACLC.

IMPORTANCE

It is important for cadets to identify volunteer opportunities with the ACLC to become aware of their potential for meaningful involvement with the CCO after their cadet service concludes.

SELF-STUDY PACKAGE INSTRUCTIONS

OBJECTIVE

The objective of this self-study package is to have the cadet identify volunteer opportunities with the ACLC.

RESOURCES

- Self-study package, and
- Pen / pencil.

ACTIVITY LAYOUT

Provide the cadet with a classroom or training area suitable to complete the self-study package.

ACTIVITY INSTRUCTIONS

1. Provide the cadet with a copy of the self-study package located at Attachment A and a pen / pencil.
2. Allow the cadet 60 minutes to complete Sections 1 and 2 of the self-study package.
3. Provide assistance as required to the cadet.
4. Have the cadet attend a 30-minute meeting with a member of the ACLC.
5. Collect the self-study package once the cadet has finished.
6. Correct the self-study package with the answer key located at Attachment B.
7. Provide feedback to the cadet and indicate whether or not they have completed the enabling objective (EO).
8. Return the completed self-study package to the cadet for their future reference.
9. Record the result in the cadet's logbook and Cadet Training Record.

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadet's completion of the self-study package will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

It is important for you to identify volunteer opportunities with the ACLC to become aware of your potential for meaningful involvement with the CCO after your cadet service concludes.

INSTRUCTOR NOTES / REMARKS

The 30-minute meeting between the ACLC member and the Proficiency Level Five cadet should be scheduled for the third period of the training session in which the cadet is attempting this self-study package.

REFERENCES

A0-040 2005-113124 Vice-Chief of the Defence Staff. (2005). *Memorandum of understanding between the DND and the leagues*. Ottawa, ON: Department of National Defence.

C3-355 Air Cadet League of Canada. (2009). *Policy and procedure manual*. Retrieved February 9, 2010, from http://www.aircadetleague.com/common/documents/images/ppm/ppm2009-2008.pdf

IDENTIFY VOLUNTEER OPPORTUNITITIES WITH THE AIR CADET LEAGUE OF CANADA (ACLC)

SECTION 1: REVIEW THE RESPONSIBILITIES OF THE ACLC

SECTION 2: EXAMPLES OF SUPPORT PROVIDED BY THE ACLC TO AIR CADETS

SECTION 3: ATTEND A MEETING WITH A MEMBER OF THE ACLC

SECTION 1
REVIEW THE RESPONSIBILITIES OF ACLC

ROLE OF THE ACLC

A role of the ACLC is to provide training, support and an organizational framework to the Squadron Sponsoring Committee (SSC), which is the group at the local level that fulfills the ACLC's responsibilities in supporting a squadron. This is accomplished by a member of the ACLC called the Squadron Advisor. An SSC is comprised of a chairperson, a vice-chair, a secretary, a treasurer and chairs of committees who oversee various activities of the committee such as, fundraising, recruiting, transportation, food services, public relations and special projects. The SSC chairperson is the liaison between the ACLC and the CO.

It is the role of the ACLC to ensure their responsibilities are carried out in accordance with the Memorandum of Understanding, for the proper and efficient delivery of the Cadet Program within Canada.

Look online at http://www.cadets.ca/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=53729 for more information on the Memorandum of Understanding.

The Air Cadet League of Canada can be abbreviated two ways: ACLC and ACL. The abbreviation ACL is used to avoid confusion within documents that also contain references to the Army Cadet League of Canada, which also uses the abbreviation ACLC.

Can you name your Squadron Advisor or any of the members of your SSC?

_____

_____

RESPONSIBILITIES OF THE ACLC / SSC

The following represent the responsibilities of the ACLC / SSC.

Fundraising

Prior to the start of each training year, the squadron creates a plan as to what type of training in which they wish to participate and the support that will be required. Through a series of meetings between the SSC chairperson and the CO, a list of support requirements is drafted that outlines what funds are immediately available and what funds need to be raised. It is the responsibility of the SSC to organize fundraising activities in consultation with the CO.

What fundraising activities has your SSC sponsored for your squadron?

_____

_____

Recruiting Cadets

The Cadet Program relies on a steady flow of new recruits every training year so that training can run smoothly. When recruitment is low, it creates a void of senior cadets in the future, causing instructor shortages. The SSC is responsible for organizing community campaigns to attract cadets to become members of the squadron.

What kind of recruiting campaigns would you suggest for your community?

_____

_____

Recruiting Officers

It is the responsibility of the SSC to conduct local campaigns to attract potential candidates within the community to become members of the Cadet Instructors Cadre (CIC) and Civilian Instructors / Civilian Volunteers (CI / CV). This is based on the needs as confirmed by the CO of the squadron.

Screening Volunteers

The ACLC has a comprehensive screening program for volunteers that helps determine if a person is suitable to work with young people and in what capacity they could best serve. The ACLC has both a legal and moral obligation to provide an environment where the cadets can safely learn and grow.

The screening program features the following elements:

- a police records check,
- a Vulnerable Sector Screening (VSS),
- a local background check,
- a probationary period, including interviews and evaluations,
- a central repository for tracking volunteers working with cadets,
- photo identification for screened members,
- an identification verification system and safety guidelines for volunteer drivers,
- comprehensive harassment, abuse and cadet safety policies,
- the ability to share information with other youth organizations, and
- the requirement to be re-screened every five years.

To apply as a volunteer, an application form must be completed and a photograph supplied to produce a Volunteer Identification Card. The volunteer is briefed on the Harassment and Abuse Policy, the Drug and Alcohol Policy and the Cadet Safety Policy. Completed applications are processed by the Provincial / Territorial Office and stored in accordance with the Information Protection and Privacy Policy. As a final check, applications are sent to the National Office who checks if the volunteer has applied in other jurisdictions and if so, were any concerns raised. Once a volunteer is approved, they are sent their Volunteer Identification Card in the mail. Declined volunteers are notified by letter.

Providing Adequate Office and Training Facilities

The SSC is responsible for providing adequate office and training facilities, where they are not provided by DND. This includes providing insurance as necessary.

Participating in Selection Boards for Senior Cadet Rank Appointments

Prior to promoting a cadet to the rank of Warrant Officer Class 2 (WO2) or higher, the CO shall conduct a merit review board. It is the mandate of a merit review board to make recommendations to the CO regarding the cadets deserving senior rank promotions and to prioritize potential candidates if required. The ACLC / SSC provides a board member to participate in the merit review board. The final decision for any cadet rank promotion rests with the CO.

Participating in Selections for Air Cadet Summer Training / Exchanges

The SSC is responsible for cooperating with the squadron's CO to encourage cadets' participation in summer courses and exchanges. They also participate in the selection process, in accordance with the Memorandum of Understanding.

Did you know?

The ACLC conducts the provincial selection boards for scholarship courses and international exchanges.

Participating in Selections for Honours and Awards

The SSC is responsible for participating in the joint selection process for honours and awards from the league and in initiating the selection process for ACLC-specific awards.

***Activate Your Brain #1*:**

What is the role of the ACLC / SSC?

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_____

***Activate Your Brain #2*:**

Why must the ACLC screen all volunteers?

_____

_____

***Activate Your Brain #3*:**

What does the ACLC / SSC member provide during a merit review board?

_____

_____

***Activate Your Brain #4*:**

Who initiates the selection process for ACLC-specific awards and recognition?

_____

_____

SECTION 2
EXAMPLES OF SUPPORT PROVIDED BY THE ACLC TO AIR CADETS

NATIONAL EFFECTIVE SPEAKING COMPETITION (NES)

The NES for air cadets is an annual Competition. Competitions are held at the zone, provincial / territorial, and national levels. The final national phase of the Competition is held in conjunction with the Annual General Meeting of the ACLC.

Did you know?

WestJet, as an official sponsor of the NES, donates the flight to the competition for each provincial / territorial winner and one parent / escort.

YOUNG EAGLES PROGRAM

The Young Eagles Program was started by the Experimental Aircraft Association (EAA) to promote the discovery of flight among young people. Under the program, each young person who takes a familiarization flight receives a certificate and is registered as a Young Eagle in the World's Largest Logbook in the EAA Museum in Oshkosh, Wisconsin. The ACLC has joined in partnership with the EAA to involve those cadets participating in squadron glider familiarization flights in the Young Eagles Program.

Figure A-1 World's Largest Logbook

Note. From "Young Eagles" by Experimental Aircraft Association, Inc., 2010, *World's Largest Logbook*. Copyright 2010 by Experimental Aircraft Association, Inc. Retrieved February 18, 2010 from http://www.youngeagles.org/logbook/

Is your name in the World's Largest Logbook?

HONOURS AND AWARDS

The ACLC is proud to recognize the contributions that cadets make to their local communities. The following is an overview of the various national awards offered to members of the Air Cadet Program.

Cadet Award for Bravery. Awarded by the Canadian Forces to cadets who perform outstanding deeds of valour which involve risking their own lives in saving the lives or property of others. The award is in the form of a medal to be worn on the left breast of the uniform. The CO initiates the recommendation, which is forwarded through all three levels of the ACLC where the Executive Committee forwards it to Canadian Cadet Movement National Honours and Awards Committee. Final approval is made by the Chief of Defence Staff (CDS).

Figure A-2 Cadet Award for Bravery

Note. From "Wikimedia", 2010, *Cadet Award for Bravery*. Retrieved February 18, 2010, from http://en.wikipedia.org/wiki/File:Cadet_Medal_for_Bravery.jpg

ACLC Air Cadet Service Medal. This award recognizes continuous cadet service of at least four years by deserving cadets. The award is in the form of a medal to be worn on the right breast of the uniform.

Figure A-3 ACLC Air Cadet Service Medal

Note. From "Wikimedia", 2010, *Air Cadet Service Medal*. Retrieved February 18, 2010, from http://en.wikipedia.org/wiki/File:Royal_Canadian_Air_Cadet_Long_Service_Medal.jpg

Cadet Certificate of Commendation. This certificate is awarded by the Canadian Forces to cadets who perform outstanding gallantry in saving lives or property of others. It is a small silver pin worn on the right breast pocket of the jacket and the shirt. The CO initiates the recommendation which is forwarded through all three levels of the ACLC where the Executive Committee forwards it to Canadian Cadet Movement National Honours and Awards Committee. Final approval is made by the CDS.

Figure A-4 Cadet Certificate of Commendation

Note. Created by Director Cadets 3, 2010, Ottawa, ON: Department of National Defence.

Annual Music Awards for Excellence. These awards (ACLC gold watches) are presented annually to the top musician in each of the pipes and drums and military band categories.

Royal Canadian Legion Air Cadet of the Year Award. The Royal Canadian Legion (RCL) Air Cadet of the Year Award is selected annually by the ACLC on behalf of the RCL. At the invitation of the RCL, the RCL Air Cadet of the Year is invited by the RCL to act as the youth representative for the annual National Remembrance Day Ceremony held in Ottawa. The cadet is a member of the Vice-Regal Party (along with the RCL Army and Sea Cadet of the Year) for the National Remembrance Day Ceremonies. The cadet accompanies the Vice-Regal party during the ceremonies and assists with laying wreaths. The cadet also receives the Royal Canadian Legion Medal of Excellence, a $500 bursary and participates in other ceremonies, events and visits while in Ottawa.

The Colonel Robert Perron Fitness Award. This award recognizes outstanding achievement in physical fitness and is presented annually to the cadet who attains the highest physical fitness test score. Sea, Army, and Air Cadets are eligible to apply for this Award.

Effective Speaking Competition Pins

Participants at each level are awarded a pin: bronze at the zone level, silver at the provincial / territorial level, and gold at the national level.

Figure A-7 Effective Speaking Competition Pins

Note. From "Air Cadet League of Canada", 2010, *Catalogue*. Retrieved February 18, 2010, from http://www.aircadetleague.com/en/webstore/tryagain/trophy1.html

Continuation Flying Awards and Power Familiarization Pilot Upgrade Scholarship

The Air Cadet League of Canada routinely pursues partnerships with various aviation and aerospace industry partners in Canada. These partners periodically provide monetary support through the Air Cadet League of Canada to cadets in the form of Continuation Flying Awards and Power Familiarization Pilot Upgrade Scholarships. Recent contributors include:

- Air Canada Pilots Association (ACPA);
- Airline Pilots Association (ALPA);
- Air Transport Association of Canada (ATAC);
- CAE;
- Canadian Business Aviation Association (CBAA); and
- WestJet Pilots Association (WJPA).

Airport Operations Awards

The following awards are presented to candidates of the Advanced Aviation Technology Course – Airport Operations.

Canadian Airports Council (CAC). Two awards of $500 each are awarded to (1) the cadet who achieves the highest academic achievement and (2) the most improved cadet.

Aircraft Maintenance Awards

The following awards are presented to candidates of the Advanced Aviation Technology Course–Aircraft Maintenance.

Canadian Aviation Maintenance Council. A $500 award to the cadet achieving the highest academic achievement on the course.

AVEOS Fleet Performance Inc. A $500 award to the most improved cadet on the course.

TRUST AWARDS

In addition to the industry-specific awards listed above, there are also related ACLC partner / trust aviation awards.

Pilot Training Achievement Awards. Awarded annually to cadets who have graduated from the Power Pilot Scholarship National Summer Training course. An amount of money, dependent on the bursary, is either given to the recipient or credited to a flight training centre in to cover the initial expenses for continuing to fly at the local flying club or flight training centre. The exact value / number of these awards, as well as the specific trusts involved, may vary from year to year depending on the trust funds available. These awards include:

- Air Force Association of Canada Awards: Twenty-five $300 awards,
- Commissionaire Frank Kobe Award: Twenty-four $300 awards,
- Irvin Erb / Virginia Mitchell Award: Two $1 000 awards (one each to the top male and the top female graduates),
- Sabre Pilots Association of the Air Division: Five $500 awards,
- Soaring Association of Canada: Six $300 awards,
- Terry Angus Memorial Award: One $300 award,
- Virginia Mitchell Awards: $300 awards,
- 99's Canadian Award in Aviation (female pilot): Three $300 awards,
- 426 Thunderbird Squadron Association: $300 award,
- BC Ex-Airforce POW Trust Fund: One $300 award,
- Dodo Bird Club Trust Fund: Two $300 awards,
- Bomber Harris Trust Fund: One $300 award, and

Post-Secondary Scholarships

The following awards are open to all air cadets pursuing any field of study. The amount of the awards is determined annually, and it is dependent upon the earnings of the investment trusts donated by the Birchalls and Dales. The awards are normally in excess of $1000.

Leonard and Kathleen Birchall Scholarship. Air Commodore Leonard Birchall and Mrs. Kathleen Birchall have been long-time supporters of the Air Cadet Program. This support has been shown in many ways, most recently through an annual scholarship to be offered through the ACLC. This scholarship is awarded on the basis of secondary school achievements combined with outstanding performance as an air cadet and a community member. This award may be received only once by an individual. Applicants must be graduates of a secondary school (or equivalent) system from any province or territory in the year of application, with the intent of immediately starting full-time, post-secondary education. Applicants must also prove that they have been accepted at a post-secondary education institution, which will lead to a degree, diploma, or professional or technical qualification. The application deadline is May 1 of the entrance year.

Did you know?

On April 4, 1942, Squadron Leader (equivalent to Major) Leonard Birchall was flying a Catalina flying boat patrolling over the Indian Ocean south of the island of Ceylon (now known as Sri Lanka). The crew spotted a large Japanese fleet heading for Ceylon which at the time was home for the Royal Navy's Eastern Fleet. The crew's radio message saved the fleet, but their flying boat was shot down, killing three. His actions earned him the title "Saviour of Ceylon".

Squadron Leader Birchall spent the rest of World War II as a prisoner of war (POW). Through his leadership, the Allied prisoner death rate at the camp where he spent over two years was less than 2% (average was 30%).

Air Commodore (equivalent to Brigadier General) Birchall, Commandant of Royal Military College, Kingston, Ontario, retired from the RCAF in 1967. He passed away on September 10, 2004 at the age of 89.

Figure A-9 Squadron Leader Birchall

Note. From "York University" (2004). *Y-file e-bulletin* (September 30, 2004). Retrieved March 10, 2010 www.yorku.ca/yfile/archive/index.asp?Article=3382

Figure A-10 Air Commodore Birchall

Note. From "York University" (2004). *Y-file e-bulletin* (September 30, 2004). Retrieved March 10, 2010 www.yorku.ca/yfile/archive/index.asp?Article=3382

Robert and Mary Dale Scholarship. Robert Dale served as National President of the ACLC from 1972–1973. Mr. Dale and his wife, Mary, set up an annual scholarship to be offered by the ACLC. This scholarship is awarded on the basis of secondary school achievements combined with outstanding performance as an air cadet. This award may be received only once by an individual. Applicants must be graduates of a secondary school (or equivalent) system from any province or territory in the year of application, with the intent of immediately

starting full-time, post-secondary education. Applicants must also prove that they have been accepted at a post-secondary education institution, which will lead to a degree, diploma, or a professional or technical qualification. The application deadline is May 1 of the entrance year.

Look online at http://www.aircadetleague.com/en/infoforcadetsandsquadron/awards/ for more information on the application process for these scholarships.

***Activate Your Brain #5*:**

What is the criteria for the awarding the ACLC Air Cadet Service Medal?

_____

_____

***Activate Your Brain #6*:**

How is the Leonard and Kathleen Birchall Scholarship awarded?

_____

_____

_____

_____

_____

_____

SECTION 3
ATTEND A MEETING WITH A MEMBER OF THE ACLC

BACKGROUND

As a Proficiency Level Five cadet, a mandatory transition phase of life is approaching in which cadet service will come to an end. Those cadets wishing to remain involved with the Cadet Program may do so in an adult role either as a member of the CIC or as an adult volunteer with the ACLC. The purpose of this meeting is to provide a participatory experience on a one-on-one basis with a member of the ACLC to explain the role of the volunteer and the current needs and opportunities at the local squadron.

At the completion of the meeting, the Proficiency Level Five cadet should have an awareness of the potential for meaningful involvement with the CCO after their cadet service concludes and have an appreciation for the range of volunteer activities available and the time commitments required for each.

Activate Your Brain

Think about the following two questions to be answered after the meeting:

1. What volunteer activities are available with the ACLC after cadet service ends?
2. What elements does the screening process feature?

Notes:

Notes:

***Activate Your Brain #7*:**

What volunteer activities are available with the ACLC after concluding your service in the Cadet Program?

***Activate Your Brain #8*:**

What elements does the screening process feature?

Congratulations, you have completed your self-study package on EO C507.02 (Identify Volunteer Opportunities with the Air Cadet League of Canada). Hand the completed package to the Training Officer / Proficiency Level Officer who will record your completion in your Proficiency Level Five logbook.

SELF-STUDY PACKAGE ANSWER KEY

***Activate Your Brain #1*:**

What is the role of the ACLC / SSC?

To ensure responsibilities are carried out IAW the Memorandum of Understanding, for the proper and efficient delivery of the Cadet Program.

***Activate Your Brain #2*:**

Why must the ACLC screen all volunteers?

The ACLC has both a legal and moral obligation to provide an environment where cadets can safely learn and grow.

***Activate Your Brain #3*:**

What does the ACLC / SSC member provide during a merit review board?

Recommendations for the selection process to the CO.

***Activate Your Brain #4*:**

Who initiates the selection process for ACLC-specific awards and recognition?

The ACLC / SSC.

***Activate Your Brain #5*:**

What is the criteria for the awarding the ACLC Air Cadet Service Medal?

Be a deserving cadet with at least four years continuous cadet service.

***Activate Your Brain #6*:**

How is the Leonard and Kathleen Birchall Scholarship awarded?

The scholarship is awarded on the basis of secondary school achievements combined with outstanding performance as an air cadet and a community member. This award may be received only once by an individual. Applicants must be graduates of a secondary school (or equivalent) system from any province or territory in the year of application, with the intent of immediately starting full-time, post-secondary education. Applicants must also prove that they have been accepted at a post-secondary education institution which will lead to a degree, diploma, or professional or technical qualification. The application deadline is May 1 of the entrance year.

***Activate Your Brain #7*:**

What volunteer activities are available with the ACLC after concluding your service in the Cadet Program?

Volunteer activities include:

- **enrolling as a member of the CIC;**
- **volunteering as a Civilian Instructor / Civilian Volunteer with the squadron;**
- **participating as an ACLC / SSC member;**
- **participating as a member of an SSC special teams (fundraising, Special Events Committee); and**
- **participating in any other ACLC / SSC-specific duties.**

***Activate Your Brain #8*:**

What elements does the screening process feature?

The screening process features:

- **a police records check,**
- **a VSS,**
- **a local background check,**
- **a probationary period, including interviews and evaluations,**
- **a central repository for tracking volunteers working with cadets,**
- **photo identification for screened members,**
- **an identification verification system and safety guidelines for volunteer drivers,**
- **comprehensive harassment, abuse and cadet safety policies,**
- **the ability to share information with other youth organizations, and**
- **the requirement to be re-screened every five years.**

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SPEAKER'S NOTES / AGENDA

Purpose

To provide a participatory experience for a Proficiency Level Five cadet on a one-on-one basis with a member of the ACLC to explain the role of the volunteer and the current needs and opportunities at the squadron.

Time

A maximum of 30 minutes will be allocated for the meeting.

Assumptions

Assumptions are outlined as follows:

1. Cadet participation will be voluntary and part of a fact-finding exercise included in Proficiency Level Five to broaden the cadet's awareness of options that become available when cadet service concludes.

2. The cadet is approaching a mandatory transition phase of their life regardless of whether or not continued involvement with the Cadet Program is to be part of it.

3. If there is to be continued involvement with the Cadet Program it will be in an adult role. Communication between the ACLC representative and the cadet will be conducted on an adult to adult basis to set an appropriate atmosphere and achieve the desired outcome of the meeting.

The Cadet Perspective

The desired outcome from the cadet's perspective should be:

1. To become aware of their potential for meaningful involvement with the CCO after their cadet service concludes.

2. To appreciate the range of volunteer activities available and the different amount of time commitment that may be required for each.

3. To understand the screening and registration process required of all adult volunteers in the cadet program.

The ACLC / SSC Perspective

The desired outcome from the ACLC perspective should be:

1. To describe and discuss with the cadet participant the options available at the squadron, the work involved with each, the competencies needed and the appropriate time required of the volunteer.

2. To illustrate the range and extent of involvement of volunteers at the squadron with sufficient detail to cover the main points of each position but tailored to what teams or positions are active or needed to enhance the ACLC / SSC operation.

3. Information on the mandatory screening and registration process.

Meeting Agenda

Discussion Points:

1. Compare the different but complementary roles of the CO's team and the ACLC / SSC. Emphasize the complementary roles of the CIC and ACLC / SSC.

2. Review the guiding principles of the ACLC. Emphasize that a successful year for an ACLC / SSC generates increased resources for the CO to work with and thereby greater benefits and opportunities for the cadets.

3. Encourage the cadet to share some of their experiences, to include:

   a. summer training,

   b. leadership and instructional skills acquired, and

   c. school involvement where applicable.

   Emphasize how these are of value to the ACLC / SSC.

4. Outline the varying degrees of involvement open to ACLC / SSC volunteers. The year-round involvement of the executive committee members can be compared to the monthly production of the squadron newsletter and to the intermittent activities other member teams.

5. Confirm with the cadet that they have the ability to select an area of involvement that is sufficiently flexible to meet their new routine after their cadet service ends.

6. Explore whether or not working with the ACLC / SSC for an interim period would be beneficial to them prior to joining the CO's team if that has already been agreed to by the CO.

7. Discuss the requirements and process for screening and registration and why this is given such a high priority.

8. Conclude the session with a discussion on what the participant sees as having been the biggest challenge and the greatest achievement so far as an air cadet.

Whether they stay involved or not, it is important the session concludes on a positive note with a projection for their future involvement with the Air Cadet Program. Whatever the future holds for them they will always be part of an exclusive alumni and their support and advocacy for the Air Cadet Program is the best advertisement possible.

Send an appropriate note to the CO confirming the completion of the meeting.

COMMON TRAINING

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 3

EO C507.03 – REFLECT UPON THE CADET EXPERIENCE

Total Time: 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the completion of this self-study package are listed in the lesson specification located in A-CR-CCP-805/PG-001, *Proficiency Level Five Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the self-study package within the section for which they are required.

Self-study packages are intended to be completed by the cadet independently. More information about self-study packages can be found in the foreword and preface.

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

Photocopy the self-study package located at Attachment A for the cadet.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A self study was chosen for this lesson as it allows the cadet to reflect upon how their cadet experience can be used to make a successful transition to adulthood at their own learning pace. This encourages the cadet to become more self-reliant and independent by focusing on their own learning instead of learning directed by the instructor.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have reflected upon the cadet experience.

IMPORTANCE

It is important for cadets to reflect upon the cadet experience because it enables them to pass on their experience and knowledge to the cadets they will be leading and instructing. By having cadets reflect on how the Cadet Program has influenced them, they apply lessons learned to future cadet experiences. Also, a reflection of the cadet experience helps to prepare the cadets as they transition out of adolescence by providing them an opportunity to develop an action plan that utilizes the transferable skills developed while participating in the Cadet Program.

SELF-STUDY PACKAGE INSTRUCTIONS

OBJECTIVE

The objective of this self-study package is to have the cadet reflect upon the cadet experience.

RESOURCES

- Self-study package, and
- Pen / pencil.

ACTIVITY LAYOUT

Provide the cadet with a classroom or training area suitable to complete the self-study package.

ACTIVITY INSTRUCTIONS

1. Provide the cadet with a copy of the self-study package located at Attachment A and a pen / pencil.
2. Allow the cadet 90 minutes to complete the self-study package.
3. Provide assistance as required to the cadet.
4. Collect the self-study package once the cadet has finished.
5. Provide feedback to the cadet and indicate whether or not they have completed the Enabling Objective (EO).
6. Return the completed self-study package to the cadet for their future reference.
7. Record the result in the cadet's logbook and Cadet Training Record.

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadet's completion of the self-study package will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Reflecting upon the cadet experience enables you to pass on your experience and knowledge to the cadets you will be leading and instructing. Reflecting on how the Cadet Program has influenced you, enables you to apply lessons learned to future cadet experiences. Also, a reflection of the cadet experience helps to prepare you as you transition out of adolescence by providing you an opportunity to develop an action plan that utilizes the skills you have developed while participating in the Cadet Program.

INSTRUCTOR NOTES / REMARKS

Nil.

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UPON THE CADET EXPERIENCE

SECTION 1: REFLECT UPON THE CADET EXPERIENCE

SECTION 2: THE CADET EXPERIENCE AND ADULTHOOD

SECTION 3: DEVELOP AN ACTION PLAN

SECTION 1
REFLECT UPON THE CADET EXPERIENCE

Circle the number on the scale for each statement below which best describes you. For example, if you are more likely to act toward the statement on the left, then the circled number would be placed closer to the left.

Make your own decisions?	**5**	**4**	**3**	**2**	**1**	Let others make decisions for you?
Look for answers to problems?	**5**	**4**	**3**	**2**	**1**	Let problems defeat you?
Take risks?	**5**	**4**	**3**	**2**	**1**	Play it safe?
Control your moods and thoughts?	**5**	**4**	**3**	**2**	**1**	Let someone else's bad mood get you down?
Feel exhilarated when you work hard?	**5**	**4**	**3**	**2**	**1**	Feel as if you have not accomplished anything, when you work hard?
Accept responsibility?	**5**	**4**	**3**	**2**	**1**	Make excuses, find fault, lay blame?
Measure yourself against your own standards?	**5**	**4**	**3**	**2**	**1**	Measure yourself against other's standards?
Speak up, set limits and voice your thoughts honestly?	**5**	**4**	**3**	**2**	**1**	Swallow your opinions, thoughts, and wishes?
Stand up straight and look people in the eye?	**5**	**4**	**3**	**2**	**1**	Slouch, with downcast eyes, looking sideways at people?
Respond flexibly to changing circumstances?	**5**	**4**	**3**	**2**	**1**	Hold on to what you have always done and thought because it is easy and comfortable?
Feel self-confident and self-assured?	**5**	**4**	**3**	**2**	**1**	Feel shy, nervous and awkward?

The survey you just completed is very similar to a self-esteem survey completed in year one as part of EO M103.02 (Map Personal Goals for the Training Year). Now that you have several years of cadet training and several more years of life experience, do you think your answers have changed?

Did you think your answers shifted to the left or to the right? What factors do you think contributed to this shift?

The left side of the survey contains statements that would be made by someone who exhibits a high level of self-esteem. Self-esteem is defined as having a good opinion of one's own character and abilities. There are many factors which contribute to one's self-esteem. Thinking back on the cadet experience you have had, do you think that the Cadet Program has contributed to any changes in your self-esteem?

What factors has the Cadet Program contributed to change your self-esteem?

THE CADET EXPERIENCE

The aim of the Cadet Program can be broken down into three parts:

- 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 Canadian Forces.

These three aspects of the aim of the Cadet Program have been used a lot to validate the function of the youth program but what do they really mean? Examine the parts of the aim in further detail.

Citizenship. According to CATO 11-03, *Cadet Program Mandate*, citizenship can be defined as when cadets develop an understanding of and appreciation for community membership and involvement within cadet, local, regional, provincial, national and global communities. Inherent in this membership is an acceptance of, and respect for, multiculturalism within Canada and the world. Through their active involvement, cadets will have a positive impact on local communities, contributing to the community strength and vibrancy.

How has the Cadet Program helped you to meet the aim of citizenship? Brainstorm a list of activities in which you have taken part as part of the Cadet Program to meet this aim.

_____ _____
_____ _____
_____ _____

Leadership. According to CATO 11-03, *Cadet Program Mandate*, in the peer-led Cadet Program, cadets develop interpersonal skills and assume responsibility as effective team members, leaders and dynamic coaches that conduct themselves in an ethical and socially responsible way.

How has the Cadet Program helped you to meet the aim of leadership? Brainstorm a list of activities that you have taken part in as part of the Cadet Program to meet this aim.

_____ _____
_____ _____
_____ _____

Physical fitness. According to CATO 11-03, *Cadet Program Mandate*, 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 behaviors that build resiliency within cadets and enable them to meet challenges.

How has the Cadet Program helped you to meet the aim of physical fitness? Brainstorm a list of activities that you have taken part in as part of the Cadet Program to meet this aim.

_____ _____

_____ _____

_____ _____

Stimulate the interest of youth in the sea, land and air activities of the Canadian Forces. According to CATO 11-03, *Cadet Program Mandate*, by exposing youth to the sea, land, and air activities of the Canadian Forces they develop elemental skills through introduction to, and interaction with, their respective CF communities. To maximize the elemental experience, 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 Sea, Army and Air Cadet Organizations, distinguishing each from the other, and the Cadet Program as a whole from other youth development programs.

How has the Cadet Program helped you to meet the aim of stimulating the interest of youth in the sea, land and air activities of the Canadian Forces? Brainstorm a list of activities in which you have taken part as part of the Cadet Program to meet this aim.

_____ _____

_____ _____

_____ _____

By the end of your participation in the Cadet Program, it is expected that you will have met five participant outcomes. These outcomes are meant to be measurable and are defined within CATO 11-03, *Cadet Program Mandate*.

Emotional and physical well-being. The cadet will:

- optimize the functioning of the body through attitudes and behaviours; and
- understand that physical wellness is not a state of perfection, but rather, a lifelong process of healthy mind and body development.

Social competence. The manner in which a cadet:

- consistently responds to other individuals;
- expects other individuals to respond; and
- interacts with members of groups.

Cognitive competence. The cadet will exhibit intellectual development and integrate information into operational functions.

Proactive citizenship. The cadet will positively impact on and build strong communities.

Understanding the Canadian Forces. The cadet will:

- gain an understanding of the Canadian Forces through:
  - an introduction of the sea, land, or air elements of the Canadian Forces, and
  - an exposure to the sea, land, or air elements of the Canadian Forces; and
- develop a unique identity in each of the cadet organizations.

To demonstrate that a cadet has achieved an outcome of the Cadet Program, underlying competencies were developed. The competencies were specific tasks that a cadet should be able to perform that demonstrated an acceptable level of achievement in the outcome. The 14 competencies of the Cadet Program are detailed in CATO 11-03, *Cadet Program Mandate*.

Competency. An area in which a person is adequately qualified or capable.

The following chart details the 14 competencies of the Cadet Program. Using the scale provided, rate yourself on your ability to complete each task. The higher the number, the more capable you believe you are at completing the task. There are no right or wrong answers but try to be as honest as possible during your self-assessment.

Participant Outcome	Competency	Scale				
Emotional and Physical Well-Being	Display positive self-esteem and personal qualities.	1	2	3	4	5
	Meet physical challenges by living a healthy and active lifestyle.	1	2	3	4	5
Social Competence	Contribute as an effective team member.	1	2	3	4	5
	Accept personal accountability for actions and choices.	1	2	3	4	5
	Exercise sound judgment.	1	2	3	4	5
	Demonstrate effective interpersonal communication skills.	1	2	3	4	5
Cognitive Competence	Solve problems.	1	2	3	4	5
	Think creatively and critically.	1	2	3	4	5
	Display a positive attitude toward learning.	1	2	3	4	5
Proactive Citizenship	Exemplify positive values.	1	2	3	4	5
	Participate actively as a valued member of a community.	1	2	3	4	5
	Commitment to community.	1	2	3	4	5

Participant Outcome	Competency	Scale				
Understanding the Canadian Forces	Knowledge of the history of the Canadian Forces.	1	2	3	4	5
	Knowledge of the Canadian Forces' contributions as a national institution.	1	2	3	4	5

Of the 14 competencies listed, what do you feel are the most important ones for cadets? Make a list of your top five competencies.

