

CHAPTER 11

**PO 121 – PARTICIPATE IN CANADIAN AVIATION, AEROSPACE AND
AERODROME OPERATIONS COMMUNITY FAMILIARIZATION ACTIVITIES**



ROYAL CANADIAN AIR CADETS
PROFICIENCY LEVEL ONE
INSTRUCTIONAL GUIDE



SECTION 1

EO M121.01 – DISCUSS AVIATION OPPORTUNITIES

Total Time:

30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

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

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

Prepare Career Investigation Sheets located at Attachment A for each group.

Prepare Career Information Envelopes located at Attachment B for each group.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

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

A group discussion was chosen for TP 2 as it allows the cadets to interact with their peers and share their knowledge about aviation careers. A group discussion helps the cadets improve their listening skills and develop as members of a team.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadets shall have discussed aviation opportunities.

IMPORTANCE

There are many career opportunities available within the aviation industry. Identifying possible opportunities stimulates an interest in the different aspects of the cadet program including aviation, aerospace, aerodrome operations and aircraft manufacturing and maintenance.

BACKGROUND KNOWLEDGE

PILOTS AND FLIGHT INSTRUCTORS

Pilots fly airplanes and helicopters to provide air transportation, training, and surveying services. Flying instructors teach flying techniques and procedures to student and licensed pilots.

Pilots and flight instructors are employed by airlines, airfreight companies, flying schools, the Canadian Forces (CF), and other public and private sector aircraft operators.

Topics such as aerodrome operations, aircraft maintenance, radio, theory of flight, navigation and meteorology will assist cadets in preparing for pilot training.

Cadet summer training qualifications include a three-week basic aviation qualification, a three-week advanced aviation qualification and gliding and power flying scholarship qualifications.

AIR TRAFFIC CONTROLLERS AND FLIGHT SERVICE SPECIALISTS

Air traffic controllers use radio communication to direct air traffic within assigned airspace. Also, they control aircraft and vehicle movement at airports. Flight service specialists provide pilots with flight information essential to aviation safety, such as weather conditions.

Air traffic controllers and flight service specialists are employed by NAV Canada and the CF.

Topics such as radio communication, aerodrome operations and air traffic control will assist cadets in preparing for air traffic control training.

Cadet summer training qualifications include a three-week basic aviation technology and aerospace qualification and a six-week advanced aviation technology qualification – airport operations.

AIRCRAFT MAINTENANCE ENGINEERS (AME)

Aircraft maintenance engineers maintain, repair, overhaul, modify and test aircraft structures and systems. The aircraft systems they work on include mechanical, hydraulic, instrument, electrical and avionics.

Aircraft manufacturing, maintenance, repair companies, airlines, the CF and other aircraft operators employ AMEs.

Topics such as aircraft maintenance will assist cadets in preparing for AME training.

Cadet summer training qualifications include a three-week basic aviation technology and aerospace qualification and a six-week advanced aviation technology qualification – aircraft maintenance.

AIR TRANSPORT RAMP ATTENDANTS

Air transport ramp attendants operate ramp-servicing vehicles and equipment, handle cargo and baggage, and perform other ground support duties.

They are employed by airlines, air services companies and the federal government.

Topics such as aerodrome operations and radio will assist cadets in preparing for groundside careers.

Cadet summer training qualifications include a three-week basic aviation technology and aerospace qualification and a six-week advanced aviation technology qualification – airport operations.

AERODROME MANAGERS

Aerodrome managers plan, organize, direct, control and evaluate the operations of an aerodrome. Some areas of responsibility may include marketing, budgeting, human resources, and managing the buildings and the land.

Aerodrome managers work for airport authorities, local governments or private airports.

Topics such as aerodrome operations and leadership will assist cadets in preparing for aerodrome management careers.

Cadet summer training qualifications include a three-week basic aviation technology and aerospace qualification and a six-week advanced aviation technology qualification – airport operations.

AEROSPACE ENGINEERS AND AIRCRAFT ASSEMBLERS

Aerospace engineers research, design, and develop aerospace vehicles, aerospace systems and their components. They also perform duties related to testing, evaluation, installation, operation and maintenance of the same.

Aircraft and spacecraft manufacturers, air transport carriers and research institutions employ aerospace engineers.

Aircraft assemblers assemble, fit and install prefabricated parts to manufacture fixed wing aircraft, rotary wing aircraft or aircraft components.

Aircraft subassembly manufacturers employ aircraft assemblers. Subassembly companies assemble the different sections of aircraft like the landing gear.

Topics such as theory of flight, aircraft maintenance and aerospace will assist cadets in preparing for design and assembly training.

Cadet summer training qualifications include a three-week basic aviation technology and aerospace qualification and a six-week advanced aviation technology qualification – aircraft maintenance.

Teaching Point 1

Conduct an aviation careers matching activity.

Time: 15 min

Method: In-Class Activity

ACTIVITY

OBJECTIVE

This activity is designed allow cadets to think about different aviation careers and how cadet training relates to these careers.

RESOURCES

- One Career Investigation Sheet per group.
- One set of Career Information Envelopes per group, to include:
 - job descriptions envelope;
 - employers envelope;
 - POs envelope; and
 - summer training qualifications envelope.

