



CANADIAN COAST GUARD: SERVICES AND CAREERS



Time

75 minutes (can be divided over multiple learning blocks)

Developed by

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Overview

The Canadian Coast Guard, an agency of the Department of Fisheries and Oceans Canada, works to keep Canada's waterways safe, secure and accessible. They also have a role in ensuring that Canadian waterways are used in a sustainable manner. This lesson will inform students on the role of the Canadian Coast Guard, the services it provides, and the variety of careers offered within this agency, along with exploring Canada's geographically unique shorelines.

Focus Questions

- What is the role of the Canadian Coast Guard?
- What are some defining features of waterways and shorelines in Canada?
- What types of careers are available with the Canadian Coast Guard and what skills and education are required for these careers?

Subject/Topic

Geography/Social Studies

Grade Level

8-12

Lesson Description

Minds on

Students will participate in a Think, Pair, Share activity to create a definition of the Canadian Coast Guard. Students will brainstorm responsibilities of people working for the Canadian Coast Guard and the services provided by the Canadian Coast Guard. Students will use Google Earth to explore Canada's coastline to start thinking about possible roles that the Canadian Coast Guard plays in Canada.

Action

Students will discuss how Canada's environment and geography impact the Canadian Coast Guard services, and how these services have an impact on Canadian lives. Students will then learn about careers in the Canadian Coast Guard by matching careers with career descriptions. With the help of a job posting sheet, students will complete a Canadian Coast Guard Career worksheet which they will present to the class, or they will fill out a worksheet based on a career that interests them. This activity will also give students the opportunity to experience the types of categories listed on a job description, and how to assess job descriptions.

Conclusion

Students will participate in a class discussion about the advantages and disadvantages of working in different positions for the Canadian Coast Guard. Students will reflect on what careers they could envision themselves obtaining. Students will also think about the different services and assess which services they believe are the most important.

Lesson Implementation

Minds on

Ask students if they have been to an ocean or one of the Great Lakes before and, if so, to describe the geography and environment they saw. If possible, compare the different descriptions and ask students to think about the unique circumstances of different coasts, and what causes these circumstances. For example, on the East Coast of Canada, you will find people fishing for lobster, which creates marine traffic. Due to the weather on the East Coast (on the Atlantic Ocean), these lobster fishing boats will face extremely different challenges on the water than the fishing boats on the West Coast (the Pacific Ocean) or on one of the Great Lakes.

Introduce students to the Canadian Coast Guard and careers within the Canadian Coast Guard by asking students to gather in pairs or small groups to discuss the Canadian Coast Guard (Think, Pair, Share). Ask students to note what they already know about the role(s) the Canadian Coast Guard plays in Canada or to guess what the Canadian Coast Guard does and where it operates. Ask students to share what was discussed in their groups.

To help students start thinking about the role of a coast guard in a Canadian context, have students explore Canada's coastal geography and the Great Lakes





CANADIAN COAST GUARD: SERVICES AND CAREERS



Learning Goals

- ► Learn about the Canadian Coast Guard, its role in Canada, and the services it provides
- ➢ Interpret images from Google Earth to formulate ideas on the role of the Canadian Coast Guard within a Canadian geographical context
- Describe different careers with the Canadian Coast Guard (both seagoing and shore-based)
- ➢ Identify skills and educational requirements of careers with the Canadian Coast Guard

Materials Needed

- > Projector
- Personal devices (e.g., laptops, iPads) with Internet access and Chrome (1 per group to use for Google Earth)
- Canadian Coast Guard College
 Prerequisites by Province and Territory (provided)
- Canadian Coast Guard Service images (1 set to be passed around or projected) (provided)
- Canadian Coast Guard Services descriptions (1 copy to be projected) (provided)
- Canadian Coast Guard Career and Description cards (provided)
- Canadian Coast Guard Career
 Postings (1 set to be displayed in classroom or kept by teacher and handed out) (provided)
- Canadian Coast Guard Career worksheet (1 per group) (provided)

using Google Earth. Encourage students to use cardinal points (e.g., SE, NNE) when discussing Canada's coastline and Great Lakes.