1. _____
2. _____
3. _____
4. _____
5. _____

Although the Cadet Program has created a specific list of competencies, there are many other competencies that a cadet develops while in the program. These competencies are the hands-on skills and leadership skills that a cadet develops while in the program.

Did You Know?

Hands-on skills are sometimes referred to as hard skills. This is because they usually result in a project or a measurable effect. Hard skills include things like sailing a boat, lighting a stove, or piloting a glider.

Leadership skills are sometimes referred to as soft skills. This is because they result in things which are harder to define. Soft skills include things like communication, teamwork or the ability to adapt.

Create an inventory of the skills you have developed while in the Cadet Program. List as many hard skill and soft skills as you can.

Use the list in the following chart to add any skills you may have missed.

Skills Chart		
Tying knots	Performing seamanship	Flying
Writing concisely	Sailing	Racing skills
Trekking	Physics	Lighting campfires
Fitness	Meeting goals	Wilderness survival
Canoeing	Instruction	Managing conflict
Kayaking	Performing drill	Enlisting help
Accepting responsibility	Discipline	Supervising others
Marksmanship	Playing a music instrument	Teamwork
Abseiling	Piping boatswain's calls	Co-operating
Stress management	Sight-reading music	Gathering information
Applying and enforcing policies	Dress and deportment	Defining needs

Skills Chart		
Critical thinking	Leadership	Mentoring
Delegating responsibility	Decision making	Organizing
Being flexible	Professionalism	Reading
Setting goals	Writing music harmony	Gliding
Time management	Biathlon	Sewing
Managing groups	Reporting information	Meteorology
Planning	Posture	Fibreglassing
Anatomy	Respect	Patience
Being responsible	Map and compass	Punctual
Caring	Identifying problems	Prioritizing
Fieldcraft	Motivating others	Self control
Scheduling	Identifying resources	Applying logic
First aid	Iron	Nutrition
Navigation	Cycling	Filing
Public speaking	Use of the chain of command	Understanding music theory
Being service orientated	Teambuilding	Listening attentively
Networking	Situational management	Efficient
Being creative	Dedicated	Consistent
Small craft operations	Coaching	Radio procedure
Taking initiative	Tuning boats	Harassment awareness
Understanding air law	Expressing ideas	Multi-tasking
Conducting an ensemble	Using firefighting equipment	Providing appropriate feedback

SECTION 2
THE CADET EXPERIENCE AND ADULTHOOD

What does it mean to be an adult? The answer is not as easy as you might think. The definition of what it means to be an adult has changed over the last 20 years. The criteria that your parents or grandparents used to establish adulthood is a lot different than the criteria you face as you enter adulthood.

THE FACTORS OF ADULTHOOD

What are the factors to consider when classifying someone as being an adult?

- Completed education?
- Leaving parents' home?
- Being financially independent?
- Being married?
- Having children?
- Having a career?

The importance of each of these factors, and how they are met by youth in the transition of adulthood, has changed dramatically over the last few decades. A comparison can be made of each factor's affect on adulthood —then and now.

Completed Education

Then. Education was usually completed with high school. It was during employment that training was given to the employee to help them advance in their career. It was usually only individuals from high income or privileged families who would attend university or college. In addition, it was only professionals (eg, doctors, lawyers, etc) who were required to gain degrees for employment. Most individuals completed their education at the age of 17 or 18.

Now. Today, more than half of the population attends college or university. Many employers expect potential employees to be well prepared for employment before they are hired. The demand for higher education has increased from only the privileged, to include middle and low income individuals. Individuals are also taking longer to complete their education. Although most universities offer four-year degree programs, many individuals are taking five or more years to complete them. Often times the extension of further education is to accommodate part-time studies so that students can work as they study. This means most individuals now complete their education in their mid-twenties.

Leaving the Parents' Home

Then. In most cases, individuals left home when they got married. Marriage happened at a much earlier age then it does now, so most individuals were only living with their parents one or two years after completing school. Males may have left the home sooner but females would normally have only moved out to move in with their husbands.

Now. Leaving the parents' home takes two different branches in current times. The first branch involves the majority of individuals. These individuals move out of their parents' home as soon as possible. Often they have multiple roommates and move many times. Often times they do not establish a more permanent living situation until after they have completed their education, established a career, or established a family (either with or without marriage). These individuals also have a high likelihood of moving back in with their parents at some point.

The second branch involves the minority of individuals. These individuals stay at home with their parents far longer. Often times they do not move out on their own until after they have completed their education, established a career, or established a family (either with or without marriage). These individuals may live at home with their parents until their late twenties.

Being Married

Then. Marriages occurred earlier in life; often women would be married by the age of 20 and men by the age of 23. Marriage was a big stepping stone on the road to adulthood. Individuals were encouraged to marry so that they could start raising families, or even later, depending on cultural norms.

Now. Marriage is often one of the last steps taken in the progression into adulthood. Many individuals are waiting until they have completed their education or established a career before getting married. For many, the idea of marriage is not considered until they are in their late-twenties or early-thirties. Added to this is the idea that marriage is not seen as mandatory as it once was. It is becoming increasingly normal for individuals live and raise a family together without being married.

Did You Know?

The concept of marriage has different outcomes depending on socio-economic class, geography, or even cultural differences.

Individuals who come from lower socio-economic backgrounds are more likely to marry at a younger age. Also, the average age of marriage varies from country to country. The following chart details the median marriage age of females in selected countries.

Industrial Countries	Age	Developing Countries	Age
United States	25	Nigeria	17
Australia	26	Egypt	19
Canada	26	Ghana	19
France	26	Indonesia	19
Germany	26	India	20
Italy	26	Morocco	20
Japan	27	Brazil	21

Figure A-1 Median Marriage Age of Females in Selected Countries

Note. From *Emerging Adulthood*. Retrieved October 27, 2009, from http://www.Parenthood.com/article-topics/emerging_adulthood.html

Which of the countries listed have the highest and lowest median age for marriage? Why do you think this is the case?

_____

_____

_____

_____

Having Children

Then. After marriage, having children was the next major stepping stone in becoming an adult. In many cases, newly-married couples had a child within one year of being married. The role of the woman was more home-based; fewer woman had careers outside of the home. This often made it possible for couples to have larger families. The age for couples to have children was usually between the early-twenties and the mid-twenties.

Now. Having children has dropped from the forefront of adulthood. Again, most individuals are more concerned with completing their education and establishing a career before they have a family. Because many couples are dual working families, it is often more difficult for them to support families. As a result, families are having fewer children than they have had in the past. The age for couples to have children has risen to the late-twenties and the early-thirties.

Being Financially Independent

Then. When an individual moved out of their parent's home, they were expected to be financially independent. Support from parents was usually only expected for adult-establishing events, such as weddings and birth of children. Often times, sacrifices were made (eg, housing, vehicles, etc) so that an individual could live within their means. Most individuals did not start off their adult life with large debt loads.

Now. Parents are often expected to support their children well into their transition into adulthood; individuals remain living at home longer and / or need help paying for additional education and / or getting established on their own (eg, housing, vehicles). Even if an individual moves out of their parents' home, they are more likely to return at some point because they are unable to establish their own household. When parents are unable to financially support their children, the children are often forced to acquire large debts in order to pay for further education or to get established on their own. Individuals are often not able to become financially independent until after they have completed further education; as a result, the milestone of being financially independent is currently one of the top indications of adulthood.

Having a Career

Then. Individuals often entered a career path earlier in life. Often times, an individual would spend twenty or thirty years in the same career (often at the same company). Employers often trained an individual and provided them with avenues of progression. The career was the means to support the family; the concept of a career being enjoyable was not often a major consideration.

Now. There is far more time spent in preparing for a career. That being said, a career has become more than a means to support a family; many individuals look to enjoy their career. In fact, many individuals tie their self-identity very closely to their livelihood. As a result of this, many individuals change jobs within their career field many times. The idea of having a successful career is very important and often other aspects of being an adult are put on hold to establish a successful career.

During a General Social Survey, conducted in March 2002, participants were asked how important they felt each of the factors of adulthood was. The percentage of respondents who answered that the factor of adulthood was somewhat important, or higher, is charted below.

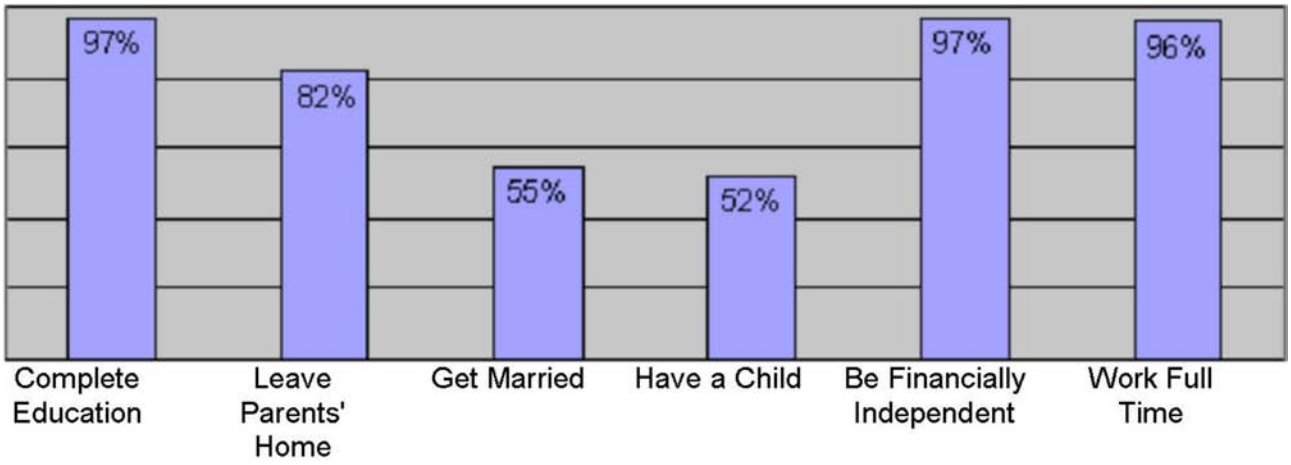

Figure A-2 Percentage Who Feel Event Important for Adulthood

Note. From *Between Adolescence and Adulthood: Expectations About the Timing of Adulthood*. Retrieved October 28, 2009, from http://www.transad.pop.upenn.edu/downloads/between.pdf

As you can see, completing an education, working full time, and being financially independent were rated as the most critical factors of adulthood; each of these relates directly to having a career. For youth today, the idea of having a career is one of the most important factors of adulthood.

In your opinion, are the most important factors of adulthood discussed? List the factors of adulthood in order of importance to you.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Are there any other factors of adulthood which you think are important?

PREPARING FOR ADULTHOOD

CATO 11-03, *Cadet Program Mandate*, states:

"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."

It is the mission of the Cadet Program to prepare youth for the transition to adulthood. It has been already detailed that the transition to adulthood is more complicated today then it has been in the past. A fundamental way that the Cadet Program prepares youth for the transition to adulthood is through the skills that youth develop while participating in the program.

Skills can be catalogued into two categories: transferable skills and non-transferable skills.

Transferable skills. These skills can be applied to many areas of adult life. These skills are also highly marketable to employers.

Did You Know?

Sometimes it is necessary to further catalogue transferable skills. Some possible categories of transferable skills are:

Communication. These are the skills of expression, transmission of knowledge, interpretation of knowledge, and the conveying of ideas.

Research and planning. These are the skills of searching for specific knowledge and the ability to conceptualize future needs and solutions for meeting those needs.

Human relations. These are the interpersonal skills for resolving conflict, relating to and helping people.

Organization, management, and leadership. These are the skills to supervise, direct and guide individuals and groups in the completion of tasks and fulfillment of goals.

Work survival. These are day-to-day skills that assist in promoting effective production and work satisfaction.

Non-transferable skills. These are often task-specific skills and as a result, do not often transfer from one aspect of adult life to another.

Non-transferable skills may still be highly employable skills. For example, trade skills are non-transferable skills (eg, woodworking, welding, plumbing). These skills are often in high demand.

Refer back to the list of skills you created in the previous section of the self-study package. Catalogue the list of skills you created into transferable and non-transferable skill lists.

Can you think of any skills you may have learned outside of the Cadet Program? Add them to the list above, cataloguing them as transferable and non-transferable skills.

Transferable Skills	Non-Transferable Skills

SECTION 3
DEVELOP AN ACTION PLAN

Adulthood has become harder to define. The path to adulthood is much longer than it used to be. Those in transition to adulthood, often take many different paths to reach the end goal. Sometimes, an individual takes multiple paths, starting fresh each time. For many, the transition to adulthood is a phase of self-exploration; more emphasis is placed on determining who they are before they solidify any path to adulthood.

It is important to take time to try and develop an action plan for the future. An action plan has several important aspects:

- an end goal;
- criteria to meet that goal;
- a set of actions to meet the criteria; and
- what skills you possess that will assist you in accomplishing the action.

End goal. The end goal is what you want to achieve. This could relate to a career, education, family, etc. The end goal should be realistic and achievable. For example, in 10 years you might be able to become a doctor but it is unlikely that you will be able to be Prime Minister that soon.

Criteria to meet that goal. The criteria to meet the goal could be a mixture of items. Perhaps the end goal has educational requirements or perhaps it has financial requirements. Some of the criteria will be large in scale and some will be small in scale (eg, graduate university versus getting your driver's license.)

A set of actions to meet the criteria. The actions required to meet the criteria. For example, if one of your criteria was to graduate post-secondary, a set of actions that may be required are:

1. graduate high school,
2. apply and get accepted to post-secondary education,
3. register for classes,
4. apply for and receive financial aid,
5. find a part-time job, and
6. study and do well in school.

The skills you possess that will assist you in accomplishing the action. What transferable and non-transferable skills you already have to help you reach your goal.

An action plan helps to give guidance as you transition into adulthood. That being said, it is very likely that the goals you set in this activity plan will change as you move toward adulthood. As you mature into adulthood and have increased opportunities to explore your interests, your goals may shift or become irrelevant.

Complete the action plan provided. Use this as a tool to help you prepare for your transition into adulthood.

ACTION PLAN	
NAME:	DATE:
RANK:	POSITION:

A. Brainstorm a list of possible goals for your future:

From your brainstorm list, select three goals and list them in priority to you.

1. _____

2. _____

3. _____

ACTION PLAN		
B. Brainstorm a list of criteria needed to meet each goal.		
Goal Number One	Goal Number Two	Goal Number Three
C. Create a set of actions needed in order to meet the criteria.		
Goal Number One	Goal Number Two	Goal Number Three

ACTION PLAN		
D. Using your list of transferable and non-transferable skills from the previous section, list the skills that you already have that will help to reach your goal.		
Goal Number One	Goal Number Two	Goal Number Three

CONCLUSION

Reflecting on the cadet experience enables you to pass on your experience and knowledge to the cadets you will be leading and instructing. Reflect on how the Cadet Program has influenced you, enables you to apply lessons learned to future cadet experiences. Also, a reflection of the cadet experience helps to prepare you as you transition out of adolescence by providing you an opportunity to develop an action plan that uses the skills the Cadet Program has given them.

Congratulations, you have completed your self-study package on reflection on the cadet experience. Complete the action plan and then hand the completed package to the Proficiency Level Officer who will record your completion in your Proficiency Level Five logbook.

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COMMON TRAINING

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 1

EO C509.01 – MONITOR INSTRUCTION

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-805/PG-001, *Proficiency Level Five Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the self-study package within the section for which they are required.

Self-study packages are intended to be completed by the cadet independently. More information about self-study packages can be found in the forward and preface.

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

Photocopy the self-study package located at Attachment A, Assessment Form located at Attachment C and the Assessment Rubric located at Attachment D for the cadet.

Photocopy the answer key located at Attachment B but **do not** provide it to the cadet.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A self study was chosen for this lesson as it allows the cadet to develop skills to monitor instruction at their own learning pace. This encourages the cadet to become more self-reliant and independent by focusing on their own learning instead of learning directed by the instructor.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have monitored a lesson.

IMPORTANCE

It is important for cadets to monitor instruction as it is the best way to improve the abilities of instructors by providing them with effective and valuable feedback on their instructional capabilities.

SELF-STUDY PACKAGE INSTRUCTIONS

OBJECTIVE

The objective of this self-study package is to have the cadets monitor instruction.

RESOURCES

- Self-study package located at Attachment A,
- Assessment Checklist located at Attachment C,
- Assessment Rubric located at Attachment D, and
- Pen / pencil.

ACTIVITY LAYOUT

Provide the cadets with a classroom or training area suitable to complete the self-study package.

ACTIVITY INSTRUCTIONS

1. Provide the cadet with a copy of the self-study package, Assessment Checklist, Assessment Rubric and a pen / pencil.
2. Allow the cadet 60 minutes to complete the self-study package.
3. Provide assistance as required to the cadet.
4. Have the cadet monitor a period of instruction using the Assessment Checklist and Assessment Rubric.

It is preferred that the cadet monitor a period of instruction given by a peer (a cadet in the process of completing or who has completed Proficiency Level Five) or a subordinate cadet (a cadet completing Proficiency Level Four). If a period of instruction delivered by a peer or subordinate cadet is not available, a period of instruction delivered by an officer may be used providing the officer agrees to act as a training aid for the cadet.

While the cadet monitors a period of instruction, an experienced assessor must be paired with them. The experienced assessor should take notes on the period of instruction in order to provide a comparison for the cadet's evaluation. The experienced assessor will also participate in a role-play with the cadet so the cadet can practice debriefing a period of instruction.

5. After the lesson is complete, have the cadet debrief the period of instruction in a role-play scenario where the instructor is replaced by the experienced assessor.
6. Collect the self-study package once the cadet has finished.
7. Correct the self-study package with the self-study package answer key located at Attachment B.
8. Provide feedback to the cadet and indicate whether or not they have completed the enabling objective (EO).
9. Return the completed self-study package to the cadet for their future reference.
10. Record the result in the cadet's logbook and Cadet Training Record.

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadet's completion of the self-study package will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

It is important for you to monitor instruction as it is the best way to improve the abilities of your instructors by providing them with effective and valuable feedback on their instructional capabilities.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A0-056 A-CR-CCP-913/PT-001 Cadet Instructors List Training School. (1978). *Technique of instruction*. Ottawa, ON: Department of National Defence.

A0-191 A-CR-CCP-914/PT-001 Cadet Instructors List Training School. (1978). *CIC instructional supervision*. Ottawa, ON: Department of National Defence.

A0-192 A-P9-000-009/PT-000 Canadian Forces Individual Training and Educational System. (2002). *Volume 9 instructional technique*. Ottawa, ON: Department of National Defence.

A0-193 A-P9-000-010/PT-000 Canadian Forces Individual Training and Educational System. (2002). *Volume 10 instructor supervision*. Ottawa, ON: Department of National Defence.

A0-194 A-P9-050-009/PT-006 Canadian Forces Individual Training and Educational System. (2002). *Volume 6 manual of individual training and education*. Ottawa, ON: Department of National Defence.

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MONITOR INSTRUCTION

SECTION 1: THE PURPOSE OF MONITORING INSTRUCTION

SECTION 2: THE PROCESS OF MONITORING INSTRUCTION

SECTION 3: MONITOR INSTRUCTION

SECTION 1
THE PURPOSE OF MONITORING INSTRUCTION

THE IMPORTANCE OF MONITORING INSTRUCTION

"By providing direction, encouragement, advice and guidance, the supervisor strives to ensure that both instructors and course members are performing to the best of their ability. Fulfillment of this supervisory role contributes to effective training and the attainment of course objectives."

Canadian Forces Manual of Individual Training

An assessor is important for the development of instructors because they provide direction, encouragement and advice for improvement while ensuring the instructors know they are working toward a common goal. To do this, assessors must be aware of the material being instructed, and the latest methods of instruction.

The assessor's job is important because:

- even good instructors can deteriorate through neglect,
- some technically qualified instructors are not adequately taught how to instruct, and
- most instructors have some weaknesses and may not be aware of them.

When monitoring instruction in the Cadet Program, the instruction monitor is referred to as the assessor.

The overall aim of monitoring instruction is to improve instruction and learning. This is done by:

Promoting Learning Within the Training Environment

All training staff are collectively responsible to ensure that the training environment promotes learning. Areas such as instructor performance, learner achievement, support and administration are monitored to ensure the training goals are met in an effective and efficient manner. An assessor plays a key role in ensuring that learning takes place by monitoring the delivery of instruction.

Assessing Whether Learning is Taking Place

An assessor assesses whether learning is taking place on an ongoing basis by monitoring instruction. Monitoring instruction enables training staff to:

- ensure the content and emphasis of the material is in accordance with the intent of the Qualification Standard and Plan (QSP); and
- confirm the adequacy and appropriate use of instructional materials and training aids as directed in the QSP and Instructional Guide (IG) as required.

Providing Opportunities for Instructors to Improve Their Instructional Technique

Monitoring instruction improves both instruction and learning. Instructors should be provided with opportunities to improve their instructional technique. Assessors are responsible for identifying areas for development in instructional staff.

To develop instructional staff, assessors must monitor the instructional staff in the classroom or other training areas to provide feedback, recognize and reinforce effective performance and identify and correct any problems before they become serious and jeopardize learning.

The development of instructional skills can take place only when the instructional staff have the opportunity to instruct under supervision and receive feedback on their performance. Monitoring and feedback must focus on instructional staff development and improvement and be based on mutual respect between the instructional staff and the assessor.

A monitoring and feedback program based on mutual respect can be fostered when:

- the instructional staff and assessor agree on the specific skills and practices that characterize effective instruction;
- the assessor frequently monitors lessons to verify that the instructional staff use the skills / practices and meets to discuss them afterwards (feedback);
- the instructional staff and the assessor agree on areas for improvement; and
- the instructional staff and the assessor develop a specific plan for improvement together.

***Activate Your Brain #1*:**

The aim of monitoring instruction is to improve instruction and learning. How is this done?

_____

_____

_____

_____

TYPES OF MONITORING

There are three types of monitoring commonly used to assess instruction. They are:

Formal Monitoring

Formal monitoring is specific and exact in nature. The assessor spends a considerable period of time observing the instructional practices of an instructor. This is the most important kind of assessment because it offers detection of specific strong and weak points in the instruction. This type of monitoring is where the assessor can make the biggest impact on an instructor's development. This type of monitoring should be done at least once for every instructor and more frequently for new or weak instructors.

Informal Monitoring

Informal monitoring is a shorter process than formal monitoring. It is the method by which an assessor ensures the general teaching procedures and managerial aspects of an instructor's classroom and training activities. This type of monitoring is useful for checking the progress of individuals who have already received a formal evaluation and determining if further formal evaluation is required.

Spot Checks

Spot checks are an even shorter process than informal monitoring. This type of assessment gives the assessor a general overview of the teaching situation. It allows them to verify the methods of instruction being employed and that the principles of instruction are being applied. Spot checks apprise the assessor of the general situation

and indicate to the instructor that they are interested in their work. The corrective measures taken from spot checks will probably be limited to cases where poor instructional situations are repeatedly evident. However, this type of monitoring is useful for keeping instructors on their toes, as they will never know when the assessor may be around to conduct a spot check.

***Activate Your Brain #2*:**

What are the three types of monitoring?

1. _____
2. _____
3. _____

ASSESSMENT

An assessor assesses an instructor using various forms of assessment. Each form of assessment has advantages and disadvantages which give them a better fit for certain types of evaluation. The three main types of assessment used are assessment by scale, assessment by rating, and assessment by rubric.

Assessment by Scale

An assessment by scale uses a series of numbers to represent a level of achievement. This form of assessment is quick to use but does not adequately define what each number means. It is common for higher numbers to represent more proficiency; lower numbers represent less proficiency.

Criteria	Rating				
Tie a Figure 8 knot.	1	2	3	4	5

Figure 1 Example of Assessment by Scale

Note. Created by Director Cadets 3, 2010, Ottawa, ON: Department of National Defence.

Assessment by Rating

An assessment by rating uses a series of words to represent a level of achievement. This form of assessment is almost as quick to use as assessment by scale, but it defines the level of achievement more clearly. This form of assessment is used often in the Cadet Program.

Criteria	Rating			
Adopt the prone position.	Incomplete	Completed With Difficulty	Completed Without Difficulty	Exceeded the Standard

Figure 2 Example of Assessment by Rating

Note. Created by Director Cadets 3, 2010, Ottawa, ON: Department of National Defence.

Assessment by Rubric

An assessment rubric is the final form of commonly used assessment. It uses a set of word pictures to represent a level of achievement. Rubrics are specific to a task and describe levels of performance for individual criteria needed to complete that task. This gives an assessor a clearer understanding of what is required to attain a specific score. This form of assessment takes longer than scales or ratings, but clearly defines levels of achievement and breaks down a performance into smaller, more assessable, pieces.

	Incomplete (I)	Completed With Difficulty (D)	Completed Without Difficulty (C)	Exceeded Standard (E)
Lesson Preparation				
Lesson plan	The lesson plan was not submitted. It had insufficient detail to deliver a full period of instruction or it was not developed IAW the QSP.	The lesson plan was disorganized / hard to follow or was incomplete or included few details of how TPs are to be presented.	The lesson plan was neat and easy to follow. The introduction, body, end of lesson confirmation and conclusion were complete and accurate.	The lesson plan was neat and easy to follow. The introduction, body, end of lesson confirmation and conclusion were complete, accurate and detailed enough for another instructor to follow and implement without difficulty.

Figure 3 Example of Assessment by Rubric

Note. Created by Director Cadets 3, 2010, Ottawa, ON: Department of National Defence.

The above example of assessment of rubric only uses one criterion. This is not typical when using a rubric; more often, the rubric has a series of criteria, each one using a separate row to define performance.

***Activate Your Brain #3*:**

What are the three types of assessment?

1. _____
2. _____
3. _____

***Activate Your Brain #4*:**

Why would assessment by rating be chosen over assessment by rubric?

_____

_____

_____

_____

Assessment Difficulties

It is rare for two assessors to have the same result when assessing a performance (eg, one assessor might describe the performance as excellent and the other describes the performance as good). This difference in assessment can be related to many factors, which may include:

- one assessor having a better understanding of the topic being assessed;
- one assessor being more familiar with the individual being assessed;
- one assessor being less focused during the assessment;
- one assessor allowing their emotions to affect their assessment; or
- one assessor being more experienced at assessing.

Did you know?

Assessment errors occur for a variety of reasons. Some errors can be caused by the design of the assessment, some occur only with certain groups of assessors, and some with individual assessors. The following are examples of common assessment errors:

1. **Error of central tendency.** Many assessors hesitate to assess either extremely high or extremely low. They tend to group their ratings close to the centre of the scale. If an error of central tendency is taking place, true ability is not reflected on the monitoring form. Therefore, the rating is of little use.
2. **Error of standards.** Some assessors tend to overrate or underrate everyone, as compared to the assessments of other assessors. They do this because of the difference in the standard they expect to see.
3. **Error of narrow criterion.** New assessors may use a narrow representation as the entire range of proficiency. If they have three superior instructors, they begin to assess others lower because they cannot perform quite as well.
4. **Logical error.** An assessor who has made a logical error allows the performance on one item to influence the assessing of another item. An alert assessor should assess each item separately and objectively.
5. **Error of familiarity.** When an assessor is with their instructors every day for a prolonged period, they can lose their assessing objectivity. They become accustomed to some of the instructors' common weaknesses and overlook them as errors. Stepping back and getting a new perspective helps to avoid this type of error.
6. **Error of halo.** Many assessors tend to assess after being influenced by their general impression of the individual. Halo error is so called because the assessment clusters like a halo around the assessor's general impression. An assessor must detach personal feelings about an instructor from the task being assessed. For example, an assessor assesses an instructor as high during a flight safety period because they speak well in a social environment; a quality which has nothing to do with flying an aircraft.

7. **Error of delayed grading.** If assessment occurs long from the actual performance, the information about the performance to be forgotten. If this happens, the assessor often goes to the central-type rating due to lack of information to justify extreme ratings.

How might you strive to overcome these errors when you monitor instruction?

Take time to examine the Assessment Checklist and the Assessment Rubric for monitoring instruction. It is important to become familiar with these tools prior to using them. If you have any questions, ask your Proficiency Level Officer or the Training Officer.

SECTION 2
THE PROCESS OF MONITORING INSTRUCTION

The process of monitoring instruction may be broken down into three stages: preparing for a monitoring session; monitoring a period of instruction; and debriefing the instructor.

PREPARING FOR A MONITORING SESSION

When preparing to monitor an instructor, an assessor must:

Advise the instructor. Advise the instructor well in advance that the lesson will be monitored and remind them that the purpose of monitoring a lesson is to give feedback to improve instructional skills.

Review the lesson. Review the lesson specification and determine how the lesson fits into the overall program by examining the lessons that precede and follow it. Consider different approaches to delivering the lesson based on the teaching points, ratio of theory to practical and amount of training activity required.

Review and prepare the assessment tools. Prepare the appropriate assessment tools, by filling in the:

- instructor's name,
- assessor's name,
- date,
- PO / EO,
- time allotted,
- any test details.

MONITOR A PERIOD OF INSTRUCTION

Monitoring a period of instruction can be broken down into three parts: before the lesson; during the lesson; and after the lesson.

Before the Lesson

1. Greet the instructor and request a copy of their lesson plan.
2. Reassure the instructor that the purpose of monitoring is to help the instructor develop their abilities and discuss any questions or concerns.
3. If possible, choose an observation point that is not in the direct line of sight of the learners or the instructor.
4. Verify that the training area has been appropriately arranged and training aids are available and in position.

During the Lesson

1. Observe the instructor's actions and learners' response during the lesson.
2. Use the assessment tools to help record behaviours. Focus on observable behaviours. Take descriptive notes and cite specific examples. The assessment tools allows the assessor to assess that:
    a. the lesson plans are prepared and complete;
    b. the training environment, including the layout of the training area and the orientation board, is appropriately prepared;

c. the instructor uses appropriate instructional techniques and principles of instruction;

d. the instructor's ability to accommodate different learning styles in their lesson; and

e. the visual / training aids employed are unobstructed and easily viewed, relevant to the subject matter and allow for easy transition throughout the lesson.

3. Do not interfere with the lesson unless there is an emergency or safety violation.

After the Lesson

1. Complete the assessment tools.

2. Review the results of the assessment tools and identify items of the lesson that went well, and items of the lessons upon which the instructor needs to improve.

DEBRIEFING THE INSTRUCTOR

Debriefing sessions are used to let the instructor know of the strengths and weaknesses showed during the delivery of a lesson and develops a specific plan on how to overcome them. It is important that the assessor prepares a comfortable and relaxed atmosphere in the debriefing area by:

1. selecting a site for the debriefing area that is:

   a. confidential and out of the hearing range of others; and

   b. away from any potential distractions and interruptions;

2. arranging furniture in an informal manner (eg, not having a desk separate the assessor and the instructor); and

3. removing any physical barriers to the conversation (eg, other furniture, lamps, boxes).

Before meeting the instructor, the assessor must take time to plan the debriefing session. When planning the session, the assessor should:

1. review the notes taken during the lesson;

2. list the instructor's strengths during the lesson and how they contributed to achieving the instructional objective; and

3. list areas of improvement in the instructor's performance and how they detracted from the achievements of goals.

To ensure the efficiency and progression of the debriefing sessions, the assessor should:

1. welcome the instructor and put them at ease. Many instructors will be tense and the assessors are to make every effort to dispel this tension;

2. explain that the purpose of the session is to provide feedback which helps to improve their performance in the classroom;

3. employ active listening skills during the debriefing session. This also includes watching the instructor's body language; and

4. discuss the instructor's performance, to include:

   a. asking questions that lead the instructor and encourage them to discuss their lesson;

   b. asking the instructor to analyze their performance by identifying their strengths and areas for improvement;

   c. responding to the instructor's self-evaluation and confirm areas identified as applicable;

   d. identifying the strengths and areas for improvement if no areas are identified by the instructor (or if important areas are missed);

   e. highlighting the effective areas of the instructor's performance and how this contributed to the achievement of the instructional objectives;

   f. assisting the instructor to develop a plan to improve their instructional abilities;

   g. having the instructor accept responsibility for the plan and commit to improve; and

   h. offering further assistance if appropriate (eg, coaching in a particular area); and

It is important to limit the number of areas of improvement to two or three. If an instructor is given too many items to consider, they become overwhelmed. Identify two or three key points upon which the instructor to focus improvement.

5. conclude the session by having the instructor summarize what was discussed and re-motivate the instructor. It is important to allow the instructor to review the assessment tools.

The following is an example of a conversation that may occur during a debriefing session.

Monitor: "Hello Sgt Smith, how are you today?"

Sgt Smith: "I'm great, thank you!"

Monitor: "We're meeting to discuss the lesson you taught earlier. I want to remind you that the reason for this discussion is to help you improve as an instructor. First of all, looking back on the lesson, how do you think it went?"

Sgt Smith: "I think it went OK."

Monitor: "That's good. What do you think were your strengths during that lesson?"

Sgt Smith: "Well, I think I prepared good training aids and that I maintained a high level of class participation."