ACTIVITY INSTRUCTIONS

1. Divide the cadets into six groups. Assign each group an aviation career from the following list:
 - pilots and flying instructors;
 - air traffic controllers and flight service specialists;
 - aircraft maintenance engineers;
 - air transport ramp attendants;
 - aerodrome managers; and
 - aerospace engineers and aircraft assemblers.



If there are less than 12 cadets in the class, divide them into three groups and assign each group two careers.

2. Give each group a Career Investigation Sheet and set of Career Information Envelopes. Advise each group that they will present their career to the class at the end of their investigation.
3. Have the groups open their job description envelopes. Cadets will have two minutes to:
 - read through all of the descriptions;
 - select the job description statements that match their careers; and
 - record the descriptions on their Career Investigation Sheets.
4. Have the groups open their employer envelopes. Cadets will have two minutes to:
 - read through all of the employers;
 - select the employers that someone from their career might work for. There may be many possible answers for each career;
 - record the employers on their Career Investigation Sheets; and
 - make a sensible case for the employers they have selected.
5. Have the groups open their PO envelopes. Cadets will have one minute to:
 - Read through all of the POs;
 - Select the POs that will help them prepare for their career; and
 - Record these POs on their Career Investigation Sheets.
6. Have the groups open their summer training qualifications envelopes. Cadets will have one minute to:
 - Read through all of the summer training qualifications;
 - Select the summer training qualifications that will help them prepare for their career; and
 - Record these summer training qualifications on their Career Investigation Sheets.
7. Call upon each group to present their career.

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 1

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

Teaching Point 2**Lead a discussion on aviation careers.**

Time: 10 min

Method: Group Discussion

GROUP DISCUSSION

**TIPS FOR ANSWERING / FACILITATING DISCUSSION:**

- Establish ground rules for discussion, eg, everyone should listen respectfully; don't interrupt; only one person speaks at a time; no one's ideas should be made fun of; you can disagree with ideas but not with the person; try to understand others as much as you hope they understand you; etc.
- Sit the group in a circle, making sure all cadets can be seen by everyone else.
- Ask questions that will provoke thought; in other words avoid questions with yes or no answers.
- Manage time by ensuring the cadets stay on topic.
- Listen and respond in a way that indicates you have heard and understood the cadet. This can be done by paraphrasing their ideas.
- Give the cadets time to respond to your questions.
- Ensure every cadet has an opportunity to participate. One option is to go around the group and have each cadet answer the question with a short answer. Cadets must also have the option to pass if they wish.
- Additional questions should be prepared ahead of time.

SUGGESTED QUESTIONS:

- Q1. What career interests you and why?
- Q2. Does anyone know someone that works in one of these careers? What can you tell us about their job?
- Q3. How do the opportunities in the air cadet program stimulate your interest in aviation, aerospace, aerodrome operations and aircraft manufacturing and maintenance?

CONFIRMATION OF TEACHING POINT 2

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

END OF LESSON CONFIRMATION

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

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

The myriad air cadet program activities expose cadets to various aspects of aviation, aerospace, aerodrome operations and aircraft manufacturing and maintenance. These experiences may encourage cadets to pursue an education / career in one these areas.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A3-003 CATO 51-01 Director Cadets 3. (2011). *Air cadet program outline*. Ottawa, ON: Department of National Defence.

C3-001 *National Occupation Classification 2001 (NOC2001)*. (2001). Retrieved 23 Mar 2006 from <http://www.hrdc.drhc.gc.ca/2001/e/generic/welcome.shtml>

CAREER INVESTIGATION SHEET

Team Members:

Career:

Job Description:

Employers:

Related POs

**Related Summer
Qualifications**

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CAREER INFORMATION ENVELOPES

Job Descriptions	
Fly airplanes and helicopters to provide air transportation, training, and surveying services.	Teach flying techniques and procedures to students and licensed pilots.
Direct air traffic within assigned airspace, and control moving aircraft and service vehicles at airports.	Provide pilots with flight information essential to aviation safety.
Maintain, repair, and test aircraft structures and systems.	Drive ramp equipment, handle cargo and baggage, and do other ground support jobs at airports.
Manage the operations of an aerodrome, including the people, the money, the buildings, and the land.	Design aerospace vehicles and systems.
Put together and install pre-made parts to make airplanes and helicopters.	

Employers				
Airlines	Air cargo companies	Canadian Forces	Private companies	Flying schools
NavCanada – runs all the air traffic control services in Canada	Aircraft manufacturing companies	Aircraft maintenance companies	Ground support companies	Airport management authorities
Local governments	Private airports	Aircraft and spacecraft manufacturers	Research institutions	Aircraft part manufacturers

POs				
Radio Communication	Principles of Flight	Meteorology	Propulsion	Navigation
Aerospace	Aerodrome Operations	Aircraft Manufacturing and Maintenance		

Summer Qualifications				
Basic Aviation	Advanced Aviation	Basic Aviation Technology and Aerospace	Advanced Aerospace	Advanced Aviation Technology – Airport Operations
Advanced Aviation Technology – Aircraft Manufacturing and Maintenance	Glider Pilot Scholarship	Power Pilot Scholarship		



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SECTION 2

**EO C121.01 – PARTICIPATE IN A PRESENTATION GIVEN BY A MEMBER OF THE
CANADIAN AVIATION, AEROSPACE OR AERODROME OPERATIONS COMMUNITY**

Total Time:

60 min X 4

THERE IS NO INSTRUCTIONAL GUIDE PROVIDED FOR THIS EO