Some questions for students to consider while in their groups:

- How long is Canada's coastline? It is about six times the length of the Earth's circumference! Canada's coastline is the longest in the world at about 243,000 kilometres, and the Canadian Coast Guard protects and secures it all.
- What are the "opening hours" of the Canadian Coast Guard? The Canadian Coast Guard works 365 days a year, 7 days a week, 24 hours a day.
- Where do you think you would find the Canadian Coast Guard? The Canadian Coast Guard operates throughout Canada, in oceans, waterways, and even on land and in the air (e.g., rescue operations using helicopters)!
- What do you think "protecting and securing" means for each of Canada's coasts?
- What impact do you think Canada's geography and natural environment have on the Canadian Coast Guard?
- What would the Canadian Coast Guard do on the northern coast of Canada that they may not do on the south western coast of Canada? *E.g., Icebreaking, re-supplying communities.*
- What issues do you think the Canadian Coast Guard has to handle throughout the year? Changing weather, changing industries, ice, sustainable water management (water traffic might be higher at certain times in the year), incidents surrounding pollution (certain materials might get transported through specific routes at different points throughout the year), seasonal types of search and rescue (a hunter may be trapped on an ice floe).
- With what members of the public/groups do you think that the Canadian Coast Guard interacts?

Action

Let students know that the Canadian Coast Guard's motto is "Safety First, Service Always," and that today, students will be exploring the various jobs and careers with the Canadian Coast Guard. Inform the class that the Canadian Coast Guard has more than 6,000 employees and provides many services to help keep Canada's waterways safe and protected. There are many careers within the Canadian Coast Guard that require different levels of education and training, and suit a variety of skills and interests. There is even a Canadian Coast Guard College located on Cape Breton Island, N. S., for officer training. This college program is four years long, with both sea phases and courses. Students accepted into the college receive a fully-funded education, inclusive of accommodations and meals.

To be admitted to the Canadian Coast Guard College for officer training, you must:

 Obtain 70 per cent or higher in required courses (see Canadian Coast Guard College - Prerequisites by Province)





CANADIAN COAST GUARD: SERVICES AND CAREERS



Connection to the Canadian Geography Framework

Concepts of Geographic Thinking

- Patterns and trends
- > Spatial significance
- Geographic perspective

Inquiry Process

- > Formulate questions
- □ Gather and organize
- ▷ Interpret and analyze

Geospatial Skills

Technologies

> virtual globes/digital Earth

- Satisfy the medical requirements for seagoing personnel (which includes vision and hearing requirements)
- Be able to train in respiratory protection with a breathing apparatus
- Be a Canadian citizen and have a valid Canadian passport
- Pass a criminal records check
- Pass a government security clearance
- Have a high school diploma

Have students think about specific services and roles of the Canadian Coast Guard. Explain that the Canadian Coast Guard helps to make sure that Canadians have accessible and safe waterways. Ask students what they think this means and what it entails. What type of tasks would someone working for the Canadian Coast Guard do? Have students discuss what types of services they think the Canadian Coast Guard provides (Ice Breaking, Aids to Navigation, Marine Communications and Traffic Services, Search and Rescue, Environmental Response, Waterways Management, Maritime Security). To help with their inquiry, pass around or project Canadian Coast Guard Service images.

After students have had a few minutes to discuss, project the **Canadian Coast guard services descriptions**. As a class, explore the services provided. Discuss which service description best matches each image, and write the number corresponding to the appropriate description in the box provided. Encourage a class discussion on the unique tasks of the different services.

Some possible questions for discussion are:

- How would Canada's environment (natural and human-made) impact a specific service? For example, what would a search and rescue call look like on different waterways in Canada?
- How would the tasks performed by these services shift with the seasons? For example, how would ice breaking in the north look different in winter versus summer?
- How do you think different services would be involved in the importing/ exporting of goods (such as food) to Canada?
- How are different services ensuring the protection of Canada's marine environment?
- Which of these services do you think has/have an impact globally?
- Discuss ways in which we, as residents of Canada, are affected (directly or indirectly) by the services provided by the Canadian Coast Guard?
- Since its founding in 1962, how do you think the responsibilities of the Canadian Coast Guard have changed?



Remove the **Canadian Coast guard services descriptions**. Next, explain to students that jobs and careers require unique sets of qualifications and skills. When looking at a job posting, you will often see:

- > A description of the types of duties that are expected to be performed
- > A list of academic training and/or professional development required for the position
- > Interests that an ideal candidate may have

Remind students that reading job descriptions closely will let the reader know if they are qualified for the job, or what they need in order to become qualified for the job. It also helps the reader assess if they may enjoy that career.