Monitor: "I agree with you. I also noticed that you created a lot of interest through the games you used to confirm the understanding of teaching points. You also placed emphasis on specific concepts by using very clear examples. I noticed that you had a great understanding of the lesson material. What do you think would be the areas in which you could improve for next time?"

Sgt Smith: "I realized at one point that I forgot a teaching point and had to go back to cover it, but I think in the end, the cadets understood the material because of my explanation. I also think I could have drawn answers from more cadets. I realized I only chose those who had raised their hands."

Monitor: "OK, you're right about those observations. How do you think you can improve on what you just told me?"

Sgt Smith: "Well, I could refer more to my lesson plan during the class to ensure I remain on track and don't forget any teaching points. I could also practice my lesson in advance to have a feel for the material. For my questioning techniques, I could plan different types of questions to ask during the class and write cues on my lesson plan to ensure I allow different people to answer questions and not only those who raise their hand."

Monitor: "That's a very good plan. Why don't you try those ideas during the next class that you'll teach and I could monitor one of your lessons next week. We can then discuss your progress."

Sgt Smith: "That sounds good!"

Monitor: "Can you summarize what we have just agreed upon?"

Sgt Smith: "I have to refer more to my lesson plan during the class to remain on track and not forget teaching points. I also need to practice my lesson in advance. And when I plan my lesson, I should incorporate different types of questions so that I don't always have the ones who raise their hand answer."

Monitor: "Very good. Feel free to drop by at any time if you need advice or help on anything. I'll look at the schedule tonight and let you know by tomorrow which lesson I'll monitor next week. Thanks for your time and your good work. Do you have anymore questions or comments?"

Sgt Smith: "No, not right now. Thanks very much."

Monitor: "Thank you, and have a good day."

Provide feedback to the Training Officer regarding the instructor's performance and progress.

***Activate Your Brain #5*:**

What are the three stages to monitoring instruction?

1. _____
2. _____
3. _____

***Activate Your Brain #6*:**

When giving a debriefing, how many items should you focus on? Why?

SECTION 3
MONITOR INSTRUCTION

PURPOSE

The purpose of this section is to provide an opportunity to monitor a period of instruction.

ACTIVITY INSTRUCTIONS

1. Liaise with your Proficiency Level Officer / Training Officer to establish which period of instruction you will be monitoring.
2. Using the Assessment Tools located at Attachment C, monitor a period of instruction.
3. Evaluate each item by following the Assessment Rubric and circle the corresponding letter on the Assessment Checklist. Record any strengths and areas for improvement in the comments section.
4. When the period of instruction is complete, finalize the Assessment Checklist.
5. Identify points to be discussed during the debriefing of the instructor.

The purpose of the debriefing is to provide the instructor feedback on their period of instruction.

6. Role-play a debriefing with your Proficiency Level Officer / Training Officer or the facilitator of this lesson. You will act as the assessor and the Proficiency Level Officer / Training Officer or the facilitator will act as the instructor.

Congratulations, you have completed your self-study package on EO C509.01 (Monitor Instruction). Complete the Assessment Checklist for the period of instruction you monitored and then hand it and the completed self-study package to the Training Officer / Proficiency Level Officer who will record your completion in your Proficiency Level Five logbook.

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SELF-STUDY PACKAGE ANSWER KEY

***Activate Your Brain #1*:**

The aim of monitoring instruction is to improve instruction and learning. How is this done?

Monitoring instruction improves learning by promoting learning within the training environment, assessing whether learning is taking place, and providing opportunities for instructors to improve their instructional technique.

***Activate Your Brain #2*:**

What are the three types of monitoring?

1. *Formal monitoring.*
2. *Informal monitoring.*
3. *Spot checks.*

***Activate Your Brain #3*:**

What are the three types of assessment?

1. *Assessment by scale.*
2. *Assessment by rating.*
3. *Assessment by rubric.*

***Activate Your Brain #4*:**

Why would assessment by rating be chosen over assessment by rubric?

Assessment by rating would be chosen over assessment by rubric because it is a faster assessment tool or if the task being assessed is simple and does not require additional assessment definitions.

***Activate Your Brain #5*:**

What are the three stages to monitoring instruction?

1. *Preparing for a monitoring session.*
2. *Monitoring a period of instruction.*
3. *Debriefing the instructor.*

***Activate Your Brain #6*:**

When giving a debriefing, how many items should you focus on? Why?

It is important to limit the number areas of improvement to two or three. If an instructor is given too many items to consider, they will become overwhelmed. Identify two or three key points for the instructor to focus improvement on.

ASSESSMENT CHECKLIST

Cadet's Name: _____ Corps: _____

Date: _____ Division: _____

	Assessment (circle one)	Notes
Lesson Preparation		
Lesson Plan	I D C E	
Instructional aids	I D C E	
Classroom / training area set-up	I D C	
Lesson Introduction		
Review of previous lesson (if applicable)	I D C	
Introduction of lesson	I D C E	
Lesson Body		
Method(s) of instruction	I D C	
Learning environment	I D C E	
Effective use instructional aids	I D C	
Satisfaction of learner needs	I D C E	
Accuracy of lesson content	I D C E	
TP confirmation	I D C E	
End of lesson confirmation	I D C E	
Lesson Conclusion		
Lesson summary	I D C	
Re-motivation	I C	
Description of next lesson	I D C	

I = Incomplete D = Completed With Difficulty C = Completed Without Difficulty E = Exceeded Standard

	Assessment (circle one)	Notes
Communication		
Voice control	**I D C E**	
Body language	**I D C E**	
Questioning techniques	**I D C**	
Time Management		
Time management	**I D C**	

I = Incomplete D = Completed With Difficulty C = Completed Without Difficulty E = Exceeded Standard

Assessor's Feedback:

	Overall Assessment			
Check One	**Incomplete**	**Completed With Difficulty**	**Completed Without Difficulty**	**Exceeded Standard**
Overall Performance	The cadet has not achieved the performance standard by receiving an "incomplete" on more than three of the criteria listed on the assessment checklist.	The cadet has achieved the performance standard by receiving an "incomplete" on not more than three of the criteria and a minimum of "completed with difficulty" on all other criteria.	The cadet has achieved the performance standard by receiving a minimum of "completed with difficulty" on all criteria and "completed without difficulty" on 10 or more of the criteria.	The cadet has achieved the performance standard by receiving a minimum of "completed without difficulty" on all criteria listed and "exceeded standard" on 7 or more of the criteria:

Assessor's Name:	**Position:**
Assessor's Signature:	**Date:**

This form shall be reproduced locally

ASSESSMENT RUBRIC

	Incomplete (I)	Completed With Difficulty (D)	Completed Without Difficulty (C)	Exceeded Standard (E)
Lesson Preparation				
Lesson plan	The lesson plan was not submitted, it had insufficient detail to deliver a full period of instruction or it was not developed IAW the QSP.	The lesson plan was disorganized / hard to follow or was incomplete or included few details of how TPs are to be presented.	The lesson plan was neat and easy to follow. The introduction, body, end of lesson confirmation and conclusion were complete and accurate.	The lesson plan was neat and easy to follow. The introduction, body, end of lesson confirmation and conclusion were complete, accurate and detailed enough for another instructor to follow and implement without difficulty.
Instructional aids	The instructional aids were not developed, not relevant or were of poor quality.	The instructional aids were relevant, but their ease of use and effectiveness were questionable.	The instructional aids were relevant, easy to use and assisted in clarifying lesson content.	The instructional aids were relevant, easy to use and assisted in clarifying lesson content. In addition, instructional aids were creative, well thought-out and extra effort on the cadet's part was evident.
Classroom / training area set-up	Set-up of the classroom / training area was not was not suitable to the lesson.	Set-up of the classroom / training area was not suitable to the lesson, however some elements were overlooked.	The classroom / training area was well set up, with due consideration given to such things as: • functional seating formation, • lighting, and • instructional aids were easily accessible and ready to use, and • distractions were minimized.	N/A
Lesson Introduction				
Review of previous lesson (if applicable)	The cadet did not review the previous lesson.	The cadet stated the topic of the previous lesson.	The cadet stated the topic of the previous lesson and provided a brief summary of the content.	N/A
Introduction of lesson	The cadet did not provide an introduction to the lesson.	The cadet stated what will be learned, but was unclear in the description of why it is important or where the knowledge / skills will be applied.	The cadet clearly described what will be learned, why it is important and where the knowledge / skills will be applied.	The cadet clearly described what will be learned, why it is important and where the knowledge / skills will be applied in a creative and engaging way.
Lesson Body				
Method(s) of instruction	The cadet's choice of method was not appropriate to the content or the audience.	The cadet's choice of method was appropriate but they displayed some difficulty using the method.	The cadet's choice of method was appropriate and they displayed no difficulty using the method.	N/A

	Incomplete (I)	Completed With Difficulty (D)	Completed Without Difficulty (C)	Exceeded Standard (E)
Learning environment	The cadet did not ensure the physical safety of the class, and/ or the cadet made no attempt to employ stress and classroom management techniques, as described in EO M409.02.	The cadet ensured the physical safety of the class at all times. The cadet attempted to employ stress and classroom management techniques, however experienced difficulty using them effective and timely manner.	The cadet ensured the physical safety of the class at all times. The cadet employed stress classroom management techniques, as necessary, in an effective and timely manner.	The cadet ensured the physical safety of the class at all times. The cadet always controlled positive and negative stress, and displayed excellent classroom management techniques.
Effective use instructional aids	The cadet did not use instructional aids.	The instructional aids were difficult to see / use, or were introduced at an ineffective time.	The instructional aids were clearly displayed and were appropriately introduced.	N/A
Satisfaction of learner needs	The lesson was delivered in a way that was inappropriate for the developmental period of the audience and did not present visual, auditory or kinesthetic learning opportunities.	Some aspects of the lesson delivery were not appropriate for the developmental period of the audience. The cadet included little variety with regard to providing visual, auditory or kinesthetic learning opportunities.	The lesson satisfied the needs of the developmental period of the audience. The cadet included some variety of visual, auditory and kinesthetic learning opportunities.	The lesson satisfied the needs of the developmental period of the audience. The cadet included many visual, auditory and kinesthetic learning opportunities throughout the lesson.
Accuracy of lesson content	The cadet displayed limited understanding of the lesson content and was unable to provide accurate explanations, demonstrations and/or clarification.	The cadet displayed a general understanding of the lesson content but struggled with the explanation, demonstration and/or clarification of some of the content.	The cadet displayed a sound understanding of lesson content and provided accurate explanations, demonstrations and/ or clarification without difficulty.	The cadet displayed a mastery of the lesson content.
TP confirmation	The cadet did not use questions or an activity to confirm the understanding of the TP content; and did not adjust the instruction based on audience comprehension.	The cadet used questions or an activity to confirm the understanding of the TP content, however made little effort to adjust instruction based on audience comprehension.	The cadet used questions or an activity to confirm the understanding of the TP content, and as necessary, attempted to adjust instruction based on audience comprehension.	The cadet creatively used questions or an activity to confirm the understanding at the end of each TP and easily adjusted instruction based on audience comprehension.
End of lesson confirmation	The knowledge or skills covered in the lesson were not confirmed using questions or an activity.	Questions or an activity was used as an end of lesson confirmation of knowledge or skills, however all teaching points were not covered.	Questions or an activity was used as an end of lesson confirmation of knowledge or skills and all teaching points were covered.	All knowledge or skills covered in the lesson were confirmed in a creative and engaging way.
Lesson Conclusion				
Lesson summary	The cadet did not re-state the objective of the lesson and did not summarize important points / areas for improvement.	The cadet re-stating the objectives of the lesson however struggled to summarize important points / areas for improvement.	The cadet re-stating the objectives of the lesson and concisely summarized important points / areas for improvement.	N/A
Re-motivation	The cadet did not attempt re-motivate the cadets.	N/A	The cadet attempted to re-motivate the cadets.	N/A

	Incomplete (I)	Completed With Difficulty (D)	Completed Without Difficulty (C)	Exceeded Standard (E)
Description of next lesson	The cadet did not describe the next lesson.	The cadet stated the topic of the next lesson.	The cadet stated the topic of the next lesson and provided a brief and accurate description of the lesson content.	N/A
Communication				
Voice control	The cadet did not speak clearly or consistently spoke to too quickly or quietly to be understood.	The cadet was understood, however struggled with the use of pitch, tone, volume, speed, and pauses to articulate and place emphasis on points where necessary.	The cadet spoke clearly and made clear attempts to control pitch, tone, volume, speed, and pauses to articulate and place emphasis on points where necessary.	The cadet spoke clearly and made excellent use of pitch, tone, volume, speed, and pauses to articulate and place emphasis on points where necessary.
Body language, dress and deportment	The cadet exhibited inappropriate body language and/or poor dress and deportment.	The cadet attempted to use body language to help communicate and emphasize points and exhibited acceptable dress and deportment.	The cadet easily incorporated the use of body language to help communicate and emphasize points and exhibited acceptable dress and deportment.	The cadet easily incorporated the use of body language to help communicate and emphasize points and exhibited a high standard of dress and deportment.
Questioning techniques	The cadet did not use any questions or apply the questions sequence (pose, pause, pounce, ponder and praise).	The cadet used appropriate types of questions but inconsistently applied the question sequence (pose, pause, pounce, ponder and praise).	The cadet used a variety questions and consistently applied the question sequence (pose, pause, pounce, ponder and praise).	N/A
Time Management				
Time Management	The lesson was not completed within the allotted time, with more than 5 minutes deviation.	Time planned for and/or spent on individual TPs / activities was somewhat inaccurate or insufficient however the lesson was completed within the allotted time (+ / - 5 minutes).	Time planned for and/or spent on individual TPs / activities was appropriate and the lesson was completed within the allotted time (+ / - 5 minutes).	N/A

Score overall assessment on the Assessment Checklist as:

1. **Incomplete.** If the cadet received an “incomplete” on more than three of the criteria listed on the assessment checklist;

2. **Completed With Difficulty.** If the cadet received an “incomplete” on not more than three of the criteria and a minimum of “completed with difficulty” or better on all other criteria;

3. **Completed Without Difficulty.** If the cadet received a minimum of “completed with difficulty” on all criteria and “completed without difficulty” or better on 10 or more of the criteria:

4. **Exceeded Standard.** If the cadet received a minimum of “completed without difficulty” on all criteria listed on the checklist and “exceeded standard” on seven or more of the criteria:

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 1

EO C530.01 – FLY A CROSS-COUNTRY FLIGHT USING A FLIGHT SIMULATOR

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-805/PG-001, *Proficiency Level Five Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the self-study package within the section for which they are required.

Self-study packages are intended to be completed by the cadet independently. More information about self-study packages can be found in the foreward and preface.

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

Photocopy the self-study package located at Attachment A for each cadet.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A self study was chosen for this lesson as it allows the cadet to plan and fly a cross-country flight using a flight simulator at their own learning pace. This encourages the cadet to become more self-reliant and independent by focusing on their own learning instead of learning directed by the instructor.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet will have flown a cross-country flight using a flight simulator.

IMPORTANCE

It is important for cadets to practice the aviation theory they have learned throughout their cadet training by flying a cross-country flight using an aircraft flight simulator as it will reinforce learning and stimulate interest in future aviation training.

SELF-STUDY PACKAGE INSTRUCTIONS

OBJECTIVE

The objective of this self-study package is to have the cadet fly a cross-country flight using a flight simulator.

RESOURCES

- Self-study package,
- Visual Flight Rules (VFR) Navigation Chart (VNC),
- ICAO chart ruler,
- Flight computer,
- Flight simulator (Microsoft flight simulator, computer, control yoke, and rudder pedals[joystick]; or Link),
- Pen / pencil.

ACTIVITY LAYOUT

Provide the cadet with a classroom or training area suitable to complete the self-study package.

ACTIVITY INSTRUCTIONS

1. Provide the cadet with a copy of the self-study package located at Attachment A and a pen / pencil.
2. Allow the cadet 90 minutes to complete the self-study package.
3. Provide assistance as required to the cadet.
4. Collect the self-study package once the cadet has finished.
5. Provide feedback to the cadet and indicate whether or not they have completed the Enabling Objective (EO).
6. Return the completed self-study package to the cadet for their future reference.
7. Record the result in the cadet's logbook and Cadet Training Record.

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadets' participation in flying a cross-county flight using a flight simulator will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

It has been stated by many flight instructors that a significant difference can be seen in the quality of students have used a flight simulator compared to those who did not. Continued training on flight simulators will enhance preparation for future flight training.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A0-001 A-CR-CCP-263/PT-001. (2000). *From the ground up*. Ottawa, ON: Aviation Publishers Co. Ltd.

C3-345 Flight Simulator Navigation. (2009). *Air navigation*. Retrieved October 22, 2009, from http://www.navfltsm.addr.com.basic-nav-general.htm

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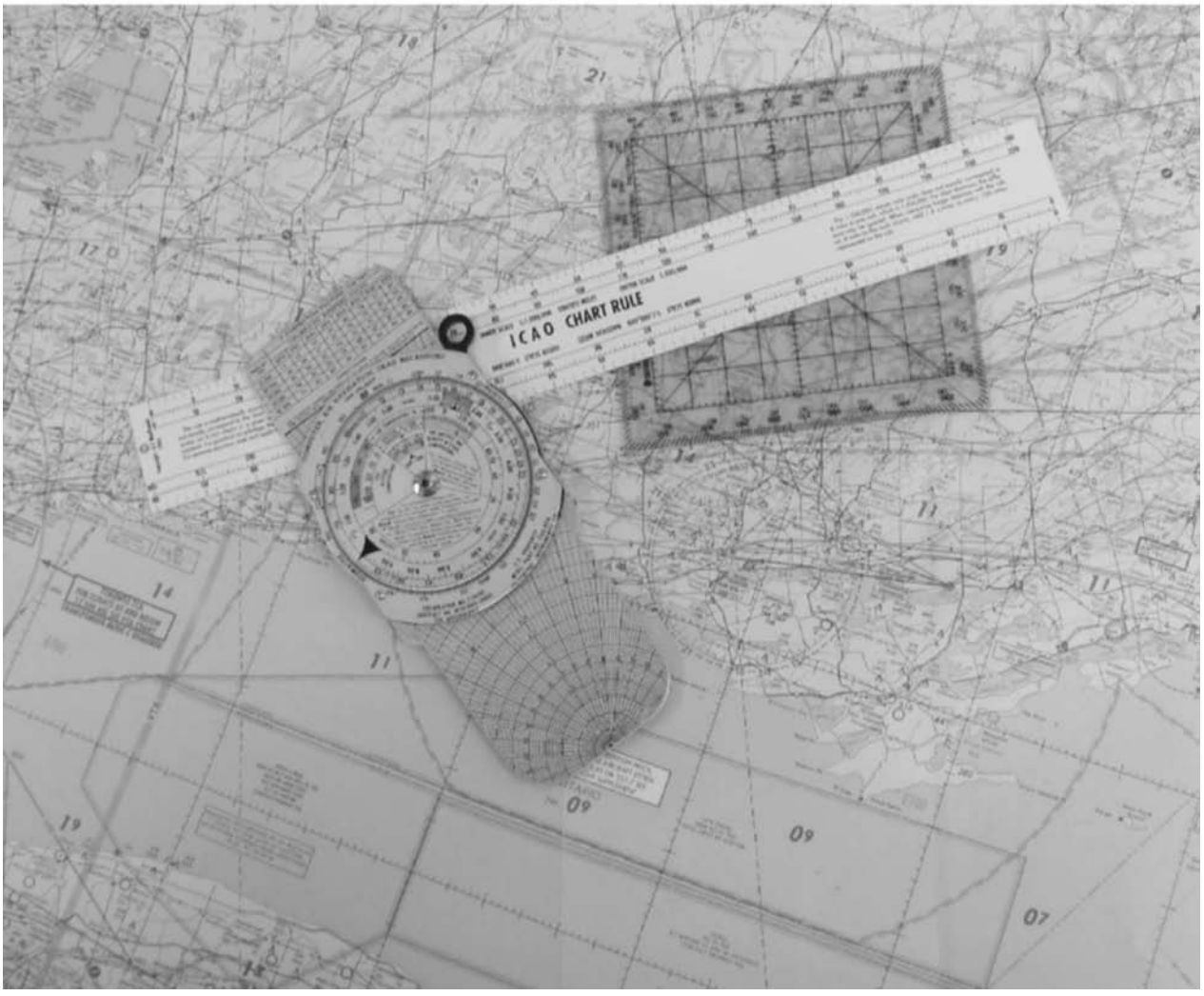
Fly a Cross-Country Flight Using a Flight Simulator



SECTION 1: PLOT A VISUAL FLIGHT RULES (VFR) CROSS-COUNTRY FLIGHT ON A VNC

SECTION 2: DETERMINE AIRCRAFT SPEED

SECTION 3: FLY A CROSS-COUNTRY FLIGHT

SECTION 1
PLOT A VISUAL FLIGHR RULES (VFR) CROSS-COUNTRY FLIGHT ON A VNC

AIRPORT SELECTION

Pilotage

Did you know?

Pilotage is navigating from place to place by following visual landmarks on the ground.

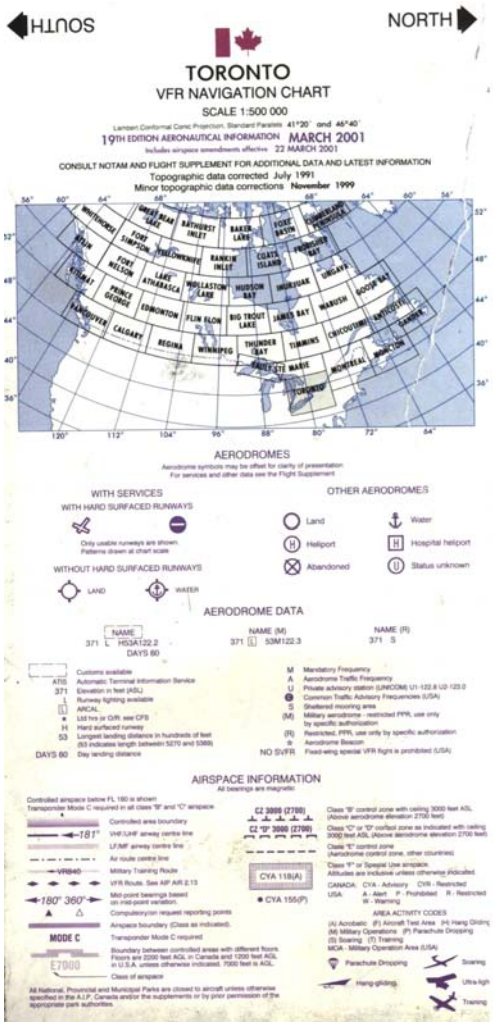


Figure A-1 VNC Cover

Note. From *Toronto VFR Navigation Chart*, by, Department of Natural Resources, 2001, Ottawa, Ontario: Geomatics Canada. Copyright 2001 by Nav Canada.

Using a Visual Flight Rules (VFR) Navigation Chart (VNC), select two airports for the flight senario, including:

1. the departure airport, and
2. the arrival airport.

Coordinates

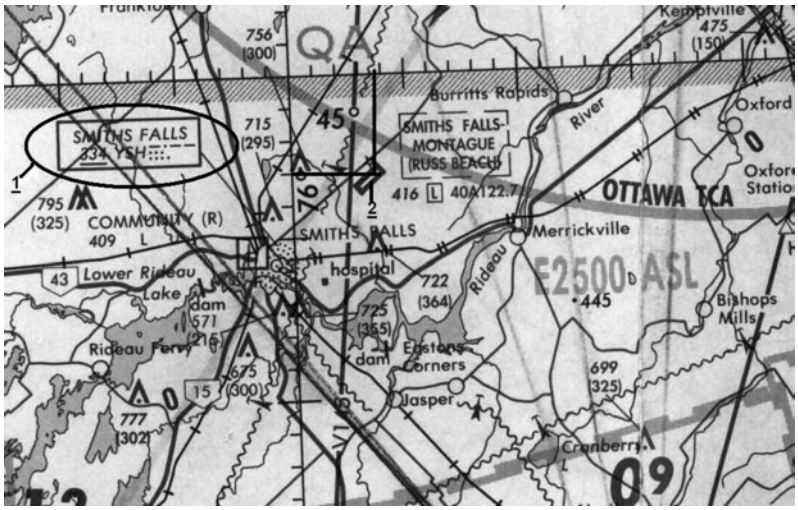


Figure A-2 VNC Map Coordinates

Note. Created by Director Cadets 3, 2009, Ottawa, ON: Department of Defence.

For each airport, identify the following:

- airport idenification letters (1), and
- airport VNC coordinates (2).

***Activate Your Brain #1*:**

What two airports will you be using?

Airports	Coordinates
_____	_____
_____	_____

Distance

Nautical Miles

Measure the distance to each turning point, totaling the distance between the two airports.

You will be flying a Visual Flight Rules (VFR) flight. The route between airports should have highways, rivers, towns / cities, and other landmarks visible from the air.

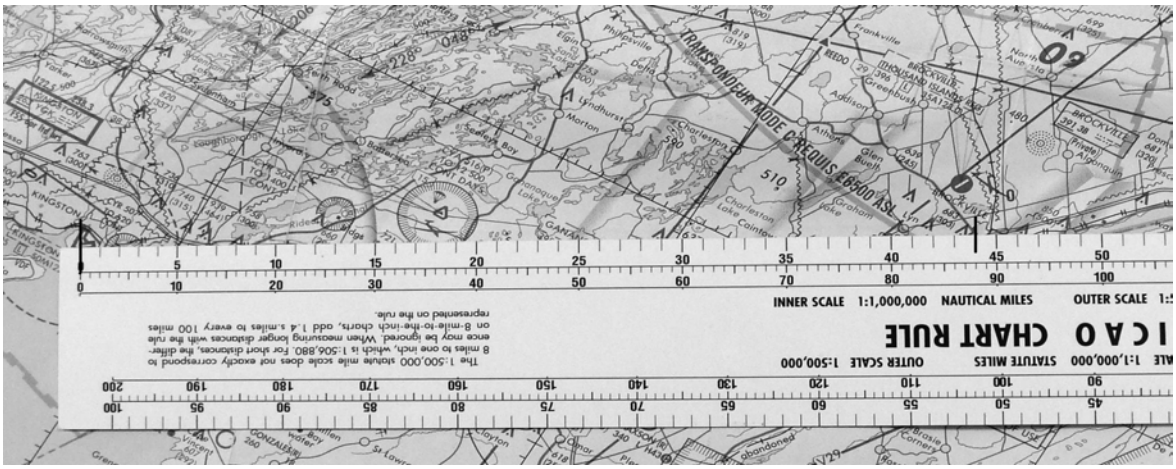


Figure A-3 ICAO Chart Ruler

Note. Created by Director Cadets 3, 2009, Ottawa, ON: Department of Defence.

***Activate Your Brain #2*:**

What is the distance between the two airports? Each turning point will have a distance in nautical miles (record as many turning points as required to arrive at the second airport).

First measurement: _____
Second measurement: _____
Third measurement: _____
Fourth measurement: _____
Fifth measurement: _____
Total distance: _____

Convert the distance from nautical miles to statute miles using a flight comuputer. Using the inside ring, set the nautical miles on the nautical mile mark on the outside ring. Read the number on the second ring corresponding to the statute mile mark on the outside ring.

Figure A-4 Flight Computer

Note. Created by Director Cadets 3, 2009, Ottawa, ON: Department of Defence.

***Activate Your Brain #3*:**

What is the distance between the two airports in statue miles?

Nautical Miles	Statute Miles
_____	_____

Landmarks

Using the VNC, identify landmarks along the flight route that will be visible from the aircraft.

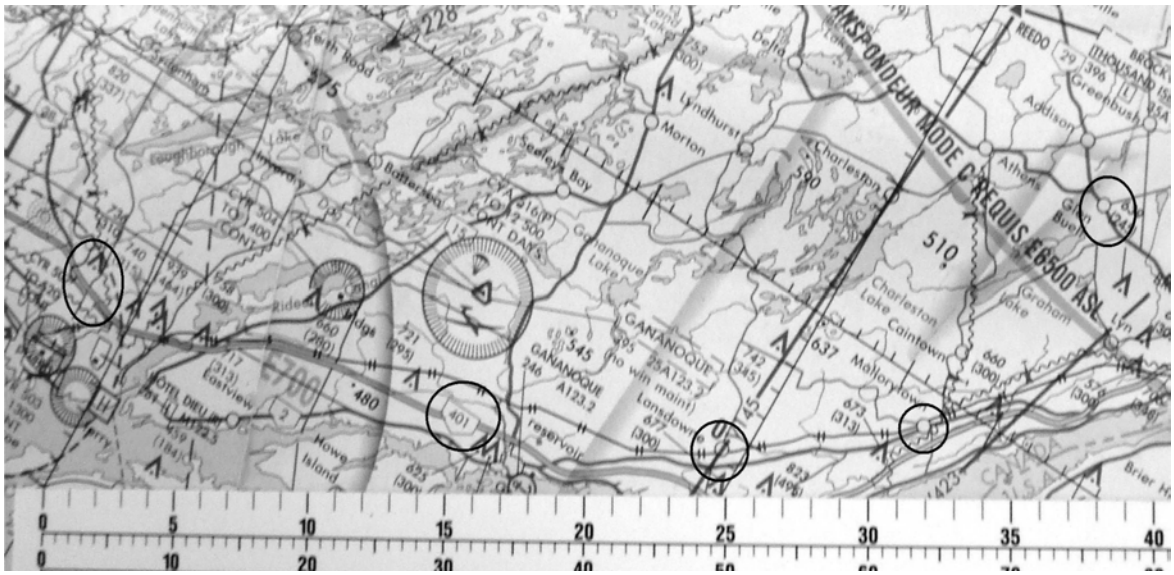


Figure A-5 Landmarks

Note. Created by Director Cadets 3, 2009, Ottawa, ON: Department of Defence.

***Activate Your Brain #4*:**

What are the landmarks you will be following between the two airports? List as many as required.

First landmark: _____
Second landmark: _____
Third landmark: _____
Fourth landmark: _____
Fifth landmark: _____

SECTION 2
DETERMINE AIRCRAFT SPEED

AIRCRAFT SPEED

Calculate the airspeed you will need to fly to arrive at your arrival airport. The formula to calulate is:

Speed (unknown ground speed) X **T**ime (known [.5 hour]) = **D**istance (known)

As the speed is unknown, you will use the formula:

Distance / Time = Speed (D / .5 = S)

***Activate Your Brain #5*:**

What is the aircraft speed required to fly between the two airports?

Distance	Divided by	Time	Equals	Speed
_____	/	.5	=	_____

To finalize your scenario, the following knowns will be set in the simulation program, including:

- clear daylight,
- no wind,
- altitude is 1 200 feet, and
- aircraft to fly, to include:
  - Piper J-3C Cub, or
  - Cessna C172.

Did you know?

The Piper J-3C's maximum speed is 74 kts (85 mph / 137 km/h).

The Cessna C172's maximum speed is 126 kts (203 km/h).

Variations from this criteria can be made to adjust for the area in which you are flying.

Complete the flight plan sheet using the data from the Activate Your Brain boxes.

FLIGHT PLANNING WORKSHEET

Date: _____ **Depart:** _____ **Destination:** _____

Airport, ID and coordinates

Airport, ID and coordinates

Distance to travel: _____
one-way

Altitude: _____

Airspeed: _____

Landmarks	Description of landmark	Time arrived at landmark
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Airports	Timings
Depart 1	
Arrive 2	
Depart 2	
Arrive 1	

SECTION 3
FLY A VFR CROSS-COUNTRY FLIGHT USING A FLIGHT SIMULATOR

Start the flight simulator with the scenario you created.

Using the flight simulator, fly the VFR cross-country flight at 1 200 feet AGL. Once you arrive at the first airport, land and then take off for a return flight to the original airport where you will land and taxi to the gas pumps.

Fill in the times as required during the flight on the Flight Planning Worksheet.

CONCLUSION

The knowledge to fly a cross-country flight has been developed over your four years of cadet training. Users of computer-based flight simulators have enhance their knowledge for future flight training.

Congratulations, you have completed your self-study package on EO C530.01 (Fly a Cross-Country Flight Using a Flight Simulator). Hand your completed package to the Training Officer / Proficiency Level Officer who will record your completion in your Proficiency Level Five logbook.

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 1

EO C540.01 – REFLECT ON CANADA'S CONTRIBUTION TO AEROSPACE TECHNOLOGY

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-805/PG-001, *Proficiency Level Five Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the self-study package within the section for which they are required.

Self-study packages are intended to be completed by the cadet independently. More information about self-study packages can be found in the foreword and preface.

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

Photocopy the self-study package located at Attachment A for each cadet.

Photocopy the answer key located at Attachment B but **do not** provide it to the cadets.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A self study was chosen for this lesson as it allows the cadet to reflect in greater detail on Canada's contribution to aerospace technology at their own pace. This encourages the cadet to become more self-reliant and independent by focusing on their own learning instead of learning directed by the instructor.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have reflected on Canada's contribution to aerospace technology.

IMPORTANCE

It is important for cadets to recognize the contribution Canadian researchers, scientists and technicians have made to the development of aerospace technology, not only for Canada but the world. Canadian technical knowledge has assisted aerospace development to create global advances within the space program and aircraft development.

SELF-STUDY PACKAGE INSTRUCTIONS

OBJECTIVE

The objective of this self-study package is to have the cadet reflect on Canada's contribution to aerospace technology.

RESOURCES

- Self-study package, and
- Pen / pencil.

ACTIVITIY LAYOUT

Provide the cadet with a classroom or training area suitable to complete the self-study package.

ACTIVITY INSTRUCTIONS

1. Provide the cadet with a copy of the self-study package located at Attachment A and a pen / pencil.
2. Allow the cadet 90 minutes to complete the self-study package.
3. Provide assistance as required to the cadet.
4. Collect the self-study package once the cadet has finished.
5. Correct the self-study package with the self-study package answer key located at Attachment B.
6. Provide feedback to the cadet and indicate whether or not they have completed the Enabling Objective (EO).
7. Return the completed self-study package to the cadet for their future reference.
8. Record the result in the cadet's logbook and Cadet Training Record.

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadet's participation in reflecting on Canada's contribution to aerospace technology will serve as the confirmation of this lesson.

REFERENCES

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C3-356 Centennial of Flight (2009). *Avro Canada*. Retrieved December 4, 2009 from http://www.centennialofflight.ca/airforce/hist/history_Avro_Canada_e.php

C3-357 page.interlog.com (2004). *Avrodemo timeline*. Copyright 1998–2004 by Art and Industry/20th Century Limited. Retrieved December 4, 2009 from http://pages.interlog.com/~urbanism/adrodemo.html

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Reflect on Canada's Contribution to Aerospace Technology

SECTION 1: ACCOMPLISHMENTS UP TO THE CANCELLATION OF THE AVRO CANADA CF-105 ARROW PROJECT

SECTION 2: THE ACCOMPLISHMENTS OF FORMER AVRO CANADA LIMITED PERSONNEL

SECTION 3: CANADA'S CONTRIBUTION TO THE SPACE PROGRAM

SECTION 4: CANADA'S CONTRIBUTION TO AIRCRAFT DEVELOPMENT

SECTION 1
THE ACCOMPLISHMENTS UP TO THE CANCELLATION OF THE AVRO CANADA CF-105 ARROW PROJECT

Canada's interest in space began well before we were a country. The first astronomical observatory was located in the French colony in Louisbourg on the coast of Cape Breton Island. As the country grew, observatories were developed in Quebec, in Quebec City and Montreal, and in Ontario, in Kingston and Toronto.

Did you know?

The first recognized Department of Astronomy was formed at the University of Toronto in 1904.

With the interest in the north magnetic pole and its affect on ratio waves, further examination of the sky was conducted with telescopes and weather balloons. Communication during World War II (WWII) became increasingly important. Scientists found that signal strength rises and falls depending on how high on a promontory or how low in a valley you are.

Did you know?

By the mid 1950s, the ideas of man-made satellites were being discussed. To launch a satellite was the problem.

Experimentation with rockets was mainly being conducted near Churchill, Manitoba jointly between Americans and Canadians. Research was being conducted by the Bristol Aerospace Company in Winnipeg, Manitoba in conjunction with the Ottawa-based Defence Research Board.

Many well known scientists worked on the development of rockets, including a little known Canadian, Dr. John Chapman. Dr. Chapman's contribution to space flight and space flight technology is unparalleled in our country.

Did you know?

The Canadian Space Agency headquarters site at Longueuil, Quebec is named The John H. Chapman Space Centre after Dr. Chapman.

As a Royal Canadian Air Force (RCAF) officer, Dr. Chapman learned and worked in the developing field of radar. After the war, he returned to Canada, received his doctorate in physics and became involved in ever-increasing leadership roles at the Defence Research Telecommunication Establishment.

When the Russians launched Sputnik in 1957, the Russian-American rivalry began. The Defence Research Telecommunication Establishment was among the first to detect and monitor the sounds of the satellite.

Figure A-1 Sputnik

Note. From "About.com". *Sputnik 1 Mockup*. Retrieved December 4, 2009, from http://www.space.about.com/od/sputnik/ig/Sputnik-a-Pictures-Gallery/Sputnik-a-Mockup.htm

With the Russian success, and the successful launch of Explorer 1 in 1958 by the Americans, Canada realized that they too could have a satellite in space. The team in Ottawa, Ontario lead by Dr. Chapman started working on this problem. If they could develop a satellite for Canada, perhaps the Americans would launch the satellite.

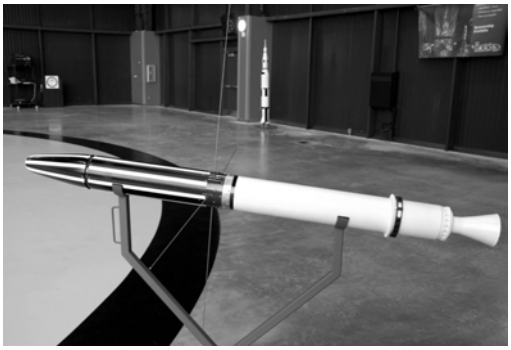

Figure A-2 Explorer 1

Note. From "U.S. Space & Rocket Center", 2009, *U.S. Space & Rocket Center Official Gallery-Interior/Explorer 1–8*. Copyright 2009 by U.S. Space & Rocket Center. Retrieved December 2, 2009, from http://www.spacecamp.com/gallery/displayimage.php?album=36&pos=1

Did you know?

When the National Aeronautic and Space Administration (NASA) was formed, they started examining American achievements including Canadian successes with space research. NASA started as a bureaucracy to keep track of space-related advances and to lend cohesion to the progress that was being made in the space field.

In 1959, NASA agreed to launch the Canadian satellite built by Dr. Chapman and his team with the understanding that any information would be shared with other countries.

The Americans already had close connections with the Canadian capabilities and resourcefulness. The Storable Tubular Extendible Member (STEM) antenna was invented by George Klein, an engineer with the National Research Council (NRC) and built by Spar Aerospace Limited (Ltd.). It was used on all early American–manned space flights, including John Glenn's (first American astronaut) launch into space.

If you want to read more about NRC engineer George Klein, you can go to http://www.nrc-enrc.gc.ca/eng/education/innovations/discoveries/stem.html

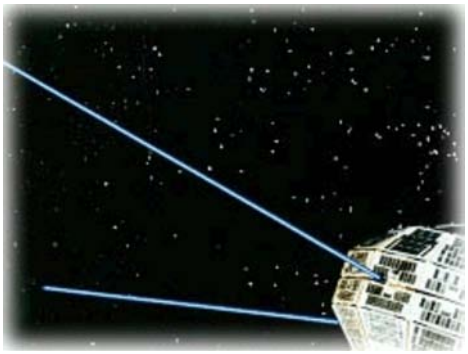

Figure A-3 STEM Protruding from Alouette

Note. From "Canada Science and Technology Museum", 2009, *Background Information for Canada in Space*. Copyright 2009 by Canada Science and Technology Museum. Retrieved December 4, 2009, from http://www.sciencetech.technomuses.ca/English/schoolzone/Info_Space.cfm

A STEM antenna, a flat strip of steel, unrolls when the satellite reaches its orbit and remains rigid when it is deployed.

Canada was launching scientific research Black Brants rockets starting in 1959, from Churchill, Manitoba. The first rocket carried a 100–kg payload to an altitude of 99 km.

Did you know?

The first Canadian satellite, Alouette 1, was launched by an American Thor-Agena rocket on September 26, 1962 in California. Alouette 1 was designed and built in Canada and had four STEM antennas. It took 20 years before Canadians were invited to become part of NASA.

While space development was progressing, aircraft development was also achieving advancements. In 1937, Malton, Ontario was selected to house Victory Aircraft. In 1945, A. V. Roe Canada Ltd. purchased Victory Aircraft as a repair and maintenance shop for aircraft. The company became known as Avro Canada.

In 1946, Avro purchased Turbo Research Ltd. to continue working on jet engines. In 1954, the Gas Turbine Division of Avro became a separate company, Orenda Engines Ltd. The Orenda engine was to be the main focus for the CF-100, F-86 and later the CF-105, as well as other countries' aircraft.

In 1953, Avro received contracts to develop a powerful interceptor aircraft to counter the Russian development of jet-powered bombers.

Did you know?

In 1952, Avro Special Projects teams started research and development on a vertical lift flying saucer-like vehicle (Avro VZ-9-AV Avrocar) funded by the United States Air Force (USAF).

The Avro Arrow was developed and proved to be an outstanding aircraft, ahead of its time. Tests flights were started in 1958 by chief test pilot Jan Zurakowski. At the same time, the Astra fire-control and Sparrow missile program were experiencing major developmental problems and creating major cost overruns. The overall costs for the Arrow project were several million dollars and increasing.

Figure A-4 CF-105 Avro Arrow

Note. From "Military Pictures", 2006, *Avro Arrow*. Copyright by MilitaryPictures.Info. Retrieved December 3, 2009, from http://www.militarypictures.info/airplanes.avro_arrow.jpg.html

Did you know?

Engineers overcame many difficulties in aircraft design at this time, including:

- wave drag at supersonic speeds:
  - used a thicker airfoil, and
  - swept airfoil rearward at a sharp angle; and
- delta wings provided:
  - more internal room for more fuel,
  - larger surface area providing ample lift at high altitudes, and
  - difficulty with increased drag at lower speeds and altitude.

NRC studied the Arrow project and was critical of the aircraft's maneuverability at altitude and range.

On September 23, 1958, the Astra and Sparrow programs were cancelled. The government cancelled the complete Arrow program on February 20, 1959. All aircraft, engines, production tools and technical data were ordered to be destroyed.

Did you know?

The Royal Canadian Mounted Police (RCMP) feared that foreign countries were spying on the development of the Arrow for technical secrets. The Mitrokhin archives (secret notes made by Vasili Mitrokhin on the Soviet Union secret police [KGB] activities and agents while working for over 30 years in the foreign intelligence archive) proved to some extend that this was happening.

At the time, foreign interest was low and the US Air Force was developing three aircraft similar to the performance of the Arrow (F-101 Voodoo, F-102 Delta Dagger and F-102B). The NRC was not interested in the Arrow, as there would be a shortage of spare parts, maintenance and qualified pilots available.

Did you know?

The NRC was against the program from the beginning.

Avro Canada continued on for several years but by 1962, the end arrived. The site was purchased by MacDonnell Douglas of Canada in 1963 and then Boeing Canada in 1997.

Did you know?

Most of the Avro site is now part of the Greater Toronto Airport Authority as Pearson International Airport.

The greatest loss was the departure of the bright minds of Avro Canada.

***Activate Your Brain #1*:**

Name the importance for each of the following:

University of Toronto	
Dr John Chapman	
George Klein	
A. V. Roe Canada Ltd	

SECTION 2
THE ACCOMPLISHMENTS OF FORMER AVRO CANADA LIMITED (LTD.) PERSONNEL

The cancellation of both the Astra and Sparrow program and the Arrow program cost 14 000 employees their jobs.

A.V. ROE CANADA COMPANY DISPERSION

Special Projects A. V. Roe became SPAR Aerospace. Orenda Engine continued operation and is now the leading industry in the Canadian company Magellan Aerospace Group. Skilled employees with these companies assisted with future successes.

Canadian Steel Improvement, Ltd. was the third company in the A.V. Roe Canada group. They continued development and engineering operations with a name change in 1969 to SIFCO Industries, Incorporated (Inc.). With the expertise and leadership by Charles H. Smith, SIFCO Industries, Inc. is a worldwide supplier to the developing aviation industry.

FORMER AVRO CANADA LTD PERSONNEL

Jim Floyd

Avro vice-president of engineering Jim Floyd worked with Avro technicians to find them employment with American aerospace companies such as Lockheed, Boeing, General Electric (G. E.) and Pratt & Whitney. Jim Floyd returned to Britain and worked with the Supersonic Transport studies that led to the development of the Concorde.

Jim Chamberlain

NASA had formed the Space Task Group (STG) to put astronauts in space. Engineers and scientists were recruited to work on the Mercury, Gemini and Apollo programs. Avro chief of technical design Jim Chamberlain lead the Canadians at the STG and was instrumental in the design of the Mercury capsule.

Jim Chamberlain was the head engineer of the Mercury project. He then designed the Gemini spacecraft which moved the American Space Program ahead of the Russian Space Program. He was responsible for selecting the moon orbit approach for the Apollo missions. He worked with Owen Maynard to develop the lunar module (LM) system.

Owen Maynard

Owen Maynard joined the STG and participated in the planning and development of getting astronauts to and from the lunar surface. He was instrumental as a team member with the initial designs of the Apollo command and service modules. When the accepted method of getting the astronauts to and from the moon's surface was decided, Owen Maynard's design for the LM was accepted and used. Owen Maynard was the chief of the LM engineering office. He later was promoted to the position as chief of the systems engineering division for the Apollo Spacecraft Program.

Did you know?

Thomas J. Kelly is known as the father of the LM but he acknowledges Owen Maynard as the person at NASA most responsible for the design of the LM.

Figure A-5 Lunar Module (LM-2)

Note. From "Historic Spacecraft", 2009, *Lunar Module*. Retrieved December 7, 2009, from http://www.historicspacecraft.com/Lunar_Module.html

Other ex-Avro employees went to work at NASA's Mission Control:

Christopher Kraft

Christopher Kraft became Flight Director at Mission Control and later the director of the Johnson Space Center in Houston, Texas. He and Gene Kranz were active during the Apollo 13 missions.

Jim Hodge

Jim Hodge was an original flight director at Mission Control. He, along with ex-Avro employees, Dennis Fielder, Tec Roberts and Fred Matthews, assisted in building Mission Control and the network of tracking stations that guided Mercury, Gemini and Apollo programs. He returned to NASA in the 1980s to launch the Space Station Program.

Bruce Aikenhead

Bruce Aikenhead joined NASA and worked for three years training astronauts. He returned to Canada to work with Gerry Bull and later on Canadian satellites, the Remote Manipulator System (Canadarm) and the Canadian Astronaut Program.

Did you know?

Dr. Gerry Bull, the youngest full professor appointed by McGill University, proposed launching satellites into orbit using a gun.

Thomas Louden and Ben Etkin

Within Canada, new challenges were faced by ex-Avro engineers. Thomas Louden and Ben Etkin remained in Canada and taught at the University of Toronto Institute for Aerospace Studies (UTIAS) as members of the Faculty of Applied Science and Engineering in Ontario.

***Activate Your Brain #2*:**

Who were we?

SPAR

Magellan Aerospace Group

SIFCO Industries, Incorporated (Inc.)

SECTION 3
THE CANADIAN CONTRIBUTION TO THE SPACE PROGRAM

SPACE DEVELOPMENT

Aerospace and defence have become a global industries. Countries are willing to share knowledge and work collectively. Canada aerospace and defence industries have proved a valued member in these evolving industries.

Original equipment manufacturers (OEM) like Bombardier, CAE, Pratt & Whitney Canada, Bell Helicopter Textron Canada and General Dynamics Canada continue to contributed and develop new technology.

Satellite Development

Satellite development continued with Dr. Chapman with his proposal to change the development from scientific satellites to communication satellites. This lead to the joint Department of Communications (DOC) and NASA project using Hermes. Hermes had large solar panels that folded out like an accordion once the satellite reached its orbit.

Did you know?

Hermes was the first high powered satellite in orbit which led to present day satellites used to broadcast television directly to individual homes using small low-tech satellite dish antennas.

Figure A-6 Hermes Spacecraft

Note. From "Friends of CRC / Les Amis du CRC", 2001, *Hermes*. Copyright by Friends of CRC. Retrieved December 7, 2009, from http://www.friendsofcrc.ca/Projects/Hermes/hermes.html

To test a satellite before flight in a thermal vacuum chamber, the David Florida Lab (DFL) near Ottawa, Ontario was built. A satellite was tested in the Thermal Vacuum Facility which simulated the temperature and vacuum of space, cycling through hot and cold temperatures. The facility also tested the satellite in a spin machine, simulating spinning in space.

The satellite was also tested in the Vibration Test Facility, shaking the satellite to ensure that it would withstand the vibrations and shock of the launch. Radio frequency testing was also performed in the reflection-free chamber duplicating the conditions of space.

Did you know?

The DFL was named after David Florida, a Canadian space pioneer who managed the team that built the International Satellites for Ionospheric Studies.

In 1991, the Anik-E series of satellites was built by Spar Aerospace but launched by the European Space Agency. The E2 satellite was not test at the DFL due to it being too large for the facility and when in space, the antenna triggers would not release. The technicians, including DFL staff showed that satellites in space could be rescued from Earth. They received awards for the rescue of the satellite.

Did you know?

Telesat, owner / operator of the satellite, received two awards for the rescue, including:

- first ever Space Recovery Prize from La Réunion Spatiale, and
- International Space Risk Insurance Group.

Canadarm

With the development of the space shuttle program, NASA turned to Canada for the development of a lifting and placement machine. The Remote Manipulator System (Canadarm) was the result of work by Spar Aerospace.

Did you know?

Canadarm is a robotic arm that allows astronauts to work in space, to include:

- releasing and retrieving satellites in space;
- working in the cargo bay from the safety of the flight deck; and
- serving as a platform from which an astronaut outside of the cargo bay can:
  - repair satellites,
  - assemble tasks, and
  - disassemble tasks.

CANADIAN ASTRONAUTS

In 1982, Canadian astronauts were invited to train and soon fly, with the United States Space Shuttle Program. Men and women joined the Canadian Space Agency and provided specialist roles within the NASA program. Not all Canadian astronauts flew in space.

This list of Canadian astronauts is current as of 2010. Go to the Canadian Space Agency at http://www.space.gc.ca to find out about Canadians who have since become astronauts.

Marc Garneau

Marc Garneau was the first Canadian to fly in space in 1984. His role was as a Payload Specialist working on several scientific exercises that would further benefit the on-going flight and future space missions. He also was tasked with taking photographs of the aurora borealis. He flew again in 1996 as a Mission Specialist and again in 2000 when he directed three spacewalks at the International Space Station (ISS) and worked the Canadarm.

He served as the first non-American capsule communicator (CAPCOM). Marc Garneau was the Deputy-Director of the Canadian astronaut program. When he retired as an astronaut in 2000, he became president of the Canadian Space Agency (CSA).

Did you know?

Marc Garneau spoke at community gatherings on his return, showing the pictures he took. Many cadets and officers witnessed the photographic wonders taken during the first flight in the mid 1980s.

The Canadian-built IMAX camera was used on this flight.

Roberta Bondar

Roberta Bondar was the second Canadian astronaut and the first Canadian woman to fly into space with the United States Space Shuttle Program. She was a Payload Specialist and worked in a science lab call Skylab in 1992. She conducted a teleconference with 1 000 elementary school students and teachers from space at the Ontario Science Centre in Toronto, Ontario.

Did you know?

Ken Money was her backup astronaut. He never flew into space and left NASA after the Bondar flight.

Steve MacLean

In 1992, Steve MacLean flew as a Payload Specialist and on his second flight in 2006, he was a Mission Specialist. Steve MacLean's primary duty on the first mission was to operate the prototype of the Canadian Space Vision System (SVS). He was one of three Canadian astronauts who participated in a spacewalk. He became the first Canadian to operate the Canadarm2 in space.

In 2008, Steve MacLean was appointed head of the CSA.

Did you know?

SVS links computers with television cameras, shooting targets on satellites or other vehicles to provide real-time computer images of where the Canadarm is in relationship to the object it needs to grasp.

With the SVS, the Canadarm operators are able to see what they are doing, even if the arm is manoeuvring something that cannot be seen from the flight deck.

Chris Hadfield

Chris Hadfield flew in 1995 and was the only Canadian to visit the Russian Space Station Mir. He also was the first Canadian Mission Specialist to fly during the 1995 shuttle flight. He was the senior member of three men, with the same qualifications. He continued his flight of firsts as the first Canadian to operate the Canadarm in space. His 2001 flight carried the new Canadarm2 to be installed to the ISS. He was one of three Canadian astronauts who participated in a spacewalk.

Chris Hadfield worked as a CAPCOM.

Did you know?

Chris Hadfield started his flying as an air cadet with 820 Squadron, Milton, Ontario. He trained at the Central Region Gliding School, at Canadian Forces Detachment Mountainview, Ontario.

He joined the Canadian Forces and graduated from Royal Military College (RMC) located in Kingston, Ontario.

He left the Air Force as a colonel and during his career, was the U.S. Navy Test Pilot of the Year in 1992.

Robert (Bob) Thirsk

Bob Thirsk was the backup astronaut for Marc Garneau. He filled the role as CAPCOM in the space station control room. He flew in the shuttle in 1996 and with Soyuz in 2009 when he became the first Canadian to live and work on the International Space Station (ISS).

Dave Williams

Dave Williams flew in 1998, as a Mission Specialist and again in 2007. He made three spacewalks, and was the manager of the Missions and Space Medicine Group in the Canadian Astronaut Program. After completing his first flight, he was appointed as the first non-American director of the Space and Life Sciences Directorate at the Johnson Space Center. He was commander for NASA Extreme Environment Mission Operations (NEEMO) for an 18-day mission.

Did you know?

The NASA research facility called NEEMO simulates weightlessness for astronauts in an underwater setting. Astronauts prepare and train for duty in the ISS.

Bjarni Tryggvason

Bjarni Tryggvason was the backup astronaut of Roberta Bondar in 1992. He flew as a Payload Specialist in 1997. His primary role was performing fluid science experiments, the background work largely a Canadian experiment.

Did you know?

Bjarni Tryggvason was born in Iceland and had not seen an aircraft as a young boy. He and his family came to Canada when he was 14 years old. He became a Canadian citizen as a youngster and was a member of the Air Reserve as a teenager when his family settled in British Columbia.

Julie Payette

Julie Payette first flew in 1999, as the first Canadian to participate on the assembling of the ISS. Her second flight was in 2009, as a Mission Specialist.

Drew Feustel

Drew Feustel flew into space in 2009. He was a member of the last flight to the Hubble Telescope. He completed three spacewalks during the space flight.

The space flights continue with Canadian astronauts flying with the Shuttle and the Soyuz programs to the ISS. Their stay at the ISS may be long or short.

Did you know?

Canada contributes to space and aeronautical developments with NASA and also Russia, the European Space Agency, Japan and other countries.

Canadian technological contributions to the space shuttles, the ISS and the unmanned space program are numerous, including:

- Canadarm,
- Canadarm2,
- Special Purpose Manipulator (Dextre),
- weather station on the Phoenix Mars Lander,
- Radarsat-2 satellite which is monitoring the Northwest Passage, and
- communications, such as:
    - television,
    - radio,
    - cell phones, and
    - Internet.

Did you know?

The Radarsat-2 satellite was the only satellite to spot a US submarine sailing through the Northwest Passage.

***Activate Your Brain #3*:**

When did they go into space?

Marc Garneau	
Roberta Bondar	
Steve MacLean	
Chris Hadfield	
Bob Thirsk	
Dave Williams	
Bjarni Tryggvason	
Julie Payette	
Drew Feustel	

SECTION 4
THE CANADIAN CONTRIBUTION TO AIRCRAFT DEVELOPMENT

Aircraft development depended on OEMs for Canadian design and built aerospace and defence products for airlines, such as Boeing, Airbus, Lockheed Martin and Raytheon. The Canadian industry has had a close relationship with the US market.

Did you know?

US airlines have been a major purchaser of Canadian regional jets.

The Defence Development Sharing Arrangement Sharing Agreement allowed Canadian firms to take on cost-shared Research & Development (R&D) for the US Department of Defense requirements. This allowed Canada access to the latest technology and to initiate next-generation services for aircraft, including:

- Airbus's A-380, and
- Boeing's Sonic Cruiser.

Canadian universities and colleges provide internationally recognized programs to train:

- aerospace engineers,
- aerospace manufacturing engineers,
- aviation technicians, and
- aircraft maintenance engineers.

The Canadian Aviation Maintenance Council (CAMC) plays a role in the development of curricula and accreditation programs for universities and colleges for the aerospace maintenance sector.

The Canadian Commercial Corporation (CCC) works as Canada's international contracting agency. The CCC negotiates and executes bilateral government-to-government contracts. The CCC provides the assurance of transparency at every phase of the procurement process.

Technology Partnerships Canada (TPC) funds technology development for individual projects on a case-to-case basis. Canada's participation in the Joint Strike Fighter (JSF) program is the result of TPC funding to Canadian aerospace companies. Supplies, evaluation sites and system development by Canadian companies contribute to the development of the JSF.

Involvement in the development and manufacturing of aircraft is an ongoing part of the Canadian aircraft industry. Companies such as Goodrich and CAE have won contracts as suppliers for aircraft production, such as the A-380 program.

Canadian industry is integrated with the US and Canadian firms play a part in the global supply chain. In 2008, over 70 % of Canadian aerospace and defence output was exported to the US.

***Activate Your Brain #4*:**

Who do these acronyms represent?

OEM	
R&D	
CAMC	
CCC	
TPC	

CONCLUSION

Canada has been a country with strong ties to the aerospace and aircraft industries. From the first astronomical observatory to today's JSF and ISS participation, aerospace development continues to grow.

Each Canadian has their own ideas regarding to the continued support of aircraft development, manned and unmanned space programs and future Canadian interests in space travel. The accomplishments by individuals, like Dr. Chapman, George Klein and others have aided other countries in their quest for space travel.

Congratulations, you have completed your self-study package on EO (Reflect on Canada's Contribution to Aerospace Technology). Complete the following exercise and hand the completed package to the Training Officer / Proficiency Level Officer who will record your completion in your Proficiency Level Five logbook.

FINAL EXERCISE

The Canadian aerospace and aircraft development up to the mid 1960s showed the accomplishments Canadian scientists achieved. When the CF-105 Avro Arrow and Astra and Sparrow contracts were cancelled, history has recorded the changes in how Canadian contributions were made to both space and aircraft technology.

Reflect on the information presented in this self-study package and write your thoughts on how the cancellation of the Arrow program aided the achievements of Canadian, US, Russian and other countries.

Consider the following questions:

- Do you think the Canadian aerospace program would be different if the Arrow program was completed?
- Do you think accomplishments of the former Avro Canada Limited personnel made a significant contribution to the aerospace industry?
- Do you think Canadians played a significant role in the manned space program?
- Do you think Canadian industries and individuals played a significant role in aircraft development?

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ANSWER KEY

***Activate Your Brain #1*:**

Name the importance for each of the following:

University of Toronto	1st recognized Department of Astronomy
Dr John Chapman	Lead development of Alouette
George Klein	STEM
A. V. Roe Canada Ltd	CF-105 Avro Arrow

***Activate Your Brain #2*:**

Who were we?

SPAR	Special Projects A.V. Roe
Magellan Aerospace Group	Orenda Engine
SIFCO Industries, Incorporated (Inc.)	Canadian Steel Improvement, Ltd.

***Activate Your Brain #3*:**

When did they go into space?

Marc Garneau	1984, 1996, and 2000
Roberta Bondar	1992
Steve MacLean	1992, 2006
Chris Hadfield	1995, 2001
Bob Thirsk	1996, 2009
Dave Williams	1998, 2007
Bjarni Tryggvason	1997
Julie Payette	1999, 2009
Drew Feustel	2009

***Activate Your Brain #4*:**

Who do these acronyms represent?

OEM	Original equipment manufacturers
R&D	Research & Development
CAMC	Canadian Aviation Maintenance Council
CCC	Canadian Commercial Corporation
TPC	Technology Partnership Canada

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 1

EO C560.01 – EXAMINE ASPECTS OF FLIGHT SAFETY (FS)

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-805/PG-001, *Proficiency Level Five Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the self-study package within the section for which they are required.

Review the self-study package located at Attachment A and become familiar with the material prior to facilitating this lesson.

Self-study packages are intended to be completed by the cadet independently. More information about self-study packages can be found in the foreword and preface.

Photocopy the self-study package for each cadet.

Photocopy the answer key located at Attachment B but **do not** provide it to the cadets.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A self study was chosen for this lesson as it allows the cadet to examine FS at their own learning pace. This encourages the cadet to become more self-reliant and independent by focusing on their own learning instead of learning directed by the instructor.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have examined aspects of FS.

IMPORTANCE

It is important for cadets to examine aspects of FS as each cadet, while participating in the Air Cadet Flying Program, must be aware of safety on the flight line. It is important that cadets understand the roles and responsibilities of the Flight Safety Officer (FSO) and how each individual can contribute to the safety of this program.

SELF-STUDY PACKAGE INSTRUCTIONS

OBJECTIVE

The objective of this self-study package is to have the cadet examine aspects of FS.

RESOURCES

- Self-study package, and
- Pen / pencil.

ACTIVITIY LAYOUT

Provide the cadet with a classroom or training area suitable to complete the self-study package.

ACTIVITY INSTRUCTIONS

1. Provide the cadet with a copy of the self-study package located at Attachment A and a pen / pencil.
2. Allow the cadet 90 minutes to complete the self-study package.
3. Provide assistance as required to the cadet.
4. Collect the self-study package once the cadet has finished.
5. Correct the self-study package with the self-study package answer key located at Attachment B.
6. Provide feedback to the cadet and indicate whether or not they have completed the Enabling Objective (EO).
7. Return the completed self-study package to the cadet for their future reference.
8. Upon completion of the self-study package, record the result in the cadet's logbook and Cadet Training Record.

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadet's participation in examining aspects of flight safety will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

The cadets' awareness on how the Air Cadet Program is an active participant in the FS Program and how the FSO plays a key role to ensure the safety of all individuals and resources, supports the understanding that FS is the concern for all participants in the Air Cadet Gliding and Powered Flight Programs.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A0-045 A-GA-135-01/AA-001 Directorate of Flight Safety. (2002). *Flight safety for the Canadian Forces*. Ottawa, ON: Department of National Defence.

A3-189 Directorate of Flight Safety. (2007). *The flight safety program*. Retrieved November 19, 2009, from http://www.airforce.forces.gc.ca/dfs-dsv/program-programme-eng.asp

EXAMINE ASPECTS OF FLIGHT SAFETY (FS)

SECTION 1: THE ROLE OF THE FLIGHT SAFETY OFFICER (FSO) IN THE AIR CADET FLYING PROGRAM

SECTION 2: EDUCATION AND TRAINING

SECTION 3: THE REPORTING PROCESS

SECTION 4: INVESTIGATION PROCEDURES

SECTION 1
THE ROLE OF THE FLIGHT SAFETY OFFICER (FSO) IN THE AIR CADET FLYING PROGRAM

Did you know?

The first known formal recognition of the need for a dedicated FS organization occurred in mid 1942 when the Royal Canadian Air Force (RCAF) Aircraft Accident Investigation Board (AIB) was formed. The Directorate of Flight Safety (DFS) was established in the early 1950s.

FS for the Air Cadet Flying Program is the responsibility of the Canadian Forces (CF). The Chief of Defence Staff (CDS) is tasked with operational command and control of the Air Cadet Flying Program, which includes:

- Air Cadet Gliding Program,
- Air Cadet Powered Flight Program, and
- familiarization flying funded by the Department of National Defence (DND) / CF and the FS Program.

The Chief of the Air Staff (CAS) has been designated as the Airworthiness Authority (AA) for the DND / CF and is responsible for FS policy.

Designated wings act as FS advisors to the Region Comd and assist the Air Cadet Glider Program activities with the program FSO to include:

- advising on FS matters;
- monitoring the safety aspects of flying operations;
- assisting in preparation and timely submission of initial and supplementary occurrence reports and recommending preventative measures (PMs);
- conducting biannual FS surveys of all designated gliding sites;
- assisting the Director of Flight Safety (DFS) and Regional Cadet Air Operations Officer (RCA Ops O) in the event of an accident;
- assisting the Region Comd in preparing comments for FS investigation reports; and
- reviewing Air Cadet Glider Program occurrence reports for quality assurance.

Regions and designated FSOs include:

REGION	REGION COMD	DESIGNATED FSO
Atlantic	Comd Maritime Forces Atlantic (MARLANT)	14 Wing Greenwood
Eastern	Comd Land Forces Quebec Area (LFQA)	3 Wing Bagotville
Central	Comd Land Forces Central Area (LFCA)	8 Wing Trenton
Prairie	Comd 1 Cdn Air Div	17 Wing Winnipeg
Pacific	Comd Maritime Pacific (MARPAC)	19 Wing Comox

An occurrence is defined as an event involving the operation of an aircraft or support of flying that constitutes an accident or incident.

An occurrence category is an alphabetical designation assigning an overall seriousness classification including:

- aircraft damage level (ADL); or
- personnel casualty level (PCL).

An FSO is designated annually by the RCA Ops O for all regional gliding schools (RGS) and gliding centres. FS qualified personnel wear the FS Diamond Badge on their operational clothing.

The aim of the FS program is to prevent the accidental loss of aviation resources. What is an aviation resource? Basically, anything or anyone involved in or supporting aviation operations.

- planes,
- parts, and
- people.

That can even include such things as the fuellers for the aircraft along with the base kitchen who makes the aircrew's box lunch!

The FS Program is based on four fundamental principles:

- Cause factors are assigned to occurrences, only done to assist the development of effective PMs .
- Personnel involved in conducting and supporting flying operations are expected to freely and openly report all FS occurrences and concerns.
- Determine the cause of occurrences so appropriate, effective PMs can be developed and implemented, personnel involved in conducting and supporting flying operations are expected to voluntarily acknowledge their own errors and omissions.
- Facilitate free and open reporting and voluntary acknowledgement of errors and omissions, the FS Program does not assign blame. Personnel involved in a FS occurrence are not identified in the final reports and the reports cannot be used for legal, administrative, disciplinary or other proceedings.