Inform students that there is a wide variety of careers within the Canadian Coast Guard and they are not all at sea, and perhaps not what you would expect at the Canadian Coast Guard. For example, an administrator is a shore-based career and their role is to carry out analyses, perform research and consultations, contribute to team projects, draw up documents (e.g., business plans), and carry out human resource tasks (e.g., hiring and supervising employees). The educational requirement for this role is a high school diploma. Qualities that would be considered an asset include: an ability to work as part of a team, excellent communication skills, and computer skills. Let students know that they will now be exploring other careers offered at the Canadian Coast Guard, learning about the educational requirements of those careers, and identifying the skills, qualifications, and interests of different careers.

Shuffle and distribute **Career and Description Cards** (one of either to each student). There are a total of 34 cards (17 in each category). Teachers can decide how many career and career description cards to give out depending on the size of their class. Ensure that matching career and description cards are given out. Give students a few minutes to read their card and think about:

- a. What types of duties would be involved with their career, or
- b. What type of career would fit the description on their card.

Now, allow students to circulate and try to find the career that matches the career description (or vice versa). Once they believe they have found their match, students should locate their corresponding **Job Posting**. The teacher has the option to hang these around the class or have them at their desk to hand out. Using information on the job posting, students should ensure that they have found the right match. Next, provide students with one of the following options:



- c. Have students work together to fill out the **Careers Worksheet**, which they will then present to the class, or
- d. Have students present their career first, and then complete a **Careers**Worksheet based on a career they found interesting.

Conclusion and Consolidation

Students should now have a good understanding of the different careers offered by the Canadian Coast Guard, the educational requirements of these careers, and the services provided by the Canadian Coast Guard. Have a group discussion about the Canadian Coast Guard and what students found interesting or surprising.

Some possible questions for discussion:

- What is one career you could envision yourself obtaining and why?
- What would be the advantages and disadvantages of working on a ship?
- What type of service provided by the Canadian Coast Guard do you think is the most important? Why?

Extend your geographical thinking

Encourage students to use Google Earth and Google Earth Timelapse to further explore changing coastlines and waters around the world. Students can think about how coast guard-like agencies in different countries would be similar or different from the Canadian Coast Guard.

Students can explore the Canadian Coast Guard website to learn more about the diverse services provided by this agency, how Canada's unique geography and environment influences those services, and how those services evolve throughout the year. On this website, students can also learn how the Canadian Coast Guard is contributing to environmental protection.

Students can visit the Canadian Coast Guard website to obtain more information on careers with the Canadian Coast Guard, including student jobs.

Modifications

If students do not have access to electronic devices, carry out the activity in the "Minds On" section by projecting Google Earth and leading a class discussion.

Instead of the career matching game in the "Action" section, teachers can divide the class into groups and distribute a career (from the **Career and Description Cards**) to each group. The teacher can then read out the career description and groups can discuss to decide if their career matches that description. The teacher should ensure that they read only the career description cards for the careers they passed



out. **Career Worksheets** can either be filled out as a class or students can complete a worksheet based on a career that interests them.

If teachers would like students to research Canadian Coast Guard services on their own or in small groups in the "Action" section, they can divide students into 7 groups and assign each student or group a Canadian Coast Guard service: Ice Breaking, Aids to Navigation, Marine Communications and Traffic Services, Search and Rescue, Environmental Response, Waterways Management and Marine Security. Visit the Canadian Coast Guard Levels of Service website for information on these services.

Strategic pairing: By Reviewing the **Career and Description Cards** ahead of time, the teacher can strategically hand out cards to ensure that certain students are in the same group.

Assessment Opportunities

- Teachers can observe and assess students' participation in, and contribution to, group work.
- Teachers can observe and assess students' use of Google Earth, their ability to draw conclusions from this technology, and their ability to communicate geographical information.
- Teachers can observe and assess students' use of geographic terminology, and their geographic thinking through group discussion and presentations.
- Teachers can assess students' understanding of careers in the Canadian Coast Guard through group presentations and the Careers Worksheet.
- Students can self-assess and peer-assess how group members and they themselves participated and contributed to group work.