Did you know?

Before 1963, a Board of Inquiry (BOI) was required to assign blame and recommended punishment for those responsible for an accident. Between 1963 and 1965, this was changed so that information given to an aircraft accident investigation could not be used in disciplinary proceedings.

The FS Program is based on three pillars:

- education,
- analysis, and
- prevention.

Where have you seen an FSO? _____

_____

How do you identify the FSO? _____

All flying aspects for the RGSs and gliding familiarization sites in the Air Cadet Program fall within the responsibilities of an FSO.

The duties and responsibilities of the FSO are outlined in A-GA-135-001/AA-001, *Flight Safety for the Canadian Forces*.

The FSO must be familiar with the unit's operations so that sound advice can be provided on accident prevention and hazardous conditions.

FSO responsibilities are:

- to advise the school / site comd on all aspects of FS,
- to report all accidents and incidents in accordance with A-GA-135-001/AA-001*Flight Safety for the Canadian Forces*,
- to aid school / site comd in the implementation of the unit FS Program, and
- to monitor all aspects of the operation and advise school / site comds of hazardous conditions.

FS personnel must immediately notify the site comd of any unsafe procedures / practices detected. The site comd immediately rectifies the situation and advises the RCA Ops O of the corrective action proposed / implemented.

Activate Your Brain #1:

FS occurrence is defined as an event _____

_____

_____

An accident / incident are defined as:

AIR ACCIDENT

An event involving an aircraft between the time the first power plant is attempted with intent for flight and the time the last power plant or rotor stops, (a glider from the time the hook-up is completed until the glider comes to rest after landing), in which one or more of the following occurs:

- someone is missing or receives fatal, very serious or serious injuries, as determined by a medical officer (MO), contributed by an aircraft or its equipment; or
- an aircraft is destroyed, missing or sustains very serious or serious damages.

GROUND ACCIDENT

An event involving an aircraft when there is no intent for flight, or when there is intent for flight but no power plant start is attempted, or after the power plant and rotors have stopped, in which one or more of the following occurs:

- a person is missing or receives fatal, very serious or serious injury or illness as determined by a MO and where the aircraft equipment or its operation has contributed to the event; or
- an aircraft is destroyed, missing or has sustained very serious or serious damage.

AIR INCIDENT

An event involving an aircraft between the time the first power plant is attempted with intent for flight and the time the last power plant or rotor stops, (a glider from the time the hook-up is completed until the glider comes to rest after landing), in which one or more of the following occurs:

- someone receives minor injuries, as determined by a MO, contributed by an aircraft, its equipment, or its operation;
- an aircraft sustains very minor damages; or
- there is no injury or damage but accident potential did exist.

GROUND INCIDENT

An event involving an aircraft when there is no intent for flight, or when there is intent for flight but no power plant start is attempted, or after the power plant and rotors have stopped, in which one or more of the following occurs:

- a person receives minor or no injuries as determined by a MO, or there is a risk of injury or illness and where the aircraft equipment or its operation has contributed to the event;
- an aircraft receives minor damage;
- there is no damage but accident potential existed;
- there is jettison or accidental release; or
- there is damage to civilian or military property.

SECTION 2
EDUCATION AND TRAINING

Education and training not only is a fundamental element of the FS Program but also requires the FSO to be properly qualified.

Flight safety education is fundamental to accident / incident prevention. All personnel involved with flight operations should be aware of flight safety objectives. FS training and education are provided both through formal and informal means.

***Activate Your Brain #2*:**

Where have you seen FS education and training?

_____ _____
_____ _____
_____ _____
_____ _____

All personnel active in the FS Program shall continue to educate themselves by accessing informal information from both military and civilian organizations. Material and information is available from numerous sources, including:

- FS publications,
- bulletins,
- web-based material,
- magazines (eg. *Flight Comment*),
- posters,
- FS reports (Occurrence report / *Epilogue* [EPI]),
- FS briefings,
- conferences, and
- seminars.

A more experienced FSO can educate newer, less experienced personnel by passing on knowledge learned through experience or from other leaders.

To work as an FSO, formal qualifications are obtained by completion of the CF flight safety courses, including:

- Basic FS Course (BFSC), and
- Advanced FS Course (AFSC).

The BFSC teaches candidates to:

- develop and implement an effective FS prevention and education program; and
- respond to FS occurrences, to include:
    - reporting;
    - investigating; and
    - implementing preventative measures.

The AFSC teaches candidates to:

- develop and implement an effective wing-level FS prevention and education program, and
- respond to FS occurrences, to include:
    - reporting;
    - investigating; and
    - implementing preventative measures.

The investigator's qualification is a requirement of the CF Airworthiness Program. Formal training includes:

- Basic Investigator (BI 2 and BI 3), and
- Investigator-In-Charge (IIC 1, IIC 2 AND IIC 3).

Training involves all personnel active in the Air Cadet Flying Program. To accomplish this, the FS Program uses:

- FSO formal / informal briefings,
- CF FS publications, and
- awards.

Have you attended a FS briefing? Has an FSO spoke to your group before the squadron started the familiarization (famil) flights at the gliding centre?

It is the responsibility of FS personnel at all levels to advise their comds when they have concerns with respect to FS issues. This advise can take many forms, including:

- formal / informal briefings,
- briefing notes,
- safety committee meetings, or
- informal discussions.

Briefings

FSOs are to provide / conduct briefings on information relevant to the audience which are:

- informative,
- current, and
- interesting.

Did you know?

With young cadets waiting for their first famil flight in a glider, safety is not on their mind. A briefing provides information for these cadets on expected behaviour around the glider, runway and even what to do if they see something questionable.

FS Publications

Magazines and articles are produced and distributed within the CF. *Flight Comment* is the CF FS magazine. It provides relevant, interesting and timely FS information using posters, articles and other training methods.

Within the magazine, numerous articles are presented including:

- Dossiers,
- *Epilogue,*
- From the Investigator, and
- *Lessons Learned*.

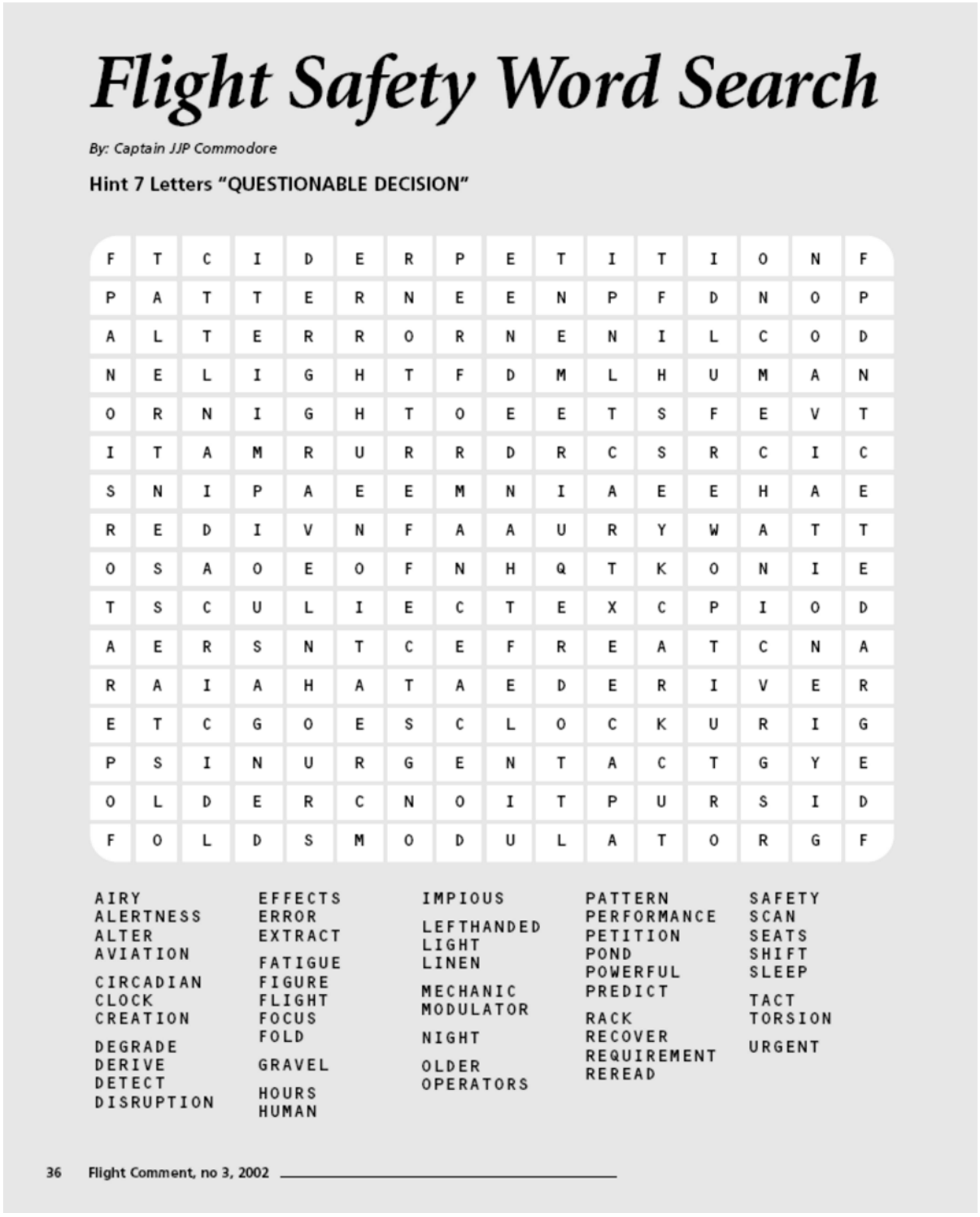
Other publications produced by the DFS include:

- *On Target* (single subject of interest),
- *FS Newsletter*, and
- *FS Flash*.

Did you know?

Within the cadet world, newsletters are published by the RGS FSO (RGS-C has an online newsletter called *Fly Right*).

Challenging activities such as crossword and word search puzzles are part of the magazine publications. To learn about FS issues and terminology, complete the following word search puzzle.



Flight Safety Word Search

By: Captain JJP Commodore

Hint 7 Letters "QUESTIONABLE DECISION"

F	T	C	I	D	E	R	P	E	T	I	T	I	O	N	F
P	A	T	T	E	R	N	E	E	N	P	F	D	N	O	P
A	L	T	E	R	R	O	R	N	E	N	I	L	C	O	D
N	E	L	I	G	H	T	F	D	M	L	H	U	M	A	N
O	R	N	I	G	H	T	O	E	E	T	S	F	E	V	T
I	T	A	M	R	U	R	R	D	R	C	S	R	C	I	C
S	N	I	P	A	E	E	M	N	I	A	E	E	H	A	E
R	E	D	I	V	N	F	A	A	U	R	Y	W	A	T	T
O	S	A	O	E	O	F	N	H	Q	T	K	O	N	I	E
T	S	C	U	L	I	E	C	T	E	X	C	P	I	O	D
A	E	R	S	N	T	C	E	F	R	E	A	T	C	N	A
R	A	I	A	H	A	T	A	E	D	E	R	I	V	E	R
E	T	C	G	O	E	S	C	L	O	C	K	U	R	I	G
P	S	I	N	U	R	G	E	N	T	A	C	T	G	Y	E
O	L	D	E	R	C	N	O	I	T	P	U	R	S	I	D
F	O	L	D	S	M	O	D	U	L	A	T	O	R	G	F

AIRY
ALERTNESS
ALTER
AVIATION

CIRCADIAN
CLOCK
CREATION

DEGRADE
DERIVE
DETECT
DISRUPTION

EFFECTS
ERROR
EXTRACT

FATIGUE
FIGURE
FLIGHT
FOCUS
FOLD

GRAVEL

HOURS
HUMAN

IMPIOUS

LEFTHANDED
LIGHT
LINEN

MECHANIC
MODULATOR

NIGHT

OLDER
OPERATORS

PATTERN
PERFORMANCE
PETITION
POND
POWERFUL
PREDICT

RACK
RECOVER
REQUIREMENT
REREAD

SAFETY
SCAN
SEATS
SHIFT
SLEEP

TACT
TORSION

URGENT

36 Flight Comment, no 3, 2002

Figure A-1 Flight Safety Word Search

Note. From "Flight Comment", 2003, *Flight Safety Word Search*. Retrieved November 23, 2009, from http:/ www.airforce.forces.gc.ca/dfs/publications/fc/archive/2000-2004/archive-eng.asp

***Activate Your Brain #3*:**

As part of FS informal education / training, list some of the information you think an FSO would present in a briefing?

_____ _____
_____ _____
_____ _____
_____ _____

Awards

Flight Comment magazine recognizes staff for accomplishments, including:

- Good Show Award for Excellence in FS, and
- For Professionalism Awards in FS.

Did you know?

Cadet Instructor Cadre (CIC) officers have been recognized in *Flight Comment*. Check out issues: Summer 2002, Summer 2005 and Issue 1 2009.

For more information and to read about some of these CIC officers, go online to http://www.airforce.forces.gc.ca/dfs/publications/fc/fc-pdv-eng.asp.

SECTION 3
THE REPORTING PROCESS

FS reports refer to all reports, whether oral or written.

Specific forms must be used to support the FS Program. It is critical that all occurrences are reported as potential or actual compromise of FS. Reports allow the emerging trends to be identified and analyzed.

Did you know?

On February 1, 1968, the unification of the Canadian military brought the Navy, Army and Air Force together to be known as the CF. Occurrences were addressed to the DFS. In 1975, Air Command was formed and assignment of responsibility was divided between the Air Command FS staff and DFS.

In August 2011, the Government of Canada restored the historic naming of Canada's Air Force such that it is now known again as the Royal Canadian Air Force.

There are two categories of forms designed for the FS Program: FS specific and FS related forms.

FS specific forms include:

- CF 215 Flight Safety Occurrence and Birdstrike Report (www.airforce.forces.gc.ca/dfs/publications/docs/cf215.pdf)
- DND 2484 Flight Safety Hazard Report (www.airforce.forces.gc.ca/dfs/publications/docs/fshr-rvsd)

FS related forms include:

- Report on Injuries or Immediate Death Form (form used to report serious or very serious injuries and fatalities),
- Coroner's report, and
- Unsatisfactory Condition Report.

All forms and reports must be completed in a specific format.

FS occurrences are reported if any of the following questions are answered with a yes.

1. Was there an injury or illness to personnel engaged in or supporting air operations, damage to a CF-owned aircraft or aircraft operated by or on behalf of DND / CF or damage to CF equipment used to support air operations?
2. Was there potential for injury or illness or damage to an aircraft?
3. Could reporting the FS event generate a PM that may prevent a similar occurrence?

To report an immediate flight safety hazard or accident call 1-888-WARN-DFS (1-888-927-6337).

Did you know?

The unit of ownership is the unit having control and authority over the aircraft. For ground occurrences, the unit of ownership is the unit, wing or base to which the aircraft is assigned.

There are exceptions for aircraft that include:

- aircraft undergoing depot-level maintenance at a contractor's plant,
- new aircraft being produced for the CF, and
- other non-CF aircraft.

If an accident occurs, the unit of ownership is to be notified by the fastest possible means. The reporting individual briefs the duty officer and confirms details as known.

Did you know?

Damage is defined as physical harm to an aircraft that impairs the value or normal function of the aircraft or portion of the aircraft, which includes:

- loss,
- repair, or
- replacement.

Damage is a result of unusual forces including:

- collision,
- impact,
- explosion,
- fire,
- rupture, or
- overstress.

You are pushing the glider off the runway and you notice a nut lying on the ground beside the glider. What do you do? To whom do you speak?

***Activate Your Brain #4*:**

What must personnel at all levels report?

_____

_____

_____

SECTION 4
INVESTIGATION PROCEDURES

Did you know?

Air Command FS staff manage the day-to-day FS Programs and DFS is responsible for accident collection and analysis.

If equipment has not been misused or subjected to unusual stress failures, it shall not be classed as damage, but as normal wear resulting from prolonged service use.

Occurrences are investigated quickly with the objective to prevent or reduce the risk of similar occurrences.

FS occurrences can result in or have the potential to cause a loss of resources.

FS Investigation (FSI)

A FSI refers to any investigation conducted under the terms of A-GA-135-001/AA-001, *Flight Safety for the Canadian Forces*.

DFS Investigator-In-Charge (IIC)

The IIC is appointed by the DFS and reports all aspects of the investigation and coordinates all activities of personnel on the team.

FS Investigation Report (FSIR)

The FSIR is produced to support Class I or most Class II FSI.

Did you know?

Class I to IV is based on the following criteria:

a. the occurrence category,

b. the safety of flight compromise level, and

c. other factors which could impact on the reputation of the FS Program, CF and the department.

Initial Report (IR)

An IR describes the immediately available particulars of the occurrence and must be sent within 12 hours of the event.

Supplementary Report (SR)

An SR is the report normally produced by the wing or unit for aircraft incidents of category D and E. It shall be submitted within 30 calendar days of the occurrence.

Occurrence categories are classified as:		
Aircraft Damage Level (ADL)	**Personnel Casualty Level (PCL)**	**Occurrence Category**
Destroyed or missing	Fatal injury or missing	A
Very serious damage	Very serious injury / illness	B
Serious damage	Serious injury / illness	C
Minor damage	Minor injury / illness	D
Nil	Nil	E

Combined Report (CR)

A CR is the combination of the IR and SR in a single report submitted for minor occurrences requiring a limited or a brief investigation and is provided within 48 hours of the occurrence. The report is the same as the SR.

Investigations are conducted by the following:

- DFS conducts Class I and II investigations,
- a specific FSO is tasked by DFS to conduct any Class III Enhanced Supplementary FSIR (ESR), and
- a unit FSO conducts all other FSIs and the report is released to the supporting wing FSO.

The purpose of FSIs is to prevent future accidents. Determining cause factors are a means to identify problems and assists in trend analysis.

Specific cause factors results in a more exhaustive analysis of the occurrence. In turn, measures are formulated that prevents a recurrence of the problem. Cause factors assist in understanding all of the reasons why an accident or incident occurred. Cause factors should lead to PMs.

Standard terminology is used in all reports. Cause factors are any event, condition or circumstance whose presence or absence, within reason, increases the likelihood of a FS occurrence. Cause factors are listed in the following six categories:

- personnel,
- material,
- environment,
- operational,
- unidentified foreign object damage (FOD), and
- undetermined.

Did you know?

On January 1, 2004, the CF adopted the Human Factors Analysis and Classification System (HFACS) to assess and document personnel cause factors (PCF). Active failures and latent conditions need to be identified for all occurrences so that effective PMs can be implemented to reduce future occurrences.

Active failures are either the error(s) or the conscious deviation(s) from an authorized procedure that directly contribute to a FS occurrence.

Latent conditions are situations or circumstances associated with the individual(s) or the system of management (supervision) of the individual(s) involved in the occurrence.

FSIs investigate and classify failures associated with personnel to include:

- unsafe acts or conditions (active failure),
- preconditions for unsafe acts (latent - direct),
- supervision (latent - remote), and
- organizational influences (latent - remote).

Did you know?

Television shows such as The Discovery Channel show "Mayday", are created to show the FS investigation and reporting process.

Read the following FSIR to understand the format of and information within a report.

CANADIAN FORCES
FLIGHT SAFETY INVESTIGATION (FSI) REPORT (FSIR)

SUPPLEMENTAL REPORT (SR)

FILE NUMBER: 1010-CGBZG (DFS 2-4-2)
DATE OF REPORT: 16 FEB 04

AIRCRAFT TYPE: Schweizer 2-33A
DATE/TIME: 27 1807Z/1503 Local Sep 03
LOCATION: Summerside, PEI
CATEGORY: "B" Category Accident

Due to the nature of the accident, the Supplemental Report was chosen as the reporting format. As no clear format for this report is outlined within the A-GA-135-001/AA-001, DFS is in the process of aligning all SR reports to reflect ICAO Annex 12 standardization.

1. DESCRIPTION

The auto tow launch began normally and, after the "all out" signal was given, the glider was observed to accelerate slowly. The visiting cadet assigned to signal the tow driver of the glider's progress noticed that the ground run of the glider was unusually long. Using a signal bat, the signal cadet subsequently gave the "stop, stop, stop" signal to the tow driver. As the stop signal was given, the glider became airborne and climbed to approximately 50 feet AGL. Thinking that the glider could successfully take off, the signal cadet then brought the signal bat down but the tow vehicle had already initiated a launch abort. Seeing this, the signal cadet then raised the signal bat straight up again, re-affirming the take off abort signal.

The glider was observed to descend rapidly and land hard in a level attitude approximately 2000' from the runway threshold. Ground roll was minimal and both the pilot and passenger immediately exited the aircraft unassisted. The glider suffered "C" category damage to the main wheel axle and support tubing.

2. INVESTIGATION NARRATIVE

The glider was being flown in support of the Air Cadet Fall Glider Familiarization Program from runway 24 at Summerside Airport, PEI. The accident flight was the 45th of the day. The Instructor Pilot (IP) was tasked to give a public relations flight to a civilian passenger; the IP was seated in the rear seat with the passenger in the front seat. The weather conditions at the time of accident were VFR with wind 180°/10 kts, visibility 15 SM, temperature 23°C, and sky clear.

The investigation revealed that the auto tow vehicle in use was not fully serviceable. The required rapid acceleration of the tow vehicle at the initial part of the auto tow launch would cause the vehicle to hesitate or sputter. To compensate for this and avoid stalling the vehicle, the auto tow driver would accelerate slowly. The tow driver thought this to be acceptable in the interest of keeping the operation going. The auto launch observer was reported as stating that the "truck was having problems all day." The site supervisor, pilot, and launch personnel were aware of this problem.

After having experienced similar slow accelerations during previous launches, the IP again noted the poor acceleration during the accident takeoff. After lift off, the IP observed the airspeed to be 50 MPH, but it soon decayed to 45 MPH at which point she released the towrope. The minimum allowable airspeed on auto tow is 50 MPH. The IP believed that she was "a little late" in reacting to the decaying airspeed. She attempted to lower the nose in order to regain a positive flying attitude and adequate airspeed for the round out but she was hesitant to use excessive forward stick pressure due to the close proximity to the ground. The glider descended rapidly and rounded out at approximately three to five feet without regaining the minimum approach speed of 50 MPH and with insufficient airspeed to arrest the descent during the flare.

At all Atlantic Region gliding sites, visiting cadets are encouraged to participate in the launching of the glider. They are given basic instruction and are closely monitored by the Air Cadet staff. The visiting cadet assigned to signals had little previous experience in his function. He stated that all of the launches that day were slow initially with long ground runs but that the accident flight ground run was longer by comparison. This caused him to doubt the safety of continuing the launch and, subsequently, he gave the stop signal. Upon seeing the glider go airborne, he doubted his decision and momentarily brought the signal bat down. As the glider then released the towrope and started to descend, the signal cadet then held the signal bat straight up again.

The Site Supervisor stated that operations at the launch site were being carried out as per normal with participating cadets being closely supervised by qualified personnel. The problem with the launch vehicle was brought to his attention early in the day at which point he suspended operations and personally investigated the issue. After finding the vehicle to be satisfactory as long as "full" throttle" was

not used, the Site Supervisor allowed operations to continue. The Site Supervisor said that at no time during the day did he perceive a further problem with the truck until it was again brought to his attention after the accident.

3. CAUSE FACTORS

3.1 Personnel – Pilot – Technique, in that the pilot did not make a timely and correct reaction to the decaying or inadequate airspeed in the initial portion of the launch.

3.2 Personnel – Support Personnel – Training, in that the cadet assigned to provide launch signals did not have the required training and experience to adequately judge whether or not the safety of the launch had been jeopardized.

3.3 Personnel – Management (Regional HQ) – Training, in that the instituted policy of having cadets fill launch positions as part of their familiarization experience does not make provision for adequate training in all cases. While functions such as holding a glider's wing or tail are purely mechanical tasks, launch signalling may require a cadet to make a decision based on knowledge or experience that he or she may not possess.

3.4 Personnel – Supervision (Site Supervisor) – Judgement, in that the Site Supervisor decided to continue operations after a problem with the auto launch vehicle was brought to his attention. Although he judged the vehicle to be safe for towing, its performance reportedly continued to be less than ideal. In fact, whether or not there was a mechanical problem with the vehicle is irrelevant. The problem was at least perceived, and led to unconventional launch technique by both the auto tow driver and the pilot.

4. PREVENTATIVE MEASURES

4.1 Greater emphasis on auto tow launch aborts are to be provided within both the Atlantic Region's auto tow conversion course and Proficiency/Currency program. Completion date TBA.

4.2 A PIF has been issued in Atlantic Region suspending the use of cadets in the position of Auto Launch Signaller. Its permanency is pending a review of our training syllabus. Site Supervisors have been reminded of the importance of close supervision of all inexperienced personnel utilized on-field.

4.3 Results of the launch training syllabus review are to be forwarded to the National Air Ops O for consideration of application to all regions.

4.4 All supervisory staff in Atlantic Region will be briefed on the danger of accepting substandard equipment for use in an operational role, possibly during the Annual Program Training Conference in January 04.

4.5 This accident and the accident involving C-GCLN at Miramichi NB, 1 Sep 02, is to be examined by the upcoming Standards Working Group meeting, at CFS in Dec 03, with the goal of evaluating if sufficient supervisory and decision-making training is provided to the 55 regional gliding site commanders and their staffs. This review should be conducted within the scope of discussions held during the recent Air Cadet Flying Training Conference at 19 Wing Comox, in Oct 03.

Figure A-2 FSIR

Note. From "Flight Comment", 2007, *Canadian Forces Flight Safety Investigation (FSI) Report (FSIR)*. Retrieved November 20, 2009, from http:/ www.airforce.forces.gc.ca/dfs/reports-rapports/l/pdf/fsir/cgbzg.pdf

***Activate Your Brain #5*:**

Analyze the FSIR and comment on the report to include:

- cause factors,
- PMs, and
- who reviews the report?

Notes:

CONCLUSION

Flight safety is the concern for all participants when participating in the Air Cadet Gliding and Power Flight Program. The FSO plays a key role to ensure the safety of all individuals and resources, not only when the flying is being conducted but also by preparing personnel through education and training to recognize dangers. The training and education required by an FSO better prepares these individuals to complete this role.

For you to understand the chain of command of the FS Program, the role and responsibilities of an FSO and the reporting mechanism, you need to understand how the ACFP is an active part of the FS Program.

Did you know?

If you have questions about the FS Program, speak with the FSO at the gliding centre and remember, each region has an FSO.

You can see the complete copy of A-GA-135-001/AA-001, *Flight Safety for the Canadian Forces* online at http://www.airforce.forces.gc.ca/dfs/publications.manual-manuel-eng.asp

Congratulations, you have completed your self-study package on EOC560.01 (Examine Aspects of Flight Safety). Hand the completed package to the Training Officer / Proficiency Level Officer who will record your completion in your Proficiency Level Five Logbook.

Answer Guide

Where have you seen an FSO? gliding centre, CSTC - glider scholarship

How do you identify the FSO? Wears the FS Diamond Badge on their operational clothing.

Activate Your Brain #1 answer:

FS occurrence is defined as an event involving the operation of an aircraft or support of flying that constitutes an accident or incident.

Activate Your Brain #2 answers:

Where have you seen FS informal education / training?

- FS publications
- bulletins
- web-based material
- conferences
- FS reports (Occurrence report / Epilogue [EPI])
- magazines (*Flight Comment*)
- posters
- FS briefings - CSTC
- seminars

Word Search Answer

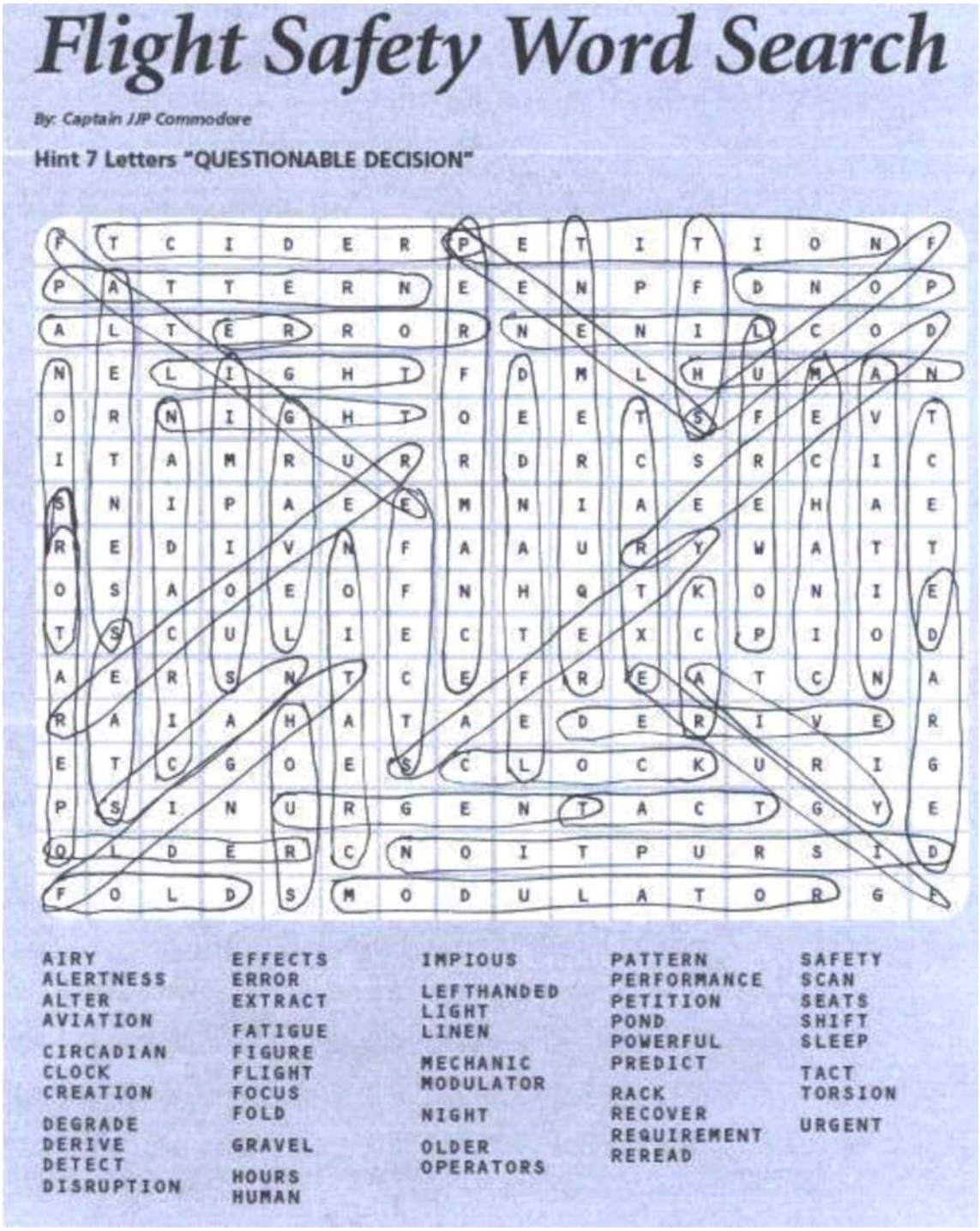


Figure B-1 Flight Safety Word Search Answer

Note. From "Flight Comment", 2003, *Flight Safety Word Search*. Retrieved November 23, 2009, from http:/ www.airforce.forces.gc.ca/dfs/publications/fc/archive/2000-2004/archive-eng.asp

***Activate Your Brain #3 answer*:**

As part of FS informal education / training, list some of the information an FSO should present in a briefing?

Corrective action for pilots.

Where not to walk.

Who to speak to if you find something dangerous on the ground.

Types of occurrences.

Behaviour on the airfield.

Behaviour around the aircraft.

Who to speak to if a problem is noticed.

***Activate Your Brain #4 answer*:**

What must personnel at all levels report?

All FS occurrences

Applicable cause factors

PMs

***Activate Your Brain #5*:**

Analyze the FSIR and comment on the report to include:

- cause factors,
- PMs, and
- who reviews the report?

Notes:

Cause factors	**Personnel** • **Pilot** - technique, in that the pilot did not make a timely and correct reaction to the decaying or inadequate airspeed in the initial portion of the launch. • **Support personnel** - training in that the cadet assigned to provide launch signals did not have the required training and experience to adequately judge whether or not the safety of the launch had been jeopardized. • **Management** (Regional Headquarter) - training in that the instituted policy of having cadets fill launch positions as part of their familiarization experience does not make provision for adequate training in all cases. • **Supervision** (site supervisor) - judgement, in that the site supervisor decided to continue operations after a problem with the auto launch vehicle was brought to his attention.
PMs	• Greater emphasise on auto tow launch aborts are to be provided within both the Atlantic Region's Auto Tow Conversion Course and Proficiency / Currency program. • A proficiency information folder (PIF) has been issued in Atlantic Region suspending the use of cadets in the position of Auto Launch Signaller. • Results of the launch syllabus review are to be forwarded to the National Air Ops O for consideration of application to all regions. • All supervisory staff in Atlantic Region will be briefed on the danger of accepting substandard equipment for use in an operational role.
Who reviews the report?	• Standards Working Group

ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 2

EO C560.02 – EXAMINE THE CANADIAN BUSH PILOT INDUSTRY

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-805/PG-001, *Proficiency Level Five Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the self-study package within the section for which they are required.

Self-study packages are intended to be completed by the cadet independently. More information about self-study packages can be found in the forward and preface.

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

Photocopy the self-study package located at Attachment A for each cadet.

Photocopy the answer key located at Attachment B but **do not** provide it to the cadets.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A self study was chosen for this lesson as it allows the cadet to examine in greater detail the Canadian bush pilot industry at their own learning pace. This encourages the cadet to become more self-reliant and independent by focusing on their own learning instead of learning directed by the instructor.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have examined the Canadian bush pilot industry.

IMPORTANCE

It is important for cadets to examine the Canadian bush pilot industry as bush flying and aircraft development was an important part of our aviation history providing transportation to remote Northern communities.

SELF-STUDY PACKAGE INSTRUCTIONS

OBJECTIVE

The objective of this self-study package is to have the cadet examine the Canadian bush pilot industry.

RESOURCES

- Self-study package, and
- Pen / pencil.

ACTIVITIY LAYOUT

Provide the cadet with a classroom or training area suitable to complete the self-study package.

ACTIVITY INSTRUCTIONS

1. Provide the cadet with a copy of the self-study package located at Attachment A and a pen / pencil.
2. Allow the cadet 90 minutes to complete the self-study package.
3. Provide assistance as required to the cadet.
4. Collect the self-study package once the cadet has finished.
5. Correct the self-study package with the self-study package answer key located at Attachment B.
6. Provide feedback to the cadet and indicate whether or not they have completed the Enabling Objective (EO).
7. Return the completed self-study package to the cadet for their future reference.
8. Record the result in the cadet's logbook and Cadet Training Record.

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadet's participation in examining the Canadian bush pilot industry will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

The evolution of bush flying and aircraft development is an important part of our aviation history. Through the flying skills of pilots and the availability of appropriate aircraft, remote Northern communities receive food, housing supplies, medical requirements and industrial supplies.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

C3-348 Ministry of Natural Resources. (2009). *History of bush flying*. Retrieved September 30, 2009, from http://www.mnr.gov.ca/en/Business/AFFM/2ColumnSubPage/STEL02_165922.html

C3-349 The Stuart Graham Papers–Chronology. (2009). *Summary of the commercial flying activities in Canada, 1919–1930*. Retrieved September 30, 2009, from http://epe.lac.gc.ca/100/200/301.ic.can_digital_collections/sgraham/chron2.htm

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The Canadian Bush Pilot Industry

SECTION 1: THE ORIGIN AND DEVELOPMENT OF BUSH FLYING

SECTION 2: AIRCRAFT FLOWN

SECTION 1
THE ORIGIN AND DEVELOPMENT OF BUSH FLYING

POST WORLD WAR 1 (WWI)

Did you know?

In Canada, the word "bush" has been used since the 19th century to describe the hostile environment beyond the clearings and settlements.

There were few registered pilots in Canada at the beginning of WWI. To avoid the hazards of trench life as a soldier, young men took to the skies as members of the British Air Service. For those men who survived wartime flying, returning to civilian life was not as interesting or exciting. These veterans of aerial combat were to become pioneers as bush pilots.

Did you know?

For pilots returning to a civilian life of flying, the main choices included:

- barnstorming,
- crop-dusting, and
- bush flying.

In the remote Canadian north, lack of roads restricted the transporting of necessities such as food, medicine and building material. With the availability of aircraft and pilots willing to fly into these remote areas, bush flying filled this transportation void.

Between 1917–18, Fairchild Aerial Surveys (of Canada) conducted the first winter bush flying. Fairchild Aerial Surveys (of Canada) flew supplies from Hudson, Ontario to Narrow Lake, Ontario for Bathurst Mines.

In 1919, the first aerial survey was completed in Labrador for the South Labrador Pulp and Paper Company, Limited (Ltd). Over 15 000 aerial photographs were taken of the timberland.

With continued development and demands for service in Northern Ontario, ex-Royal Naval Air Service (RNAS) and Royal Air Force (RAF) pilots were hired to fly war-surplus aircraft. The handful of flyers who could fly and fix their aircraft became the core of the fledgling bush flying industry. To survive in the wilderness regions, aircraft needed maintenance.

The first commercial flying started in 1919 when an organized group lead by the Laurentide Paper Company requested two aircraft from the St. Maurice Forestry Protection Association in Quebec to fly fire patrols. The Curtiss HS-2L "La Vigilane" was the first commercial aircraft to complete this duty.

Did you know?

It took 12 hours and 20 minutes over three days to fly the Curtiss HS-2L "La Vigilane" from Dartmouth, Nova Scotia to Grand-Mère on Lac à La Tortue, Quebec.

You can see the La Vigilane and read its story at the Canada Aviation Museum in Ottawa, Ontario.

During the 1919 season, 80 hours of flying time was accumulated. During the 57 flights, experiments in aerial photography for forestry purposes were completed.

The Forest Protection Association decided to withdraw from the operation. The Laurentide Paper Company entered into agreement with one of the pilots, W.R. Maxwell and together they formed Laurentide Air Service Ltd.

Passenger service and surveying was a major role of this new service. Forest fire patrols over the St. Maurice River valley in Quebec was extended to include from Lake-of-the-Woods to James Bay, both in Ontario. The Ontario Department of Lands and Forest requested a survey of forest resources in Northern Ontario.

Did you know?

The first Canadian private pilot licence, air engineer's certificate and commercial aircraft registered were issued in January 1920.

At the same time, the Canadian government approved the establishment of a Canadian Air Force.

The bush flying role continued to evolve with the development of the aircraft. Transporting personnel, patrolling for forest fires and sketching or taking aerial photograph of timber limits became a common task for the pilots.

In 1920, pilots with engineers would fly to Northern Ontario regions not accessed before. Ray Maxwell with his engineer Geordie Doan made the first flight to James Bay, flying from Remi Lake, Ontario near Kapuskasing to Moose Factory, Ontario in an H-Boat. They flew the first ambulance flight in northern Canada 11 days later. Maxwell continued to fly firsts when he made the first volume carriage of airmail in Canada.

The Ontario government promoted the continued growth of bush flying by contracting services from the few air services. Large government contracts provided flying work for detail mapping, to include:

- showing lakes,
- waterways, and
- forest types.

Other contracts required the transporting of firefighting personnel and to complete fire patrols.

Pilots started flying to the North for the thrill of flying into remote areas, but this soon changed from thrill of flying to flying for profit. The number of licensed pilots, registered aircraft and private flying companies decreased by 1924; flying hours and amount of freight carried increased.

The Canadian Air Force discontinued providing flying services that could be provided by private companies.

***Activate Your Brain #1*:**

W.R. Maxwell played a major role with the development of bush flying. Can you name some of the first accomplishments he made?

_____ _____

_____ _____

_____ _____

Creation of the Ontario Provincial Air Service (OPAS)

The Ontario government had seen the benefits of utilizing aircraft and created the OPAS to own and operate its own fleet of aircraft. Through its development of services and the pilots who flew the aircraft, the OPAS represented the "cradle of bush flying."

Did you know?

The OPAS established its primary base of operation at Sault Ste. Marie, Ontario. Other bases of operation were established across Northern Ontario. The first fleet of aircraft consisted of 13 surplus Curtis HS-2L flying boats.

With OPAS flying, contracts decreased for Laurentide and many of the best pilots and engineers left Laurentide to the new government flying service.

Laurentide tried to counter the loss of contracts by introducing scheduled services, including:

- air service into the Quebec gold field between Angliers, Lake Fortune and Rouyn, and
- mail service to Haileybury, Ontario, Angliers, Quebec and Rouyn, Quebec.

Both services were not well received by the communities and Laurentide Air Service Ltd. terminated operations in 1925.

With the discovery of Ontario gold at Red Lake, OPAS started to fly all the men, supplies and equipment needed, to Red Lake before the winter freeze.

Competition for air services developed with Patricia Airways and Exploration Ltd. providing the first scheduled air service into the gold field at Red Lake, carrying:

- passengers,
- freight, and
- mail.

Did you know?

Patricia Airways and Exploration Ltd. was developed by Roy Maxwell, the first director of OPAS. Many of the OPAS aircrews joined Maxwell.

***Activate Your Brain #2*:**

St. Maurice Forestry Protection Association and OPAS first used what aircraft?

_____

Northern Air Service Ltd.

In northeastern Ontario, Northern Air Service Ltd. was formed to fill the void left by Laurentide. Supplies from the Quebec goldfields were transported by Northern Air Service Ltd.

Bush flying operations continued to rely on the surplus WWI aircraft, including:

- H-boats,
- Canuck trainers,
- Avro 504Ks, and
- other available aircraft.

Did you know?

Bush flying activity was mainly developed in Ontario and Quebec. The companies set the framework for the progression of bush flying into other Canadian provinces and territories.

Western Canada Airways (WCA)

A Winnipeg businessman, James Richardson, saw the merits and potential of aircraft to serve the remote northland of Western Canada. The base of operation was located at Hudson, Ontario. With the new company a new aircraft was introduced, the Fokker Universal with a newly developed radial, air-cooled engines and a high-wing cabin.

Did you know?

Early bush pilots and engineers often sat exposed in open-cockpit aircraft during the winter when the temperature could be 35 below zero.

Bush flying duties mainly operated in the northern Ontario and Quebec goldfields. The first major undertaking of its kind in northern Canada was for WCA to supply men, machinery and materials to the west coast of Hudson Bay at Fort Churchill, Manitoba. The airlift was completed in the winter. The successful airlift was noted in government reports.

Did you know?

In 1927, Fort Churchill, Manitoba was selected as the ocean terminus of the Hudson Bay Railroad because of the successful airlift completed by WCA.

More large contracts were given to WCA, including the transporting of men and equipment to a new mining development north of Senneterre, Quebec. WCA work proved that the north was open for operations, 12 months of the year.

At this time, aircraft development was undertaken by designers, mainly because of the development of the Pratt and Whitney radial, air-cooled engine.

With winter flying, new innovations were made to improve the operation of the Fokker which was not designed for the bush. The Elliott Brothers of Sioux Lookout, Ontario redesigned skis to replace the Fokker designed skis. The new skis improved landing on rough frozen lakes and the design was used on bush planes for many years.

Did you know?

Admiral Byrd used the Elliot Brothers skis on his aircraft for all three expeditions into the Antarctic.

Expanding to the Artic Circle

With flying a common sight in the southern bush, companies looked further north, well into the Artic Circle. Aircraft would build fuel cashes in the summer, landing on the lakes with aircraft equipped with floats. Once the lakes froze, flights continued with aircraft landing using skis.

The cooperation and team work of the pilots and mechanics or air engineers kept the far north open 12 months of the year. Unreliable aircraft would leave the crew stranded on a remote lake miles from anywhere with no communications. The skills of the mechanic would make the aircraft flyable or the crew would have to make the long walk out of the bush.

Figure A-1 Fokker Universal

Note. From "Western Canada Aviation Museum", 2006, *Ghost of Charron Lake-Fokker Universal Standard Aircraft G-CAJD*. Copyright 2006 by fokkeraircraftrecovery.ca. Retrieved December 2, 2009, from http://www.interactivestudio.ca/fokker2/history.htm

New challenges faced the crew, especially in this cold environment. At times, a new engine had to be delivered to the crippled aircraft and changed in the field or repairs to a collapse landing gear made in hot or cold situations. The challenges of working in the sub-zero temperatures lead to innovations. To protect the pilot and engineers, an all-weather canvas nose hanger was designed with a small stove for servicing aircraft engines outdoors.

Did you know?

Starting an engine in the late 1920's was challenging. The oil was drained from the engine at the end of the day and stored in a warm building then returned to the engine in the morning. If the oil was too thick, it had to be warmed over a fire pot while another fire pot was placed under the engine to thaw it. The oil was added and if it did not start, the process was repeated until the engine started.

Flying in the Artic Circle was limited to the daylight hours. Many times the crew would spend the night in the sub-zero temperatures, starting the aircraft in the early morning darkness to maximize the daylight flying time.

Canadian Airways

Canadian Airways was formed in 1930 by uniting WCA and the Aviation Corporation of Canada. The flying interests of the Canadian Pacific Railroad (CPR) and the Canadian National Railroad (CNR) was included. Canadian Airways controlled almost all air business in Canada. With the new company was introduced the Junkers JU52.

Aircraft design continued to grow and more aircraft were developed to serve multiple roles from carrying large freight including:

- bulldozers,
- tractors,
- a complete sawmill,
- cement,
- dynamite,
- fuel oil,
- horses, and
- cows for milk.

Flying locations continued to expand, supplying freight and personnel to communities, mining sites and dam constructions sites.

Austin Air Service

Two Toronto, Ontario brothers, Jack and Chuck Austin created Capreol and Austin Air Service in 1934. The name changed to Austin Airways shortly after the opening. The aircraft were Waco cabin biplanes. The modifications the brothers introduced included a removable panel on the port side behind the cabin. This allowed the loading of a stretcher, creating Canada's first commercial air ambulance.

Mining personnel were the main clients but in 1936, the Department of Lands and Forest used many air services to aid during the large forest fire season.

Did you know?

Pilots were paid a monthly salary and a dollar a flying hour. When the dollar an hour was changed to a dollar a mile, aircraft started moving faster in shorter times.

Austin Airways established numerous Ontario bases from Sudbury, Chapleau, Gogama and Biscotasing. A summer base was established at Temagami, Ontario. Austin aircraft flew over Northern Ontario and beyond, linking remote native communities. Fish hauling was a profitable business with these communities.

By 1941, Austin Airways had expanded in Ontario, to South Porcupine and Nakina with regular flights into James Bay and soon flying on both sides of Hudson Bay.

The creation of northern airlines provided the mainstay of transporting personnel and material between southern communities to northern remote communities. The expansion of roles for these airlines changed with the development of aircraft, better suited for remote flying duties. From the larger cargo aircraft to smaller aircraft better suited to fly into smaller remote lakes, the role of the bush pilot continues to evolve to today's standards.

Did you know?

Television shows such as The Discovery Channel show "Ice Pilots", are created to show the role and hardships of pilots in northern Canada.

The bush aircraft come in various sizes and shapes but are designed to withstand the take-off and landing in short distances.

The skills of men and women include good piloting skills and a need to adapt to precise flight at slow speeds for landings and take-offs on small lakes and landing strips. Bush pilots tend to be self reliant individuals with knowledge of wilderness survival.

Today, bush flying has evolved into a new outlet, supporting new services to remote locations.

Missionaries fly in and out of remote communities to provide religious service to communities.

Bush flying has evolved into a family activity with the availability of rentals and charter tours. Small companies provide bush pilots to fly people into small remote locations to provide recreational support to many people, including:

- hunters,
- fishermen,
- photographers, and
- outdoor enthusiasts (campers and hikers).

Did you know?

Training is available to teach pilots the skills to fly and land float aircraft which has opened new locations for the owners of private aircraft. With more pilots receiving the skills to fly specially equipped aircraft, comes the dangers of inexperienced pilots flying to remote locations.

With the development of helicopters, bush flying has introduced specific helicopters to fly into remote communities not accessible by aircraft. The ability to manoeuvre a helicopter into confined spaces introduced a modern mode of transportation to provide support to more northern communities and outposts. The role of fire detection is better suited for helicopters as they can hover over tight spots, give accurate information, fly loaded detection patrols during high-hazard days or high-risk areas and land crews in specific areas.

***Activate Your Brain #3*:**

Can you name some of the air services?

_____ _____

_____ _____

_____ _____

_____ _____

SECTION 2
AIRCRAFT FLOWN

Many aircraft were used to promote the bush flying role for Canadian air services. Development of bush flying specific aircraft was not a priority as many air services used the aircraft of the day. Many aircraft were float planes as most of the land planes could not land on unprepared fields and the large amount of undeveloped, forested land led to many aircraft having to land on lakes.

PIONEER BUSH FLYING AIRCRAFT

Pilots who trained on different aircraft during WWI returned to Canada and flew the war-surplus aircraft purchased for pioneering services to northern, isolated communities. The aircraft were large flying boats that required specific sized lakes and landing stripes to operate. The main base of operation was a water base suitable for the large lumbering aircraft to land and take-off.

Curtiss HS-2L

The Curtiss HS-2L flying boat was an open cockpit aircraft used for costal patrols during WWI. This aircraft was the pioneer bush flying aircraft. The single Liberty engine aircraft could land and take-off from water but had wheels for manoeuvring on land. The Canadian government first used these aircraft for anti-rum-running, fishery and custom patrols on the east and west coast before two HS-2Ls were sent to fly fire patrols for the St. Maurice Forestry Protection Association of Quebec.

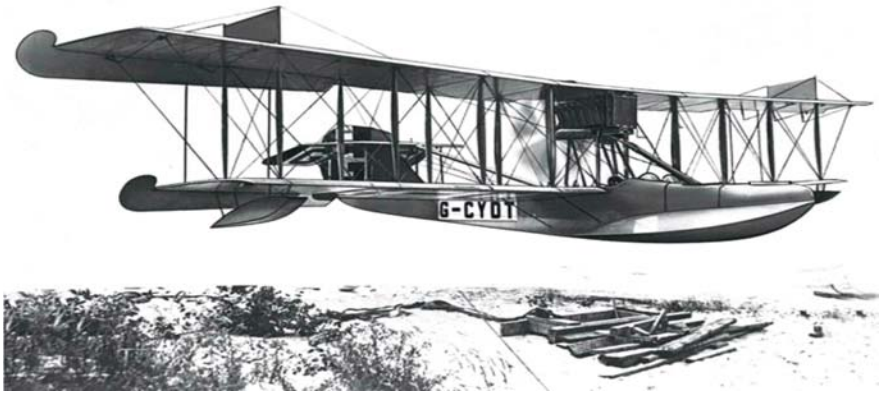

Figure A-2 Curtiss HS-2L

Note. From "Défense nationale", 2004, *Curtiss HS-2L*. Retrieved December 2, 2009, from http://www.airforce.foces.ca/v2/equip/resrc/images/hst/l-g/hs2l.jpg

Vickers Vedette Flying Boat

The Vickers Vedette flying boat was the first aircraft built to a Canadian specification for Canadian conditions. The RCAF flew this aircraft for forestry surveying and fire protection patrols. The aircraft was flown to wilderness areas for communications and photography surveys for the preparation of maps by the Geological Survey of Canada.

Figure A-3 Vickers Vedette Flying Boat

Note. From "Government of Canada", 2004, *Canadian Military Heritage*. Retrieved December 2, 2009, from http://www.cmhg-phmc.gc.ca/cmh/en/image_587.asp

de Havilland Moth

The OPAS used the de Havilland Gypsy Moth but the RCAF used the de Havilland Cirrus Moth.

Figure A-4 de Havilland DH-60 Cirrus Moth

Note. From "National Defence", 2004, *Canada's Air Force, Aircraft, Historical Aircraft, de Havilland DH-60 Cirrus Moth*. Retrieved December 2, 2009, from http://www.airforce.foces.ca/v2/equip/hst/moth-eng.asp

Did you know?

The word Gypsy and Cirrus was the name of the engine design.

Curtiss JN-4 "Canuck"

The Curtiss JN-4 was used by Northern Air Service Ltd. to fly many firsts including:

- first ski flying,
- first airmail,
- first aerial survey, and
- first flight across the Canadian Rockies.

Figure A-5 Curtiss JN-4

Note. From "Canada Aviation Museum", *Curtiss JN-4 "Canuck"–Canada Aviation Museum*. Retrieved December 2, 2009, from http://www.aviation.technomuses.ca/collections/artifacts/aircraft/CurtissJN-4Canuck

Avro 504k

Only two of the Canadian version of the Avro 504 were built and flown by the RCAF. A civil Avro 504k was one of the first commercial passenger flights into the Canadian bush on October 15–17, 1920. Two passengers sat in the front open cockpit seat and were flown from Winnipeg to Le Pas, Manitoba.

An Avro 504k made the first winter flight to James Bay in 1922.

Figure A-6 Avro 504k G-CYFG

Note. From "Canada Aviation Museum", *Avro 504K G-CYFG–Canada Aviation Museum*. Retrieved December 2, 2009, from http://www.aviation.technomuses.ca/collections/artifacts/aircraft/Avro504KG-CYFG

Fokker Standard Universal

The Fokker Standard Universal was built in 1926. The fuselage and tail surfaces were made of welded tubular steel, covered with fabric. The wings were plywood with a Sitka spruce spar and the engine was the Wright J-4B 200 horse power (hp). The pilot sat in an open cockpit while the engineer travelled in the enclosed cargo section.

Figure A-7 Fokker Standard Universal

Note. From "Western Canada Aviation Museum", 2006, *Ghost of Charron Lake-Fokker Universal Standard Aircraft G-CAJD*. Copyright 2006 by fokkeraircraftrecovery.ca. Retrieved December 2, 2009, from http://www.interactivestudio.ca/fokker2/history.htm

Did you know?

A Fokker Stand Universal was used by Admiral Byrd for his 1928–1930 expedition to the Antarctic.

Junkers Ju-52 CF-ARM

Canadian Airways Ltd. flew the Junkers Ju-52 from the Red River. The Junkers Ju-52 was the largest single-engine aircraft operated in Canada and was fondly referred as the "Flying Boxcar". The single engine aircraft was brought to Canada from Germany and outfitted with a 830 hp Roll Royce Buzzard engine.

Figure A-8 Junker Ju 52 CF-ARM

Note. From "Western Canada Aviation Museum", 2009, *Junkers Ju-52*. Copyright 2009 by Western Canada Aviation Museum. Retrieved December 2, 2009, from http://www.wcam.mb/junkers.html

Did you know?

The Junkers Ju-52 lands at 47 miles per hour and appears to float toward the ground like a glider.

Waco

The Waco biplane had a cabin for both the pilot and engineer to fly protected from the environment. Up to three people can travel in this aircraft.

Figure A-9 Waco UIC

Note. From "Alberta Aviation Museum Edmonton", 2009, *Waco UIC (1933)*. Copyright 2009 by Alberta Aviation Museum. Retrieved December 2, 2009, from http://www.albertaaviationmuseum.com/index.php?option=com_content&task=view&id=31&item=41

Noorduyn Norseman

The Noorduyn Norseman is a commercial aircraft designed as a light transport. The Norseman has a Whitney R-1340 radial engine. The design of this large bush plane enabled it to remain in service from 1935–1959 when many were replaced by the de Havilland Otter.

Figure A-10 Noorduyn Norseman

Note. From "U.S. Centennial of Flight Commission", 2009, *General Aviation: Noorduyn Norseman Bush Plane*. Copyright 2009 by John Stephens. Retrieved December 2, 2009, from http://www.centennialofflight.gov/essay/GENERAL_AVIATION/bush_flying/GA18G3.htm

Did you know?

During WWII, famed band leader Glenn Miller disappeared over the English Channel. It was rumoured that he was abducted by space aliens or the Norseman, he was flying, had design flaws. Neither was true.

PRESENT BUSH FLYING AIRCRAFT

With the advancement of engine design, more powerful power plants allowed new designs to be considered for future bush flying aircraft. Large and small aircraft were built for role specific duties. Helicopter development and refinement created numerous multi-role airframes.

Did you know?

Engines were identified with lettering to include:

- opposed (O),
- radial (R),
- fuel injected (I),
- turbocharged (T or TS),
- geared (G), and
- helicopter or vertical installation (H or V).

de Havilland DHC-2 Beaver

The Beaver was designed as a no-nonsense bush plane with a nine cylinder Pratt & Whitney radial engine. The all metal aluminum, semi-monocoque design had tube frame seats and first flew in 1947. The Beaver had short take-off and landing capability (STOL) and could fly with floats or skis. It was known as a "half-ton truck with wings".

Figure A-11 de Havilland Beaver

Note. From "U.S. Centennial of Flight Commission", 2009, *General Aviation: de Havilland Beaver*. Copyright 1996 by Geoff McDonell. Retrieved December 2, 2009, from http://www.centennialofflight.gov/essay/GENERAL_AVIATION/bush_flying/GA18G3.htm

de Havilland DHC-3 Otter

The Otter first flew in 1951 and was the successor of the DHC-2 Beaver. It was initially called the "King Beaver" but was renamed the Otter. It was like the Beaver but many were converted to turbo-prop Pratt & Whitney or Walter engines.

Figure A-12 de Havilland Otter

Note. From "findtarget reference", 2009, *Seaplane Information*. Copyright 1999–2009 by FindTarget.com. Retrieved December 2, 2009, from http://reference.findtarget.com/search/seaplane

Did you know?

The Otter was the basis for de Havilland's successful Twin Otter.

Cessna Floatplanes

Cessna floatplanes were designed in numerous configurations, including:

- single-engine Cessna 182,
- twin-engine Cessna 337 Skymaster, and
- single-engine Cessna Caravan.

The high wing placement allowed the pilot an unobstructed view of the area below. The slow-speed requirement was met by the Cessna, allowing the pilot to observe and report accurately on a fire.

Figure A-13 Cessna 182 Floatplane

Note. From "Creek Side Landing", 2009, *Cessna 182*. Copyright 2009 by Old Planes and Cars for Sale. Retrieved December 2, 2009, from http://www.oldplanesandcars.com/inventory

Figure A-14 Cessna 337 Skymaster

Note. From "Canadian Bushplane Heritage Centre", 2009, *Cessna 337 Skymaster*. Retrieved December 1, 2009, from http://www.bush-planes.com/detection-aircraft-canadian-bushplane-heritage

Helicopters

With the introduction of helicopters to the role of bush flying, more remote areas were accessible and specific tasks were assigned to the helicopter. Helicopters could land and take off from tight spots and hover over a fire for the observer to note and report the details.

Helicopters varied in size and could fulfill various roles, to include:

- fire watch,
- firefighting,
- construction,
- lumber collection, and
- recreational hunting and fishing excursions.

Figure A-15 Helicopter

Note. From "Canadian Bushplane Heritage Centre", 2009, *Helicopter*. Retrieved December 1, 2009, from http://www.bush-planes.com/detection-aircraft-canadian-bushplane-heritage

Figure A-16 Bell 47 Bush Helicopter

Note. From "bush-planes.com", *Bell 47*. Retrieved December 3, 2009, from http://www.bush-planes.com/Bell47Helicopter.htm

Figure A-17 Bell Jet Ranger Bush Helicopter

Note. From "bush-planes.com", *Bell Jet Ranger*. Retrieved December 3, 2009, from http://www.bush-planes.com/BellJetRangerHueyHelicopter.htm

Figure A-18 Sky Crane Helicopter

Note. From "bush-planes.com", *Sky Crane*. Retrieved December 3, 2009, from http://www.bush-planes.com/SkyCraneHelicopter.htm

Figure A-19 C47 Chinook Helicopter

Note. From "bush-planes.com", *C47 Chinook*. Retrieved December 3, 2009, from http://www.bush-planes.com/ChinookandSeaKnightHelicopters.htm

If you visit Sault St. Marie, Ontario, you can see and learn about bush planes at the Canadian Bushplane Heritage Centre, or go to http://bushplane.com

Can you Identify bush aircraft?

Number the name of the aircraft with the picture of the aircraft.

1	Curtis HS-2L
2	Vickers Vedette Flying Boat
3	de Havilland DH-60 Cirrus Moth
4	Curtis JN-4
5	Avro 504k G-CYFG
6	Fokker Standard Universal
7	Junker Ju 52 CF-ARM
8	Waco UIC
9	Noorduyn Norseman
10	de Havilland Beaver
11	De Havilland Otter
12	Cessna 182 float plane
13	Cessna 337 Skymaster
14	Bell 47 bush helicopter
15	Bell Jet Ranger bush helicopter
16	Sky Crane helicopter
17	C47 Chinook helicopter

Bush aircraft	Number of name
	

	
	
 COLUMBIA	

	
	
 G-CYDT	


-ARM

	
 45	
 YF	

CONCLUSION

The historical value of the bush pilot to open Northern Canada can be traced back to the returning pilots from WWI. Although the original reason to become a bush pilot was for the excitement of flying in the wilds of Canada, the development of the air services allowed business to expand during the times of forestry and mining.

Northern communities received the support from the flying services to provide the resources and services that would not be available if the bush aircraft had not been developed to the level of operation today.

Congratulations, you have completed your self-study package on EO C560.02 (Examine the Canadian Bush Pilot Industry). Hand your completed package to the Training Officer / Proficiency Level Officer who will record your completion in your Proficiency Level Five logbook.

ANSWER KEY

***Activate Your Brain #1 answer*:**

W.R. Maxwell played a major role with the development of bush flying. Can you name some of the first accomplishments he made?

Formed Laurentide Air Service Ltd.

First ambulance flight to northern Canada

First flight to James Bay from Remi Lake

First volume mail carriage of air mail in Canada

***Activate Your Brain #2 answer*:**

St. Maurice Forestry Protection Association and OPAS first used what aircraft?

surplus Curtis HS-2L flying boats

***Activate Your Brain #3 answer*:**

Can you name some of the air services?

Laurentide Air Service Ltd

Ontario Provincial Air Service (OPAS)

Northern Air Service Ltd

Canadian Airways

Canadian Air Force

Patricia Airways & Exploration Ltd

Western Canada Airways (WCA)

Austin Air Service

Bush aircraft	Number of name
	5

	14
	15
	17

	12
	13
	1

	4
	10
	3

	11
	6
	7

	9
	16
	2

	8

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 1

EO C570.01 – EXAMINE THE ASPECTS OF AIRCRAFT MANUFACTURING AND MAINTENANCE THROUGH THE DEVELOPMENT OF AEROBATIC AIRCRAFT

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-805/PG-001, *Proficiency Level Five Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the self-study package within the section for which they are required.

Self-study packages are intended to be completed by the cadet independently. More information about self-study packages can be found in the forward and preface.

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

Photocopy the self-study package located at Attachment A for each cadet.

Photocopy the answer key located at Attachment B but **do not** provide it to the cadets.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A self study was chosen for this lesson as it allows the cadet to examine in greater detail the aspects of aircraft manufacturing and maintenance through the development of aerobatic aircraft at their own learning pace. This encourages the cadet to become more self-reliant and independent by focusing on their own learning instead of learning directed by the instructor.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have examined the aspects of aircraft manufacturing and maintenance through the development of aerobatic aircraft.

IMPORTANCE

It is important for cadets to examine the aspects of aircraft manufacturing and maintenance through the development of aerobatic aircraft as through the years flying skills and better aircraft development has created higher performing aircraft.

SELF-STUDY PACKAGE INSTRUCTIONS

OBJECTIVE

The objective of this self-study package is to have the cadet examine aspects of aircraft manufacturing and maintenance through the development of aerobatic aircraft.

RESOURCES

- Self-study package, and
- Pen / pencil.

ACTIVITIY LAYOUT

Provide the cadet with a classroom or training area suitable to complete the self-study package.

ACTIVITY INSTRUCTIONS

1. Provide the cadet with a copy of the self-study package located at Attachment A and a pen / pencil.
2. Allow the cadet 90 minutes to complete the self-study package.
3. Provide assistance as required to the cadet.
4. Collect the self-study package once the cadet has finished.
5. Correct the self-study package with the self-study package answer key located at Attachment B.
6. Provide feedback to the cadet and indicate whether or not they have completed the Enabling Objective (EO).
7. Return the completed self-study package to the cadet for their future reference.
8. Record the result in the cadet's logbook and Cadet Training Record.

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadet's participation in examining the aspects of aircraft manufacturing and maintenance through the development of aerobatic aircraft will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

The development and the performance of aerobatic aircraft have resulted in numerous flying skills and better aircraft over the years. Manufacturing and maintenance from the time of the Wright brothers has created higher performing aircraft.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A3-183 Department of National Defence. (2009). *Full history*. Retrieved October 1, 2009, from http://www.snowbirds.dnd.ca/v2/hist/hist2-eng/asp

C3-348 Sport Pilot. (2009). *Aerobatics*. Retrieved October 1, 2009, from http://www.esparacing.com/sport_pilot.htm

C3-349 Jet Fighter School II. (2009). *Introduction to aerobatics*. Retrieved October 1, 2009, from http://www.flightsimbooks.com/jfs2/chapter1.php

C3-350 Model Aviation. (1999). *A short history of aerobatics*. Retrieved October 1, 2009, from http://jmrc.tripod.com/fa/aero.aero1.htm

C3-351 Hickok Sports.com. (2003). *Aerobatics*. Retrieved October 1, 2009, from http://www.hickoksports.com/history.shtml

Aspects of Aircraft Manufacturing and Maintenance Through the Development of Aerobatic Aircraft

SECTION 1: THE ORIGIN OF AEROBATIC FLIGHT

SECTION 2: AIRCRAFT DEVELOPMENT

SECTION 3: MODERN AEROBATIC DISPLAYS

SECTION 4: CANADIAN AEROBATIC TEAMS

SECTION 1
THE ORIGIN OF AEROBATIC FLIGHT

ORIGIN

Pre-World War I (WWI)

Did you know?

The first time the Wright brothers made a 360-degree banked turn, the idea of aircraft development for more thrilling control of an aircraft started.

With the development of the aircraft in 1904, each new aircraft manoeuvre was more thrilling to the public. Large paying audiences soon tired of watching pilots perform simple flying exhibits and demanded more thrills and danger. Pilots competed to develop flying tricks and stunts leading to aerobatic manoeuvres.