Sources and Additional resources

Canadian Coast Guard

- Admission Requirements for the Officer Training Program ccg-gcc.gc.ca/college/admission-eng.html#_Course_prerequisites
- Aids to Navigation ccg-gcc.gc.ca/navigation/aids-aides/index-eng.html
- Aids to Navigation Program ccg-gcc.gc.ca/navigation/aids-aides/program-info-programme-eng.html
- Canadian Coast Guard ccg-gcc.gc.ca/







- Canadian Coast Guard College ccg-gcc.gc.ca/college/index-eng.html
- Environmental response program ccg-gcc.gc.ca/environmental-environnementale/program-information-prograMme-eng.html
- Icebreaking in Canada ccg-gcc.gc.ca/icebreaking-deglacage/program-programme-eng.html
- Levels of Service ccg-gcc.gc.ca/publications/corporation-information-organisation/levels-of-service-niveaux-de-service/ind ex-eng.html
- Mandate ccg-gcc.gc.ca/corporation-information-organisation/mandate-mandat-eng.html
- Marine Communications and Traffic Services Program Information ccg-gcc.gc.ca/mcts-sctm/program-info-programme-eng.html
- Maritime Security ccg-gcc.gc.ca/maritime-security-surete-maritime/index-eng.html
- Officer Training Program
 ccg-gcc.gc.ca/college/officer-training-formation-officier/index-eng.html
- Search and Rescue Program Information ccg-gcc.gc.ca/search-rescue-recherche-sauvetage/program-info-programmeeng.html
- Student Jobs ccg-gcc.gc.ca/careers-carrieres/student-job-emplois-etudiants-eng.html
- Waterways Management Program ccg-gcc.gc.ca/navigation/waterways-voies-navigables/program-infoprogrammE-eng.html

Google Earth

- Google Earth google.com/earth/
- Google Earth Timelapse earthengine.google.com/timelapse/

Government of Canada

Jobs canada.ca/en/services/jobs/opportunities/government.html



Information on the marine industry standard requirements, certificates, and licenses (issued by Transport Canada):

- Canada Shipping Act (laws-lois.justice.gc.ca/eng/acts/c-10.15/)
- Marine Personnel Regulations (laws-lois.justice.gc.ca/eng/regulations/sor-2007-115/)

Lesson plan adapted from:

Canadian Coast Guard (n.d.). How Important Are Skills in a Career or Job? [PowerPoint].

Additional Information and Positions:

Positions on Canadian Coast Guard vessels are divided into Ship's Crew and Ship's Officers. Each of these departments then has different sub-departments. All positions work together to make the day-to-day and overall operations on board the vessel run smoothly.

Ship's Crew:

The ship's crew is made up of the deck crew and the logistics crew. The positions in these sub-departments are primarily involved in the fabrication, maintenance, repair, operation and protection of vessels, including equipment upkeep, provision of food and personal services.

Ship's Officers:

The officers' positions primarily involve on-board command and control of the operation of a vessel. The ship's officers include deck (including navigation), engineering and logistics officers.

See the descriptions of each position in the job descriptions provided.

There are many other positions within the shore-based and seagoing personnel of Canadian Coast guard, and Fisheries and Oceans Canada. If your students are interested in a marine related, or seagoing career outside of the traditional crew positions, consider the positions below:

- Scientists *
- Conservation and protection specialists *

*These positions work with the Canadian Coast Guard, but are not Canadian Coast Guard jobs. Also, note that fishing officers within the Canadian Coast Guard are officers who specialize in fishing operations in support of the Department of Fisheries and Oceans (DFO) sciences. Conservation and protection officers are there to monitor waterways and, if necessary, prosecute illegal fishing activities at sea and ashore.

More information about these and other positions can be found on the Canadian Coast Guard and/or Government of Canada website.





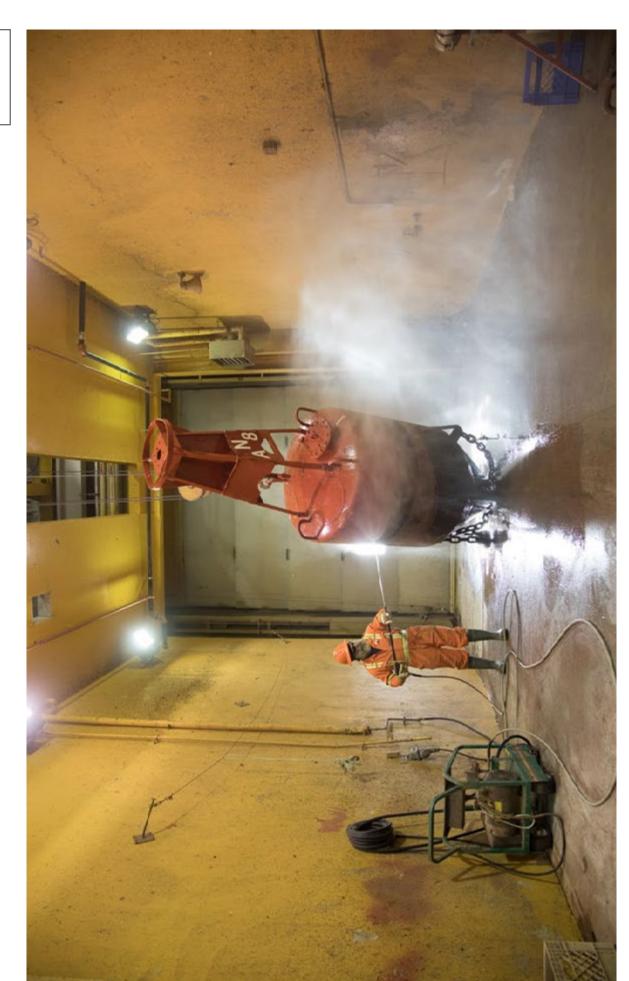
CANADIAN COAST GUARD: SERVICES AND CAREERS