Did you know?

Flying clubs were created soon after the development of the aircraft. To teach new pilots how to fly and handle the numerous new aircraft being developed, clubs were created by individuals and builders such as Curtis.

In 1905, Count Henri de la Vauix, vice-president of the Aero Club of France gave a presentation to the Olympic Congress of Brussels for the formation of a universal aeronautical federation to regulate the various aviation meetings and advance the science and sport of aeronautics. The Fédération Aéronautique Internationale (FAI) was formed by countries including:

- Belgium,
- France,
- Germany,
- Great Britain,
- Italy,
- Spain,
- Switzerland, and
- The US.

Daredevils

Did you know?

A daredevil is defined as a reckless, impulsive, and irresponsible person.

In 1910, the American, Walter Brookins was performing spiral dives and 90-degree banked turns, thrilling audiences who thought such moves were wild and dangerous. Another American, Lincoln Beachey created his "Death Dip" to counter Walter Brookins flying displays and became known as "the father of aerobatic flying". He would fly to 5 000 feet and dive straight at the ground with the engine turned off, recovering at the last second, scaring the audience.

Did you know?

Walter Brookins was the first pilot trained by the Wright brothers to fly their aircraft.

Pilots like Lincoln Beachey and Walter Brookins would barnstorm the country, appearing at county fairs as stunt fliers, thrilling audiences.

Did you know?

On arrival to a town, the pilot would perform a series of loops, rolls and spins to draw a crowd to a grass field where the pilot would land. To cover a pilot's expenses, rides were offered for a fee.

The aircraft used evolved from the military aircraft but the increased stress on the control surfaces and systems caused system and structural damage. Airframes would collapse while pulling out of diving manoeuvres.

Control surfaces include:

- ailerons,
- elevators and stabilizers, and
- the rudder.

Control systems used can be:

- cables and pulleys,
- push and pull rods, or
- torque tubes.

The aircraft used were oversized and underpowered. These factors produced an uninteresting aerobatic performance, by today's standard. Aircraft maneuverability was sluggish and the ability to climb vertically was limited. Flying at slow speeds could result in the aircraft stalling and spinning. Stalls and spins were manoeuvres not understood by the early pilots until Wilfred Parke, a test pilot for the Roe Avro Company, experienced this while test piloting for the military.

Did you know?

Wilfred Parke fell into a left-hand spin after stalling and pulled hard on the stick and pushed the rudder to the left with no correction. He then eased off the rudder and pushed the rudder to the right into the spin which caused the aircraft to right.

With the spin correction mastered, pilots included this new manoeuvre in their routine.

Upside Down and Backwards Flying

Did you know?

Aerobatic flight is defined as precise manoeuvring in three dimensional space. Manoeuvring is divided into three components including:

- position,
- velocity, and
- attitude.

With the development of the monoplane and rotary engines, pilots found this design gave them better control and they started experimenting with unusual flight manoeuvres.

An Englishman, William Moorhouse, was the first pilot to fly an aircraft backward. During a steep climb with the nose up as far as it would go, he turned the engine off. The aircraft stopped momentarily then slipped backward for a short distance before yawing to the side and diving straight toward the ground. This became another thrilling manoeuvre for pilots to practice then perform.

Did you know?

Many pilots found themselves flying inverted as a result of wind gusts. No one had flown into an inverted position intentionally.

In 1913, Adolphe Pegoud was a test pilot with the Bleriot aircraft development team. He decided to create a new manoeuvre and in September 1913, he performed the first half roll to an inverted position. He first practiced in an aircraft suspended in a hanger, hanging upside down. He realized the controls would have to be operated in a reverse manner and from the upside-down position practised the feel of flying in this manner. During the first demonstration, the aircraft proved that inverted flight could not be accomplished for a long time as Pegoud was drenched in fuel.

Did you know?

Adolphe Pegoud was the first flyer to jump from an aircraft on August 13, 1913 at Chateaufort, France to test a parachute.

At the same time in 1913, Petr Nikolaevich Nesterov, a Russian air force officer, performed the first complete loop creating another aerobatic manoeuvre. Everyone started doing loops. In 1914, Beachey performed the outside (inverted) loop.

Did you know?

Petr Nikolaevich Nesterov was immediately arrested for taking undue risk with military equipment but his superiors recognized the advantage of this manoeuvre and he was released and promoted.

WWI

Did you know?

Aerobatic flying was the forerunner to air combat.

Air shows and flying exhibitions were heavily attended by the public until the start of WWI. Aerobatic tricks and stunts were skills many pilots learned to survive in battle. Superior tactics gave a pilot an edge over others even when flying an inferior aircraft.

Oswald Boelcke, a German air force pilot, was a master tactician and leader and created many tactics used successfully by German aviators. He is known as the "father of air combat".

Did you know?

The first German air ace, Max Immelmann, was a master of the surprise attack. He used aerobatic manoeuvres to attack or get away from his adversaries. The Immelmann Turn is a modern aerobatics manoeuvre where the pilot combines an ascending half loop with a half roll.

With continued development of aircraft such as the German Fokker Albatross and the English Sopwith, many pilots created new tricks for the aerobatic inventory, to include:

- half loops,
- barrel rolls, and
- the split-S.

Those pilots who could master these skills over the battlefield lived the longest and were the most successful.

Did you know?

Formal training courses for the military were not set up until 1917, three years after the start of WWI.

Pre-World War II (WWII)

Rivalry between pilots returning from the WWI battlefields of Europe continued to create new manoeuvres, including:

- vertical rolls,
- flat spins,
- vertical figure eights, and
- the avalanche (roll on the top of a loop).

Manoeuvres were created, at times when a pilot was attempting a specific manoeuvre, got into difficulty and to prevent from crashing, recovered anyway possible; creating something new for others to attempt to recreate.

Did you know?

Len Povey, a famous American barnstormer, was hired to train the new Cuban Air Force, in the early 1930s. He was persuaded to compete in Miami, Florida in a new Curtis Hawk biplane. As he was attempting to complete a triple Avalanche, three snaps at the top of a loop, he found he had too much speed for the snap. He rode over the top, coming down the back side completing a half-roll into another loop, again half rolling on the back side before pulling out.

He had created what became known as the "Cuban eight".

Air shows soon returned featuring famous barnstormer acts. Individual teams joined together to create multiple displays with ticket sellers, ground controllers and display pilots.

In 1927, the first large scale aerobatics competition was held in Zurich, Switzerland. At this time, the first aircraft fuel system capable of inverted flight appeared. Gerhard Fieseler, a German air force pilot, had an interest in inverted flight and provided the development of the new fuel system which brought inverted flight back into aerobatics.

Competitive aerobatic competition became a mature sport complete with rules and regulations.

Did you know?

With the development of motion pictures, movies were created showing the development of aviation and aerobatics. Some examples of movies you can watch, include:

- *The Lost Squadron* (1932),
- *Devil Dogs of the Air* (1935),
- *Dawn Patrol* (1938),
- *The Blue Max* (1966), and
- *The Great Waldo Pepper* (1975).

WWII and Beyond

Many of the tactics and manoeuvres effective in WWI proved obsolete and dangerous with the aircraft advancements being created during WWII. Few aerobatic manoeuvres were created during this period of global conflict but aircraft modifications made advancements for the safety of the pilots.

Did you know?

The more powerful engines created higher gravity (G) forces; positive and negative. Flight manoeuvres which impose high G factors on a pilot include:

- steep turns,
- pull-outs,
- rolls,
- tail slides, and
- inverted loops.

The physical demands on pilots in higher performing aircraft required modifications, some including:

- adding foot straps to keep the pilot's feet from slipping off the rudder peddles during manoeuvres; and
- placing a window in the floor of the cockpit to identify the plane's dive angle.

In the mid-1950s, Czechoslovakian pilots introduced the most thrilling manoeuvre of the times, a "Lomcevak".

Did you know?

A Lomcevak is the first gyroscopic manoeuvre using the gyroscopic precession generated by the propeller. Depending on the aircraft, the result is a graceful end-for-end tumble on all three control axes.

SECTION 2
AIRCRAFT DEVELOPMENT

Aerobatic aircraft designs can be ordered as a home-builder's kit. The aircraft is built by an individual and certified before being flown.

Through the years of aircraft development from the first flight by the Wright brothers to present high performance aerobatic aircraft, aircraft were adapted from conventional military trainers and sport aircraft using biplane or monoplane wing designs.

Can you picture this antique aircraft looping in the air?

Figure A-1 Little Looper

Note. From "Aerofile", 2009, *Beachey, Beachey-Curtiss*. Retrieved November 23, 2009, from http://www.aerofiles.com/_ba.html

Figure A-2 Tiger Moth

Note. From "Virtualtourist", 2009, *More Aircraft, Rare, Old or Precious*. Copyright by Virualtourist.com, Inc, 1994–2004. Retrieved November 26, 2009, from http://members.virtualtourist.com/m/tt/6fa74/

Early aircraft were constructed of wood, fabric and wire; very fragile and not suited for the increased stress from the demands of the pilots with limited experience.

Early aircraft were oversized and underpowered having limited ability to climb vertically so pilots would climb to higher altitudes between manoeuvres. Many times, the contemporary aerobatic aircraft was more similar to conventional light aircraft of the day.

In the 1930s–40s, Grumman built an aircraft which could bear the high structural stresses of aerobatic flying and modified the engine to endure inverted flying for up to 30 minutes. The Grumman Gulfhawk II thrilled air show audiences from 1936–1948.

Figure A-3 Grumman Gulfhawk II

Note. From "Aerobatic Flight", 2009, *U.S. Centennial of Flight Commission*. Retrieved November 25, 2009, from http://www.centennialofflight.gov/essay/GENERAL_AVIATION/aerobatic/GA19.htm

In the mid 1930s, the German-built biplane, the Bücker Bü-133 Jungmeister became the dominant force in aerobatic competitions from the mid 1930s until the outbreak of WWII. Ailerons were added to both the upper and lower wings and the agility and responsiveness to the controls made this aircraft ideal for aerobatic flying.

Figure A-4 Bücker Bü-133 Jungmeister

Note. From "Virtualtourist", 2009, *More Aircraft, Rare, Old or Precious*. Copyright 1994–2004 by Virualtourist.com, Inc. Retrieved November 26, 2009, from http://members.virtualtourist.com/m/tt/6fa74/

Did you know?

A civilian German flying club known as the "Luftsportverband" flew the Jungmeister as a training aircraft. Some of these pilots created a secret German Air Force that evolved into the Nazi Luftwaffe.

In 1945, Curtis Pitts built the first aircraft specifically designed for aerobatics: the Pitts Special S-1. The design was a smaller aircraft than the war-era biplanes and could climb, roll and manoeuvre swiftly. The swept-wing aircraft was powered by a smaller, lighter, horizontally-opposed engine. With the improved centre of gravity, tighter snap rolls could be executed.

Figure A-5 Pitts Special S-1

Note. From "Steen Aero Lab", *Pitts Special S1 Historical Info*. Retrieved November 27, 2009, from http://www.steenaero.com/PittsS1/history.cfm

Did you know?

The continued development of the Pitts line created small, lightweight and extremely agile aerobatic aircraft with a high power-to-weight ratio.

Did you know?

Betty Skelton flew a Pitts Special S-1. She was the first woman to fly inverted only a few feet off the ground and slice a 0.6 m (2 feet) wide ribbon strung between two poles. During her first attempt at the ribbon-cutting manoeuvre, her engine stalled but she recovered close to the ground, righted the aircraft and landed safely.

The Stephens Akro competed against the Pitts Special. It was able to overcome the inability of the Pitts to climb vertically. The Stephens Akro used a single wing configuration which reduced drag, therefore allowing higher airspeed which enabled the pilot to achieve higher altitude.

Figure A-6 Stephens Akro

Note. From "The Museum of Flight", 2009, *Stephens Akro*. Copyright 2009 by The Museum of Flight. Retrieved November 26, 2009, from http://www.museumofflight.org/aircraft/stephens-akro

The Stephens Akro monoplane design was soon overshadowed by the German Extra design.

Figure A-7 Extra 300L

Note. From "Xtra aircraft", 2009, *Extra Aircraft*. Copyright 2002–2009 by Extra Aircraft. Retrieved November 27, 2009, from http://www.extraaircraft.com/gallery.asp

During the 1950s and 60s, the aerobatic category of aircraft design continued to evolve, reaching significant breakthroughs with the first purpose-built aerobatic machines. Use of composites, more powerful engines, larger propellers and improved aerodynamic surfaces and controls created aircraft better suited for the demands of aerobatic flight.

Did you know?

Today's best aerobatic aircraft design differs from the earlier design. Present designs includes:

- structural strength,
- power-to-weight ratio,
- inverted capability (airfoils, fuel and oil systems),
- control authority, and
- stall / snap / spin behaviour.

Today's line of aerobatic aircraft includes designs from numerous countries, including:

- Czech Republic,
- Germany,
- Russia,
- China,
- Britain, and
- the US.

Figure A-8 Zlin

Note. From "Takács Miklós", 2008, *Zlin 526F*. Copyright 2008 by Zlintrener.com. Retrieved November 26, 2009, from http://www.zlintrener.com/tipus.php?nyelv=angol

Figure A-9 YAK 52

Note. From "Wikimedia", 2009, *Yak 52 Wairarapa*. Retrieved November 27, 2009, from http://en.wikipedia.org/wiki/File:Yak_52_Wairarapa.jpg

Figure A-11 Sukhoi SU-26

Note. From "EAA Young Eagles", 2006, *1 001 Aviation Photos*. Copyright 2009 by Experimental Aircraft Association, Inc. Retrieved November 27, 2009, from http://www.youngeagles.org/photos/gallery.asp

Figure A-11 CAP 232

Note. From "Air Races", 2009, *Mudry CAP 232*. Copyright by Zijde Aviation Photo Publishing. Retrieved November 27, 2009, from http://www.air-races.com/aircraft/CAP%20232.htm

Figure A-12 Cessna 152 Aerobat

Note. From ”Sport Pilot", *aerobatic aircraft*. Copyright by www.esparacing.com. Retrieved November 1, 2009, from http://www.esparacing.com/sport_pilot/aero_aricraft.htm

Did you know?

Aerobatic displays are not limited to powered aircraft. Today's competitions include aerobatic glider displays.

SECTION 3
MODERN AEROBATIC DISPLAYS

Did you know?

A textbook aerobatic aircraft's position would be precisely controlled and quickly reorient to any other position along all three axes being:

- pitch,
- role, and
- yaw.

The closest flying machine that can reorient to these positions is the space shuttle.

Aerobatic displays and air racing grew in Europe after WWI. European and American styles of air shows differed. By the mid-1920s, the 'can you top this?" attitude led to the development of aerobatic competitions for private cups and trophies.

Did you know?

The first competition was held in Rheims, France in August 1909. It was in the form of air racing to see which pilot could win in categories, including:

- the highest altitude achieved,
- the longest flight,
- the most passengers in the aircraft, and
- the fastest one-, two- and three-lap flights over a 10 km (6.2 mile) course.

Air racing developed into organized competitions with aircraft racing within a closed-circuit course. The average speed at the first international air race in 1920 on Long Island, New York was 251.8 km/h (156.5 miles per hour). This race led to the establishment of a national air meet which became know as the National Air Races in 1924.

Aircraft had been racing against the clock but at the 1924 competition, aircrafts started racing head-to-head with all aircraft flying a closed-circuit course around pylons.

The air racing competitions soon included air show displays with aerobatic displays. Now meets that were originally just for aerobatic and air racing, combined. Specialized competitions were still held just for one purpose; air racing or aerobatic.

In 1961, Jose Luis de Aresti published his dictionary of all possible aerobatic manoeuvres for the Bücker Bü-133 Jungmeister. This dictionary has grown from around 3 000 to over 15 000 manoeuvres for all models and evolved into the FAI Aerobatic Catalogue.

The Aresti aerobatic shorthand (Sistema Aresti) and scoring system was developed in 1964. Count Jose Aresti scribed line diagrams of his sequence and taped them to his instrument panel. The Sistema Aresti evolved and was added to the FAI Aerobatic Catalogue. The FAI Aerobatic Catalogue is the undisputed last word on aerobatic figures.

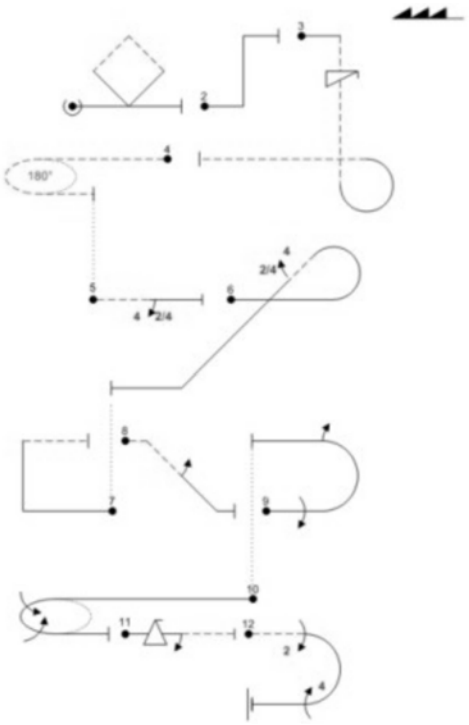

Figure A-13 Sistema Aresti

Note. From ”Sport Pilot", *aerobatic competition*. Copyright by www.esparacing.com. Retrieved November 1, 2009, from http://www.esparacing.com/sport_pilot/aero_aricraft.htm

The FAI Aerobatic Catalogue and the Sistema Aresti were the final steps to the standardization and evaluation of formal aerobatic flight.

The progression of aerobatics developed along a dual track with some pilots continuing to display informal aerobatic air show manoeuvres while others followed the rigorous standardized competition approach.

Aerobatic Clubs have grown around the world. Many chapters of these clubs promote international competitions based on FAI and the International Aerobatic Club (IAC) rules and regulations.

Aerobatics Canada promotes aerobatic displays and competitions through its chapters, including:

- Alberta,
- British Columbia,
- Gatineau, Quebec,
- Manitoba, and
- Southwestern Ontario.

The standardization of modern aerobatic displays has evolved into a set of required manoeuvres in normal and inverted flight. The sequences must be flown with split-second timing, precise speed and altitude control, constant calculation for variables such as wind and temperature, and precise planning on the pilot's part.

Did you know?

The Red Bull races that started in 2001 was a combination of air racing competitions in that the aircraft is racing against the clock using specialized aerobatic turns to manoeuvre through a closed-circuit course of pylons (air gates).

In 2005, the individual Red Bull Air Race World Series was inaugurated with seven races in various countries (2009 had 12 races).

At air competitions, there are five FAI levels in aerobatics, including:

- basic,
- sportsman,
- intermediate,
- advanced, and
- unlimited.

Each competition has five to nine judges with assistants, positioned about 150–250 m from the edge of the box. Corner judges monitor the pilot's position at the edge and give penalties for aircraft leaving the box.

Each judge grades each individual figure as well as how well the sequence is positioned within the box. Each judge has a copy of the performing pilot's routine and scores for the level of difficulty of each manoeuvre.

Imagine flying within a space 3 000 feet by 3 000 feet box with an upper limit of 1 000 feet, at high speed. You must complete specific manoeuvres and you are penalized for leaving the box.

Sounds like similar rules for a drill competition.

Anyone with a computer can perform aerobatic displays using early aircraft to modern high performance aircraft. New simulator designs can assist you in finding the aerobatic sensation.

Did you know?

Programmes are classed as:

- known:
  - determined each year by the FAI and all competitors fly at all contests;
- free:
  - each pilot demonstrates their personal flying skills, creative talent and aircraft performance by designing own sequence;
- unknown:
  - the chief judge chooses and announces the figures to the pilots 24 hours before the competition; and
  - no prior practice is permitted; and
- 4-minute free:
  - top unlimited pilots are invited to fly this final program; and
  - new figures are allowed to be flown at this time to increase the pilot's score.

For more information and descriptions of aerobatic figures or how to get started in aerobatics, you can look online at http://www.esparacing.com/sport_pilot/aerobatic%20figures.htm

SECTION 4
CANADIAN AEROBATIC TEAMS

Many countries have both civilian and military demonstration teams to amaze and thrill the public at air shows. US Army Air Corps Red Knights was formed in the 1930s, the same time period the Canadian "Siskins" started flying. The pilots and ground crews demonstrated the skill and proficiency common to the level of other teams flying.

Siskins

The "Siskins" was a demonstration team consisting of a team of three Siskins from the Royal Canadian Air Force (RCAF) from 1926–1932. They were formed at Camp Borden, Ont. and toured Canada demonstrating formation and individual displays.

Figure A-14 Siskin

Note. From "Airforce", 2004, *Armstrong Whitworth Siskin*. Retrieved November 30, 2009, from http://www.airforce.forces.gc.ca/v2/equip/siskin-eng.asp

RCAF Golden Hawks

In 1959, the RCAF Golden Hawks demonstration team was formed. The team flew until 1963. The team consisted of nine F-86 Sabres and represented Canada's first jet-powered aerobatic team. The team perfected many of the aerobatic stunts adopted by other flying teams. The team introduced the two-solo-pilot routine and were the only team to loop and roll the five-card formation. The team flew low and fast over the heads of the air show crowds.

Figure A-15 Golden Hawk

Note. From "The Torch", 2009, *RCAF Golden Hawks Reunion/F-86 Sabre Flying with Snowbirds/RCN Grey Ghosts*. Retrieved November 30, 2009, from http://www.toyoufromfailinghands.blogspot.com/2009/04/rcaf-hawks-reunion-86-sabre.htm

RCN Grey Ghosts

The Royal Canadian Navy (RCN) was flying the Banshee from the deck of the Canadian aircraft carrier, Her Majesty's Canadian Ship (HMCS) Bonaventure. The four plane aerial display team called the "Grey Ghosts" flew during the 1960's. The Banshee was Canada's only operational naval jet fighter.

Figure A-16 Grey Ghosts

Note. From "The Torch", 2009, *RCAF Golden Hawks Reunion/F-86 Sabre Flying with Snowbirds/RCN Grey Ghosts*. Retrieved November 30, 2009, from http://www.toyoufromfailinghands.blogspot.com/2009/04/rcaf-hawks-reunion-86-sabre.htm

The Golden Centennaires

The Golden Centennaires were formed for Canada's centennial year (1967). The demonstration team flew the CT-114 Tutor but also had a CF-101 Voodoo and CF-104 Starfighter as part of the air demonstration team. They flew a hundred shows across Canada and performed eight shows in the United States.

The team was disbanded at the end of the centennial year but was the forerunner for the Snowbirds.

Figure A-17 CT-114 Tutor

Note. From "Cold Lake Airshow", 2009, *Golden Centennaires*. Retrieved November 30, 2009, from http://www.coldlakeairshow.com/main/index.php?option=com_contnent&view-article&id=123&Item=133

The Snowbirds

In 1971, the Snowbirds first performed and on April 1, 1978, the squadron was established as the Canadian Forces Air Demonstration Team (CFADT); 431 (Air Demonstration) Squadron. For seven years, the team from CFB Moose Jaw, Sask., operated on a year-to-year basis, performing aerobatic formation manoeuvres. Performances increased yearly to include:

Abbotsford, B.C.,

Canadian National Exhibition (CNE), Toronto, Ont, and

Arctic Circle.

Figure A-18 Snowbirds

Note. From "National Defence", 2009, *Snowbirds, Multimedia, Photo Gallery*. Retrieved November 30, 2009, from http://www.snowbirds.dnd.ca/v2/multimedia/photo-eng.asp

Since the formation of the Snowbirds as an official unit within the CF, the demonstration team has performed above millions of spectators across North America.

Did you know?

During the 100th anniversary of flight in 2009, various aircraft demonstration shows included an F-86 and CF-18 painted in anniversary colours and other demonstrations by the Snowbirds.

Non-military

With affordability of aircraft, individuals can purchase and train on aerobatic category aircraft. With research, individuals can find flight centres that have aerobatic training aircraft and skill instructors.

Non-military solo pilots and teams come and go but these individuals provide exciting aerial demonstrations at their local airport or scheduled air shows across the country.

Aviation enthusiasts perform yearly as solo pilots and formation civilian teams. Have you seen non-military aerobatic demonstrations at any air show you have attended?

CONCLUSION

The history of aerobatic aircraft and the creation of all manoeuvres included in the FAI Aerobatic Catalogue progressed over the years mainly for the premise "can you do this?". The use of aerobatics over the years provided military pilots with new skills to support the combat role during WWI and WWII.

The manufacturing of aircraft provided better control by the pilot to invent new ways to manoeuvre the aircraft in flight. Designers learned and produced better aircraft frames, control surfaces and systems leading to higher performing aircraft. Pilots then produced new manoeuvres.

With the continued aeronautical development of aircraft, pilots will push the envelope further for their personal accomplishments and for the thrill of showmanship for the air show public.

Congratulations, you have completed your self-study package on EO C570.01 (Examine The Aspects of Aircraft Manufacturing and Maintenance Through the Development of Aerobatic Aircraft). Complete the following exercise and hand your completed package to the Training Officer / Proficiency Level Officer who will record your completion in your Proficiency Level Five logbook.

SELF-STUDY REVIEW

Place an X in the column which relates to the information about the era of aerobatic development.

Information	Pre-WWI	WWI	Pre-WWII	WWII and on
Adolphe Pegoud was drenched in fuel				
Airframes collapsed when pulling out of dive				
FAI Aerobatic Catalogue				
First air race on Long Island, New York				
G forces				
Immelmann Turn				
Individual teams joined together to barnstorm				
Len Povey - Cuban Eight				
Lincoln Beachey - father of aerobatic flying				
Lomcevak				
Oswald Boelcke - father of air combat				
Wilfred Parke recovered from stall and spin				
Zurich, Switzerland's large scale aerobatic competition				

Place an X in the column to identify the era when the aircraft was first flown.

Aircraft	Pre-WWI	WWI	Pre-WWII	WWII and on
				
				

Aircraft	Pre-WWI	WWI	Pre-WWII	WWII and on
				
				
				
				

Mark the Canadian Demonstration teams in sequence of Operation (1-5).

Canadian Demonstration Teams	Operational sequence
RCN Grey Ghosts	
RCAF Golden Hawks	
The Golden Centennaires	
Siskins	
The Snowbirds	

SELF-STUDY REVIEW ANSWER GUIDE

Place an X in the column which relates to the information about the era of aerobatic development.

	Pre-WWI	WWI	Pre-WWII	WWII and on
Adolphe Pegoud was drenched in fuel	X			
Airframes collapsed when pulling out of dive	X			
FAI Aerobatic Catalogue				X
First air race on Long Island, New York	X			
G forces				X
Immelmann Turn		X		
Individual teams joined together to barnstorm			X	
Len Povey - Cuban Eight			X	
Lincoln Beachey - father of aerobatic flying	X			
Lomcevak				X
Oswald Boelcke - father of air combat		X		
Wilfred Parke recovered from stall and spin	X			
Zurich, Switzerland's large scale aerobatic competition			X	

Place and X in the column to identify the era when the aircraft was first flown.

	Pre-WWI	WWI	Pre-WWII	WWII and on
				X
	X			

	Pre-WWI	WWI	Pre-WWII	WWII and on
			X	
				X
			X	
		X		

Mark the Canadian Demonstration teams in sequence of Operation (1-5).

Canadian Demonstration Teams	Operational sequence
RCN Grey Ghosts	3
RCAF Golden Hawks	2
The Golden Centennaires	4
Siskins	1
The Snowbirds	5

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ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 1

EO C590.01 – ANALYZE AN AIRCREW SURVIVAL CASE STUDY

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-805/PG-001, *Proficiency Level Five Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the self-study package within the section for which they are required.

Self-study packages are intended to be completed by the cadet independently. More information about self-study packages can be found in the foreword and preface.

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

Photocopy the self-study package located at Attachment A for the cadet.

Photocopy the answer key located at Attachment B but **do not** provide it to the cadet.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A self study was chosen for this lesson as it allows the cadet to analyze an aircrew survival case study at their own learning pace. This encourages the cadet to become more self-reliant and independent by focusing on their own learning instead of learning directed by the instructor.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have analyzed an aircrew survival case study.

IMPORTANCE

It is important for cadets to analyze a case study as it allows the cadet to learn from the actions of others.

SELF-STUDY PACKAGE INSTRUCTIONS

OBJECTIVE

The objective of this self-study package is to have the cadet examine a case study of an actual aircrew survival incident.

RESOURCES

- Self-study package, and
- Pen / pencil.

ACTIVITY LAYOUT

Provide the cadet with a classroom or training area suitable to complete the self-study package.

ACTIVITY INSTRUCTIONS

1. Provide the cadet with a copy of the self-study package located at Attachment A and a pen / pencil.
2. Allow the cadet 90 minutes to complete the self-study package.
3. Provide assistance as required to the cadet.
4. Collect the self-study package once the cadet has finished.
5. Correct the self-study package with the self-study package answer key located at Attachment B.
6. Provide feedback to the cadet and indicate whether or not they have completed the Enabling Objective (EO).
7. Return the completed self-study package to the cadet for their future reference.
8. Record the result in the cadet's logbook and Cadet Training Record.

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadet's participation in completing the case study will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

A case study helps you to understand the principles involved in reaching a solution or analyzing an issue. This case study allows you to gain experience through the actions of others without experiencing the hardships / dangers yourself.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A3-016 B-GG-302-022/PT-001 Director Air Operations and Training. (1978). *Down but not out*. Ottawa, ON: Department of National Defence.

C3-002 ISBN 0-00-653140-7 Wiseman, P. (1999). *The SAS survival handbook*. Hammersmith, London: HarperCollins Publishers.

C3-003 ISBN 1-8967-00-9 Tawrell, P. (1996). *Camping and wilderness survival: The ultimate outdoors book*. Green Valley, ON: Author.

C3-352 1932nd Communication Squadron. (2009). *Crash in the wilderness circa 1942*. Retrieved October 9, 2009, from http://www.lswilson.ca/page8.htm

C3-353 British Columbia Outdoor Wilderness Guide. (2009). *Wilderness survival guide: Basic wilderness survival skills*. Retrieved October 9, 2009, from http://www.bdadventure.com/adventure/wilderness/survival/basic.htm

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Analyze an Aircrew Survival Case Study

CLOCKWISE FROM TOP LEFT
1ST LT GC HODGE, PILOT
2ND LT FW JANSSEN CO-PILOT
CPL FJ GALM, RADIO OPERATOR
BAILEY, ENGINEER

TAKING DELIVERY OF A
BRAND NEW B-26B AT
BAER FIELD, INDIANAPOLIS
INDIANA, OCTOBER 1942

"TIMES A WASTIN" PAINTED
IN BRIGHT YELLOW

PHOTO COURTESY OF
JOHN & ALMA ROSE

SECTION 1: CASE STUDY

SECTION 2: BACKGROUND KNOWLEDGE

SECTION 3: AIRCREW SURVIVAL

SECTION 1
CASE STUDY

A TRAGEDY VINTAGE 1942
PRESENTED BY
THE 1932nd COMMUNICATIONS SQUADRON (AFCS)
GOOSE BAY AIR BASE, LABRADOR, CANADA

On the coast of Labrador, the icy waters of snow-fed streams flow to meet the sea through the steep, rocky walls of Saglek Fjord. Between June and October they flow, but for the remainder of the year all exposed water is frozen, often to the depth of several feet. Archaeologists have uncovered residue of ancient residents who hunted and fished the waters of the fjord as early as 2580 BC. Their stone hearth, with charcoal still intact, has been uncovered on Rose Island in the mouth of the bay.

Today, a small United States (US) Airforce converted radar site houses a tropospheric communications link to the northernmost outposts of the hemispheric defence system. From the steep heights, US contractor maintenance personnel overlook the vast stretches of frozen tundra and infrequently visible blue-green of the Atlantic. On a flat stretch of this barren land, at the base of the steep bluff, now crowned by a radome and the concave, billboard antennas of the site, our story finds a setting. No more than 46 m (50 yards) from the present site runway, lie the weathered remains of a B-26 medium bomber of World War II vintage.

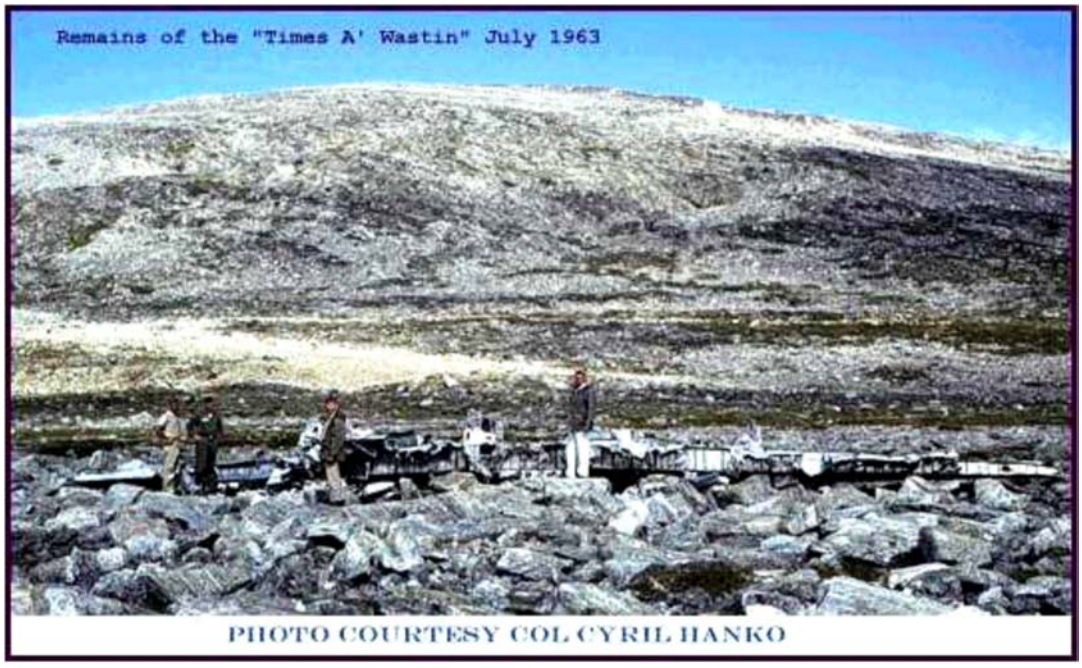

Figure A-1 Remains of the B-26 Marauder "Times A Wastin"

Note. From 1932nd Communication Squadron. (2009). *Crash in the Wilderness Circa 1942*. Retrieved October 9, 2009, from http://www.lswilson.ca/page8.htm

The story begins at BW-1, Narsarsuaq, Greenland, as the long arctic winter has shortened the days and is closing in as the seven man crew of a Martin B–26 Marauder medium bomber of the 440 Squadron, 319 Bomb Group, the "Times A Wastin" awaits clearance for the flight home—first stop Goose Bay, Labrador.

Figure A-2 B-26 Marauder Similar to "Times A Wastin"

Note. From 1932nd Communication Squadron. (2009). *Crash in the wilderness circa 1942*. Retrieved October 9, 2009, from http://www.lswilson.ca/page8.htm

Data from Quest for Performance *and* Jane's Fighting Aircraft of World War II	
General Characteristics	
Crew	7 (2 pilots, bombardier/navigator, radio operator, 3 gunners)
Length	58 ft 3 in (17.8 m)
Wingspan	71 ft 0 in (21.65 m)
Height	21 ft 6 in (6.55 m)
Wing Area	658 pi^2 (61.1 m^2)
Empty Weight	24 000 lb (11 000 kg)
Loaded Weight	37 000 lb (17 000 kg)
Powerplant	2× Pratt & Whitney R-2800-43 radial engines, 1 900 hp (1 400 kW) each
Performance	
Maximum Speed	287 mph (250 knots, 460 km/h) at 5 000 feet (1 500 m)
Cruise Speed	216 mph (188 knots, 358 km/h)
Landing Speed	114 mph (90 knots, 167 km/h)
Combat Radius	1 150 mi (999 NM, 1 850 km)
Ferry Range	2 850 mi (2,480 NM, 4 590 km)
Service Ceiling	21 000 ft (6 400 m)
Wing Loading	46.4 lb/ft^2 (228 kg/m^2)
Power/Mass	0.10 hp/lb (170 W/kg)
Armament	
Guns	12 × .50 in (12.7 mm) Browning machine guns
Bombs	4 000 lb (1 800 kg)

Figure A-3 B-26 Marauder Data

Note. From "Wikipedia", 2010, *B-26 Marauder*. Retrieved February 2, 2010, from *http://en.wikipedia.org/wiki/B-26_Marauder*

Crew of the "Times A Wastin"

Pilot: First Lieutenant GC Hodge
Co-Pilot: Second Lieutenant P Janssen
Navigator / Bombardier: Second Lieutenant EJ Josephson
Radio Operator: Technical Sergeant CF Nolan
Gunner: Sergeant R Weyrauch
Gunner: Corporal JJ Mangins
Gunner: Corporal FJ Galm

The weather turned sour and the pilot was forced to crash land at the head of the Saglek Fjord in Labrador. The aircraft sustained minimal damage and the crew survived the impact unscathed. What follows is their efforts to survive in one of the most unfriendly and hostile landscapes on Earth at the worst possible time of year. The diary of the pilot has been retained intact; the last entry added was in February 1943. Except for names and places, spelling and punctuation have been retained as they appeared.

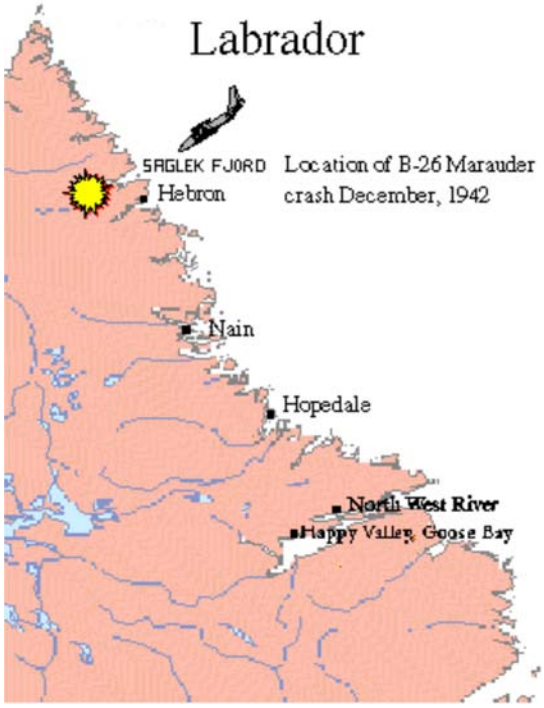

Figure A-4 Crash Site

Note. From 1932nd Communication Squadron. (2009). *Crash in the Wilderness Circa 1942*. Retrieved October 9, 2009, from http://www.lswilson.ca/page8.htm

Distances and Headings:

Narsarsuaq, Greenland to Goose Bay, Labrador: 1250 km at 232°
Crash Site (Saglek) to Goose Bay: 590 km at 167°
Crash Site to Hebron: 30 km at 177°

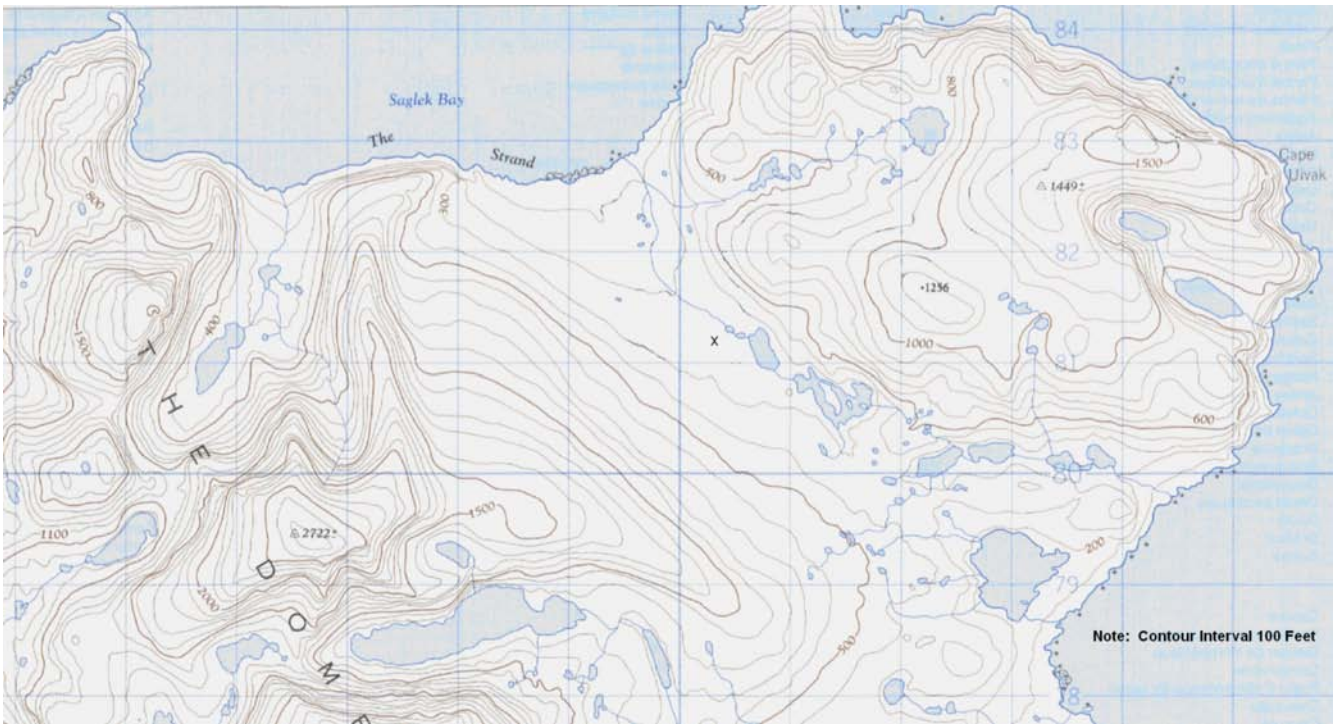

Figure A-5 Crash Site Marked With an "X"

Note. Created by Director Cadets 3, 2010, Ottawa, ON: Department of Defence.

Glossary

500 Rummy. A card game.

A-10. The Strike, an attack (light) bomber.

A-20. The Havoc, an attack (light) bomber.

B-25. The Mitchell, a medium bomber.

Dingy radio. Small emergency radio.

Goose beam. The radio directional beacon from Goose Bay, Labrador.

Liaison receiver / set. Radio used to communicate (liaise) with other aircraft, ground stations, etc.

Minutes. A unit of time and of angular measure (1/60 of a degree).

P-40. The Warhawk, a fighter aircraft.

Putput. On-board auxiliary power unit (generator) used to start the engines and for ground operation of on-board electrical equipment.

Star shot. Determining one's location using the positions of stars.

Stations. Establishments equipped to transmit and receive radio signals (eg, ham radio operations).

The Diary Begins

Note. From 1932nd Communication Squadron. (2009). *Crash in the Wilderness Circa 1942.* Retrieved October 9, 2009, from http://www.lswilson.ca/page8.htm The diary has been modified to only include the pilot's entries.

The first three diary entries describe the crew's actions in Narsarsuaq, Greenland during their wait for good flying weather.

NOVEMBER 12, 1942

We're still sitting here with 16 minutes (less) of daylight each day. We've less than six hours of daylight between sunrise and sunset now. Had about two inches of snow last night and everything was really pretty. Spent most of the morning sweeping it off the plane. They said that there's a chance of leaving tomorrow but this place seems so much like home that it doesn't seem like we should leave.

NOVEMBER 16, 1942

This place is full of changes. Yesterday afternoon Janssen and I walked down to the river. There was a solid sheet of ice resting on the rocks, and it was covered with almost two inches of snow. Every once in a while, we would break through up to our knees, but there was nothing under the ice. Last night we had rain with a warm wind with gusts up to 60 miles per hour. So this morning there was only isolated patches of ice left. Today was the first time in two weeks that we have been able to walk on bare ground. We've had all kinds of weather, most of the days were fairly warm. But one day it was six degrees. We've seen days when not a breath of air stirred.

NOVEMBER 26, 1942

I still say this is screwy weather. We were alerted this morning at 0330. There was a solid overcast. We killed time until 0600 when we got briefed. It was still overcast and seemed to be getting worse. The A-10s and B-25s started kicking off, but about then it started to rain and the ceiling looked like it was very low. About 10 minutes later it stopped raining and an A-20 came over at 600 feet with room to spare. By 0830, the sun was shining and everything looked as nice as we could ask for, but it was too late to take off.

The December 10 diary entry describes the day of the crash.

DECEMBER 10, 1942

Took off at last for Goose Bay. About one hr 15mins out, we ran into some clouds and I turned around and called for the formation to turn around also. One plane dropped out. I think I saw the P-40s later. I lost the others while letting down below the clouds. We saw an opening to the south at about 2000 feet and after flying in that direction we broke out. We finally had to go back up to 13000 feet, but it was clear sailing, so we kept on. Lt Josephson gave me a new heading to get back on course, but we know now it was too much of a correction. About halfway I picked up Goose beam, but the set went dead after a few minutes. It was too late to turn back then, so we tried to get it on the compass, but couldn't. We finally hit the coast. We decided we were south of Goose Bay, so we turned north until we finally realized we were north. We were almost out of gas, so I started looking for a place to land. I wanted to get back to where there were trees, but the engine started missing, so we came back down. The crew never batted an eye when they were told that we were going to have to make

a crash landing. Even if I do say so myself, it was a good landing and Lt Josephson did a good job cutting the switch. We hit a rock that tore the bombay open and one prop tip went through the fuselage behind me. Outside of that, the ship was intact. It swung around almost 90 degrees without stopping, but made a good wind break that way; it was almost dark so after eating a cold ration we went to bed inside the ship; we had 17 blankets, a comforter and a bedroll, but we slept very well. Lt Josephson took a star shot and decided we were 300 minutes from Goose.

The aircraft landed **above** the treeline.

DECEMBER 11, 1942

Lt Josephson walked to the fjord to the west and Galm the one to the east. We spent most of the day clearing up the ship and pooling rations in the afternoon. I climbed the mountain in front of us, but didn't learn much. Nolan worked on the putput all day without results. We cranked the dingy radio. It was pretty windy so we spent the night in the ship.

DECEMBER 12, 1942

Made three big improvements in our situation. Lt Janssen and Galm discovered a lake close to our ship and saw a fox. Weyrauch and I saw 50 seals; so we know that there is food here. We made a lean-to out of tarp under the wing and slept there. It was much better.

DECEMBER 13, 1942

When the star shots were figured out it showed us to be close to the town of Hebron. Worked on the putput all day without success, so we tried to work the liaison set on the batteries but they were too weak. We pooled our covers and slept together.

DECEMBER 14, 1942

Wind blew all day with increasing velocity and snow. Our lake went dry so we were back to melting snow. Went to bed early.

DECEMBER 15, 1942

Had to eat a cold breakfast because the wind blew too much snow in our fire. Nolan changed the voltage regulators and got 25 volts, long enough for me to get a couple of stations on the liaison receiver. The putput stopped, but we hope we know what is wrong with it. So we hope to get a message out soon.

DECEMBER 17, 1942

The putput went out, but we did try the batteries. They too, were dead.

DECEMBER 19, 1942

More snow last night. Nolan and Mangins tried to work on the putput but it was too cold. We built a fire in the lean-to and thawed out.

DECEMBER 20, 1942

It was so windy we stayed in bed all day.

DECEMBER 21, 1942

Everything was really snowed in so we spent the day eating and thawing out blankets and planning a trip south. Lt Josephson Lt Janssen and Sgt Nolan plan to head south in the boat the first clear day.

The December 21 diary entry introduces the crew's plan to split up. Three of the seven crewmembers plan to use the aircraft's emergency raft, referred to as "boat", to travel south to get help. These three crewmembers are the "boatmen" described in the December 22 diary entry and are referred to as "boys" in several later entries.

DECEMBER 22, 1942

Had a perfect day, the first clear day in over a week. We worked on the boat and cleared snow away from the lean-to all day. We ate a pretty big meal with the three boatmen eating a little extra.

DECEMBER 23, 1942

Got up at 0715, got the boat ready and started carrying it. The wind was pretty strong and the boat was heavy, so we had a pretty hard time of it. We didn't get to the water until noon and then it took quite a while to find a place to put it in the water. We intended to put them off shore, but they appeared to be making slow headway to the south. That was the last time we saw them. We had a hard time coming back across the snow. We had some peanuts and caramels and went to bed.

The three boatmen are never heard from again and no evidence has been found to explain what happened to them. It can be assumed that they succumbed to hypothermia on the freezing cold waters of the Labrador Strait and drifted south on the Labrador Current into the Atlantic Ocean.

DECEMBER 24, 1942

Christmas Eve and we've been here two weeks today. It was lonesome with just the four of us, but we got up pretty early and dug out the gas strainer so we could make a fire. It was so windy we couldn't work outside so we dried out blankets. Galm got blisters pretty bad and swollen hands which have to be doctored. We stretched out our eating to cover most of the day. We had a sardine sized can of herring with crackers, a spoonful of peanuts a piece, a black cough drop, and a caramel, a cup of grape drink, and plenty of coffee, using the same grounds over and over. It's really a surprise how much one can get from a small thing like a caramel, but we look forward to it with anticipation each day.

DECEMBER 25, 1942

What a Christmas. Mangins' feet pained him so much we had to get up at 0330. He was in agony before that, but was better after, although his arches pain him pretty bad. Got up again at 0900. Galm went exploring, I massaged Mangins' feet and Weyrauch started fixing up the floor, which was in pretty bad condition from the fire. Later we had to dig out the rear entrance to the ship to fix the window up. After that, we had a first aid lesson. The only one who doesn't have anything wrong is me. We are about to eat our Christmas dinner and go to bed.

Galm's and Mangin's injuries described in the previous two diary entries are consistent with frostbite.

DECEMBER 26, 1942

Had another swell day. The weather was perfect. Weyrauch cleaned up the back of the ship, while Galm dug around in the rear of the bombay, uncovering a can of fruit cocktail and a can of chicken a la king. I worked on Mangins' feet and did some odd jobs. Everyone is feeling better, and I hope that Mangins will be up in a few days. We aren't starving by any means, but the conversations are mainly about food. One surely can remember some tasty food.

DECEMBER 27, 1942

Started today as usual by treating the casualties. Mangins' feet are better, but we found a big blister on each foot. Galm and Mangins spent the day drying blankets. Weyrauch finished cleaning out the back of the ship, and I climbed the mountain to see if I could see anything out to sea. I also took a roll of film. The enforced diet is beginning to tell on us, but we'll eat a little more tomorrow.

DECEMBER 28, 1942

This has been a terrible day. The wind started up early in the morning and has kept us inside all day. We had two fires which took the rest of the day to repair. Mangins' feet are quite a bit better and he will start working on the putput soon. We may get the liaison set going yet. In the meantime, we can feel the effects of the short rations more every day. We pray almost every minute that the boys in the boat will get through soon and get some help.

DECEMBER 29, 1942

Today has been just average. The wind started up early again, but not too hard. Mangins' feet are almost back to normal.

DECEMBER 30, 1942

Today was overcast with snow showers. Spent most of the day working on the inside. Galm lost a fingernail, and may lose another. I'm just thankful that his hand doesn't pain him. Worked a little on the putput and made some progress, but it was too dark to work much. Got up a game of 500 Rummy which everyone seemed to enjoy. The boys have been gone a week today, God grant they are still going.

JANUARY 1, 1943

Happy New Year. It snowed and blew all night long and kept it up all day. So since we had no fire we stayed in bed all day.

JANUARY 2, 1943

More wind and snow today. It slackened up a little around noon, so we got up with the aid of a fire in a peanut can. Weyrauch got the prop and receiver tank out with a gallon of alcohol and glycerine, and I dug out the oil drain. After that, we had a couple of hot fires and plenty of hot coffee and had a lemon powder and a cup of bouillon. Our main dish was the last can of datenut roll with jelly and it was very good. We didn't finish with the eating and drinking until almost noon. Then I worked on Mangins' feet and went to bed. There was quite a bit of loose snow outside but the very shape of our ship keeps it fairly clean. It actually rained today and I don't know what effect that is going to have on our situation. The boys have been gone ten days today, which is the time we figured it would take them to make the trip. We hope they made it and can bring help soon.

JANUARY 3, 1943

There wasn't much wind last night so we thought we would have a good day, but the wind picked up and it snowed all day. The ship had a sheet of ice on it and is covered with snow. Besides that, the drifts are higher and closer than they have ever been before. We hooked up the fuel transfer pump and I'm positive we pumped some gas over to this side but we couldn't get it to drain out so we had to use the alcohol to cook with. I got

into a big hurry once and caused a fire in which I got burned but not badly. Now we are all wearing bandages. I found two bouillon cubes in the radio operator's desk. Spent a lot of time putting snow under our bed. There was quite a hole there, so we should be able to sleep better tonight. It must be raining outside now. It couldn't be melting ice on the wing. We keep praying for clear weather and hope that the boys get through. Also to try out a new theory to where Hebron is.

JANUARY 4, 1943

Had a blue sky when we got up, but it stayed overcast all day. There wasn't much wind, however, so we got up and went to work. Weyrauch and I got quite a bit of gas out of the other wing, so we are pretty well fixed on that. Mangins has the putput almost ready to try again. We are just praying for good weather both in hopes of a rescue plane (if the boys got through). I am cutting down still on the rations.

JANUARY 5, 1943

It started off like a beautiful day, but turned to a light low overcast. Weyrauch and I cleaned the plane of snow and Mangins finished the putput, which seems to be in pretty good shape. It started clearing late this afternoon.

JANUARY 6, 1943

This is the eighth day of bad weather. The entrance is blocked, and it doesn't do any good to dig it out. It has been two weeks since the boys left and spirits are still high in spite of the bad weather.

JANUARY 7, 1943

We've been here four weeks today. The entrance was blocked up this morning. As I was going into the ship, I saw a little bird. We caught him and boiled him for a couple of hours. Then made a stew by adding a bouillon powder. It was really delicious. Galm started to go looking for Hebron, but the snow was too soft. Mangins got out for the first time in 13 days. If we can't find a town or get the putput going in three days, we are going to have to sit and wait until the weather clears and pray that the boys got through because we are too low on food to do anything else. God help us to get out of here safely.

JANUARY 8, 1943

Today was the most strenuous for me since we got here. I tried to get to Hebron, and I still think I know where it is, but there are two mountains in the way. I can feel myself growing weaker and we have less to eat every day. I don't know what we would do if we didn't have that three pounds of coffee. We sit around and drink that and talk about all kinds of food, but I think we all crave chocolate candy more than anything else. The boys have dug out the back of the ship so if tomorrow is clear, we still have one last try with the putput radio.

JANUARY 9, 1943

Well, we put the putput back in its place and it jammed again, so that leaves us with one possibility, that the boys get through.

JANUARY 10, 1943

We have been here one month today, 31 days. Spent most of the day which was perfect as far as the weather was concerned looking for the plane and fixing up bandages. The boys spirits were much higher today after our little church service. Our only food today was a slice of pineapple and two spoons full of juice.

JANUARY 11, 1943

Our third day of perfect weather, also the coldest day since right after we got here. Spent the day watching for the plane which didn't come. The oil gave out on this side, which brings about another problem. The short rations are beginning to tell on us, but we are still in high spirits. If we don't live to eat some of the food we talked about, we've mentally eaten one of the best meals in the world.

JANUARY 12, 1943

Today was the boys' 20th day and our 33rd, and was overcast, but was calm. We got the oil almost dug out but are all so weak that we can hardly work. The boys spirits are still high though, and we had a couple of lively bull sessions on our one topic, food. Our ration today was a slice of pineapple.

JANUARY 13, 1943

Another calm overcast day. We dug up the oil, dried out blankets, made a new bed on snow and ate our last food, a slice of spam and a soda cracker a piece. All we have left is a half pound of chocolates and three drink powders, but we talk like rescue was certainly tomorrow. It cleared off late this afternoon, so maybe there is hope for tomorrow.

JANUARY 14, 1943

Clear day but with wind. We cleaned off the plane and waited, but nothing happened. Late this afternoon we were playing cards when Mangins oiled the gas to fast and caused an explosion which burned both his and my face, hair, and hands. Our rations were four chocolates, but we are still working out pretty well. After a devotional, we went to bed.

JANUARY 15, 1943

A perfect day as to weather, but the coldest since we got here. Spent most of the day trying to keep warm and listening for a plane. Also made big plans for a couple of days in New York when we get our furloughs. Rations were two chocolates and a bouillon powder. No one is particularly hungry yet, but we are getting weaker and colder because our bodies aren't putting out enough heat.

JANUARY 16, 1943

Another calm clear day, but the coldest we have had yet. The oil froze up, so we had to end up burning nothing but gas. The only thing we have left is one bouillon powder and two sticks of gum. The strain is beginning to tell, but we still have good bull sessions about food and the furlough in New York.

JANUARY 17, 1943

Couldn't have asked for a better day except that it is so cold that the oil is frozen and won't burn. So our gas is going pretty fast. Had our last food, bouillon powder, so unless rescue comes in a few days -------. The boys have been gone 25 days which is a long time, but they are our only hope; our families will really miss some swell dishes and menus.

JANUARY 18, 1943

Cold and clear. My watch stopped, so we didn't get up until noon. Must be a little warmer because we got a little oil. Today was our first complete day without any food, but spirits are still pretty high. It's surprising how much punishment the body and mind can take when necessary. We are still in pretty good condition but rather weak. Not much hope left.

JANUARY 20, 1943

It snowed and blew all night, but we slept pretty well, and we were much more cheerful today. We stayed up longer than we should have though and are pretty tired. That snow has been blowing pretty hard all day and is piling up in front of the door, so I don't know what we will do if it doesn't stop pretty soon.

JANUARY 21, 1943

Six weeks today and rough night with snow and rain, so everything was soaked when we got up. Only Weyrauch and I got up and then only long enough to melt snow for water. Things could be worse.

JANUARY 22, 1943

Got up around noon, and was up until about 6. I cleared up the entrance and made the bed. We could stand some good weather.

JANUARY 23, 1943

Spent a miserable night. Everyone got crowded and nobody could get comfortable. Had a good day, but everybody is pretty discouraged, although the conversation was pretty good. We haven't really felt famished but we are really weak. It really gets me to see these boys start to do something and have to stop from the lack of power to go on. Weyrauch has developed a case of piles and is really suffering.

JANUARY 24, 1943

Overcast but fairly calm. Each day we don't know how we can last another day, but each time we manage to go on. We all smoked a pipe of tobacco this morning and Galm got really sick, and I felt pretty bad. But we came out pretty well.

FEBRUARY 3, 1943

Slept a solid week in bed. Today Weyrauch died after being mentally ill for several days. We are all pretty weak, but should be able to last several more days at least.

NOTE: This is the last entry in the diary. The remains of the crew were found April 9, 1943 by Inuit from the settlement of Hebron, located about 30 km south.

List of food when landed:

- 7 cans of Spam,
- 3 cans of peanuts,
- 8 cans of chicken,
- 2 cans of pineapple,
- 3 cans of fruit cocktail,
- 2 cans of date nut roll,
- 1 can of brown bread,
- 3 boxes of chocolates,
- 28 Hershey Bars,
- 4 packages of dates,
- 1 pound of crackers,
- 4 boxes of fig newtons,
- 1 pound of cheese crackers,
- 1 case of Coke,
- 2 cans of salmon,

- 3 pounds of coffee, and
- 20 packages of caramels.

The original transcript of the pilot's diary was included in the formal report filed by the USAAF team that recovered the remains of the crew on April 18, 1943. Major Vaughan, Lieutenant Holmes and Lieutenant Norton accomplished the recovery by landing at the Inuit settlement of Hebron and walking overland to the crash site. The bodies were returned to Crystal-1 (Fort Chimo, now called Kuujjuaq) on April 22, 1943 where a funeral service and interment took place in the US Army cemetery plot the following day.

SECTION 2
BACKGROUND KNOWLEDGE

The following background knowledge was covered during EO M190.04 (Discuss Survival Psychology).

SURVIVAL PSYCHOLOGY

Understanding survival psychology is very important. It is a person's will to survive that helps them the most. Having survival skills is not as important as the will to survive.

The Role of Fear in a Survival Situation

Fear is a normal reaction when in a survival situation. Fear can aid or hinder individuals depending on their reaction to it. 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 one 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.

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 one's equipment; and
- concentrating on the job to be done.

Have you ever been in a real survival situation? If so, how did fear play a role?

_____

_____

_____

Action to Take When Lost (Employing "STOP")

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 one becomes lost, stopping prevents the person from possibly moving further away from the area a search crew may cover. It is also important to stop so one can think effectively. By stopping to think, one may avoid making errors due to hasty decisions.

Think. It is critical to think about what actions should be taken once a person realizes they are lost. One should think of the danger and consequences of either staying put or moving on. One should think about the possible dangers that could occur. Analyzing the weather, terrain and available resources should also be taken into account when deciding on the actions to be taken.

Observe. Conduct a self-analysis to identify possible symptoms of physical ailments such as fatigue, increased heart rate, or shivering. Also, look for psychological ailments such as extreme stress or fear. Observe surroundings for resources, weather potential, terrain, and possible landmarks that can provide information on one's current location.

Plan. After thinking of and observing all aspects of the situation, plan a course of action that best uses the available resources.

Do you remember using STOP during your survival training? If so, did it help?

_____

_____

_____

The Survival Pattern

The survival pattern is a procedure used in a survival situation. It is a way of prioritizing tasks.

First aid. The most important thing to address in a survival situation is any injury that may have been sustained. Treating injuries can prevent worsening conditions, and reduce pain. Treating injuries allows for more involvement in survival activities.

Fire. Fire serves many purposes in a survival situation. It can provide warmth, boost morale, and provide a sense of security. It is a method for creating signals and can help purify water and cook food.

Shelter. Shelter allows a person to be warm and dry by providing protection 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. Signals can take many different forms. Signal fires with 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 will only last a few days. Lack of water can lead to mild dehydration, which can reduce the ability to concentrate. This in turn can be 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 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.

The survival pattern is a way to prioritize tasks. Can you think of a situation where the order would be different than what is listed?

The Seven Enemies of Survival

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 one is pre-occupied. Pain may go unnoticed if one'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 one's hopes up and keep working.

Cold. Cold lowers the ability to think and the will 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.

Did you know?

You can survive about three minutes without air, about three days without water and about three weeks without food.

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.

***Activate Your Brain #1*:**

What signs of fatigue did the crew of the "Times A Wastin" exhibit?

_____ _____

_____ _____

Even though the crew was suffering from fatigue, why did they spend so much energy to keep the plane cleared of snow?

_____

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 one 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.

How did you deal with boredom and loneliness during your survival training? Did it help?

_____

_____

_____

SECTION 3
AIRCREW SURVIVAL

During EO M409.01 (Identify Methods of Instruction) you were shown that a case study requires four lists to be created: **facts**, **assumptions**, **problems**, and **solutions**.

A **fact** is something that is known to have occurred.

An **assumption** is something that a person takes or accepts to be true, without proof, for the purpose of an argument or action.

A **problem** is a doubtful or difficult matter requiring a solution.

A **solution** is an act or means of solving a problem or difficulty.

***Activate Your Brain #2*:**

Based on the case study, create a list of facts, a list of assumptions, a list of problems, and a list of solutions.

The list of problems should be based on the survival pattern and the seven enemies of survival.

The list of solutions should be the ones the aircrew came up with, not what you think they should have done.

Facts

Assumptions

Problems

Solutions

Analyzing the Cause of the Accident

Based on your analysis of the case study, what was the main cause of the accident? Explain your reasoning.

Examining the Survival Situation

Based on your analysis of the case study, what were the main survival concerns? Explain your reasoning.

Investigating the Actions of the Survivor(s)

Based on your analysis of the case study, were the actions of the aircrew appropriate? Explain your reasoning.

Reflecting on the Outcome

Based on your analysis of the case study, what would you have done differently? Explain your reasoning.

Congratulations, you have completed your self-study package on EO C590.01 (Analyze an Aircrew Survival Case Study). Hand the completed package to the Training Officer / Proficiency Level Officer who will record your completion in your Proficiency Level Five logbook.

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ACTIVATE YOUR BRAIN ANSWER KEY

***Activate Your Brain #1*:**

What signs of fatigue did the crew of the "Times A Wastin" exhibit?

accidents (through carelessness)	poor decisions
lack of energy	lack of motivation

Even though the crew was suffering from fatigue, why did they spend so much energy to keep the plane cleared of snow?

So that the plane could seen from the air and not blend into the landscape.

***Activate Your Brain #2*:**

Based on the case study, create a list of facts, a list of assumptions, a list of problems, and a list of solutions.

The list of problems should be based on the survival pattern and the seven enemies of survival.

The list of solutions should be the ones the aircrew came up with, not what you think they should have done.

Facts	**Assumptions**
winter	navigation error
poor weather	location of Hebron
above treeline	lots of food available
no injuries due to crash landing	could fix putput
did inventory of food and supplies	safe to use boat
scouted immediate area	boat trip would take 10 days
found lake (water source)	
found seals (food source)	

Problems	**Solutions**
cold / wind	built lean-to with a tarp over wing
limited supply of fuel for fire	used fire only as needed
thirst	found water, melted ice / snow
hunger	pooled food, caught bird
pain	applied first aid as required
signals	tried to fix radio
fatigue	reduced physical activity
boredom	played cards, did chores
loneliness	talked to each other

For the following questions the most likely answers are listed. The cadet's explanation of their answer should be well reasoned. Their reasoning may be based on the case study, their training and their personal experiences.

Note: The cadet may think of answers that are not listed. Such answers are acceptable if they are both plausible and well reasoned.

Analyzing the Cause of the Accident

Based on your analysis of the case study, what was the main cause of the accident? Explain your reasoning.

Poor Weather
Navigation Error
Equipment Failure

Examining the Survival Situation

Based on your analysis of the case study, what were the main survival concerns? Explain your reasoning.

Cold
Food
Fatigue
Landing Above the Treeline

Investigating the Actions of the Survivor(s)

Based on your analysis of the case study, were the actions of the aircrew appropriate? Explain your reasoning.

Yes
No

Reflecting on the Outcome

Based on your analysis of the case study, what would you have done differently? Explain your reasoning.

Stayed Together
Walked to Hebron
Searched for More Liquid Water Sources
Hunted / Fished for Food
Created Ground-to-Air Signals