CANADIAN COAST GUARD COLLEGE - PREREQUISITES BY PROVINCE AND TERRITORY

Province	Chemistry	Physics	Advanced Math	English or French
Alberta, Northwest Territories, and Nunavut	Chemistry 20	Physics 30	Math 30-1 or 31	English or French 30-1
British Columbia and Yukon	Chemistry 11	Physics 12	Pre-Calculus 12	English or French 12
Manitoba	Chemistry 30S	Physics 40S	Pre-Calculus 12	English or French 40S
New Brunswick (English sector)	Chemistry 111 or 112	Physics 121 or 122	Pre-Calculus A120 & B120 or Calculus 120	English 121 or 122
New Brunswick (French sector)	Chemistry 52311	Physics 51421 or 51411	Math 30421C or 30411C	French 10411 or 10421
Newfoundland and Labrador	Chemistry 2202	Physics 3204	Math 3200 or 3208	English or French 3201
Nova Scotia	Chemistry 11	Physics 12	Pre-Calculus 12	English or French 12
Ontario	Chemistry SCH3U	Physics SPH4U	Math MCV4U or MHF4U	English ENG4U or French FRA4U
Prince Edward Island	Chemistry 521A	Physics 621A	Math 621B or 611B	English or French 621A
Quebec	Chemistry 534 (051504)	Physics 534 (053504)	Math - Technical Science (064506) or Math, Natural Science (065506)	English or French (132506)
Saskatchewan	Physical Science 20	Physics 30	Pre-Calculus 30	English or French A30 and B30

AIDS TO NAVIGATION





DESCRIPTION #:

ICE BREAKING



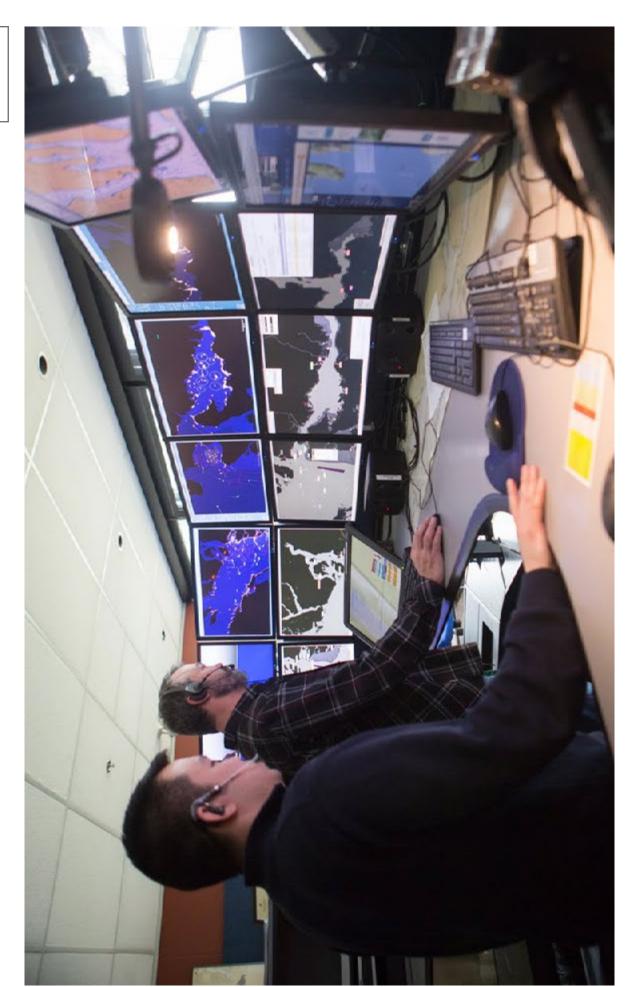






MARINE COMMUNICATIONS AND TRAFFIC SERVICES

DESCRIPTION #:

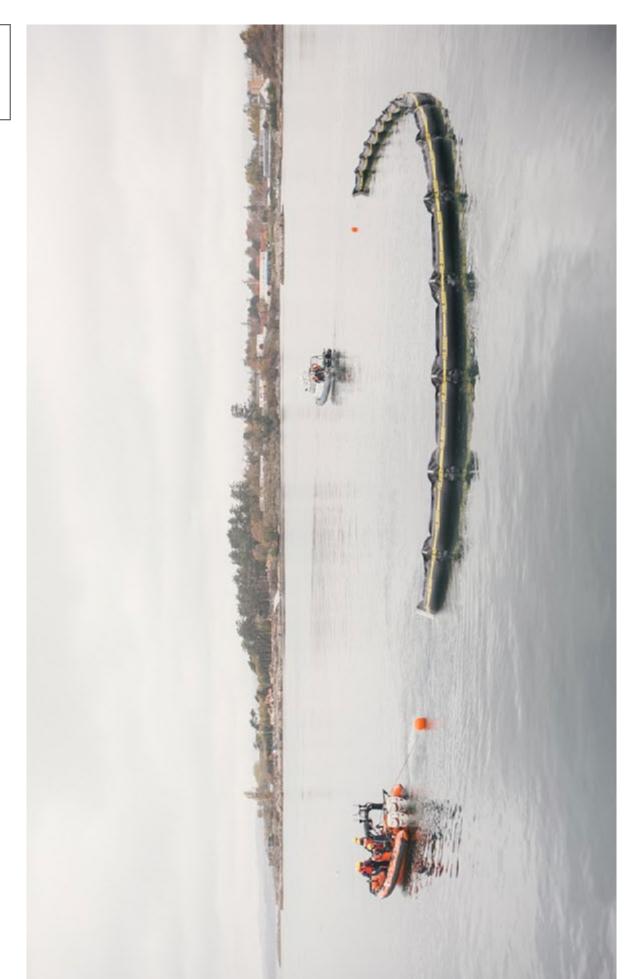


MARITIME SECURITY

DESCRIPTION #:

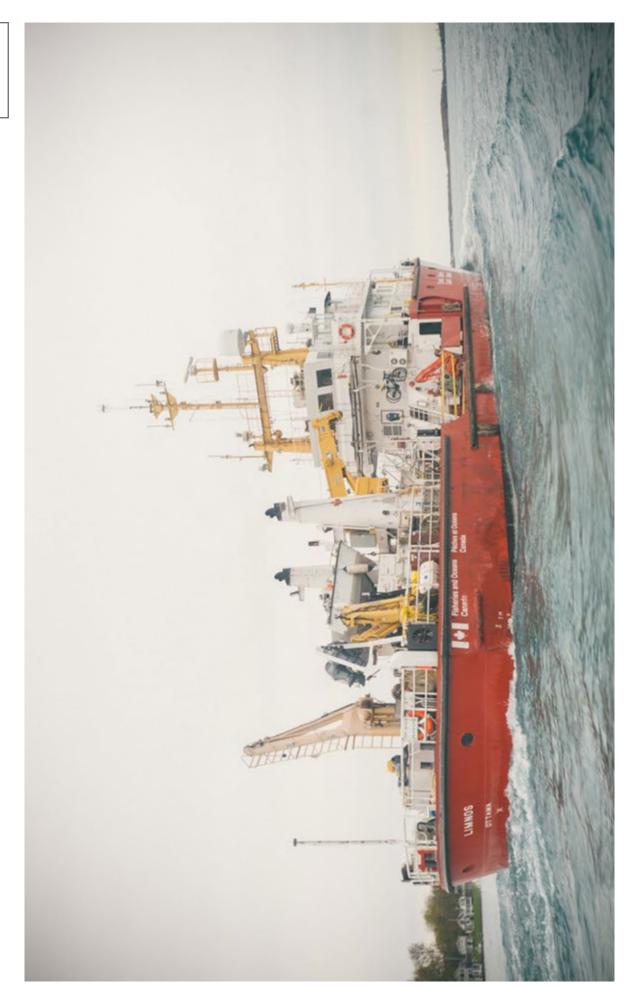


ENVIRONMENTAL RESPONSE



WATERWAYS MANAGEMENT

DESCRIPTION #:

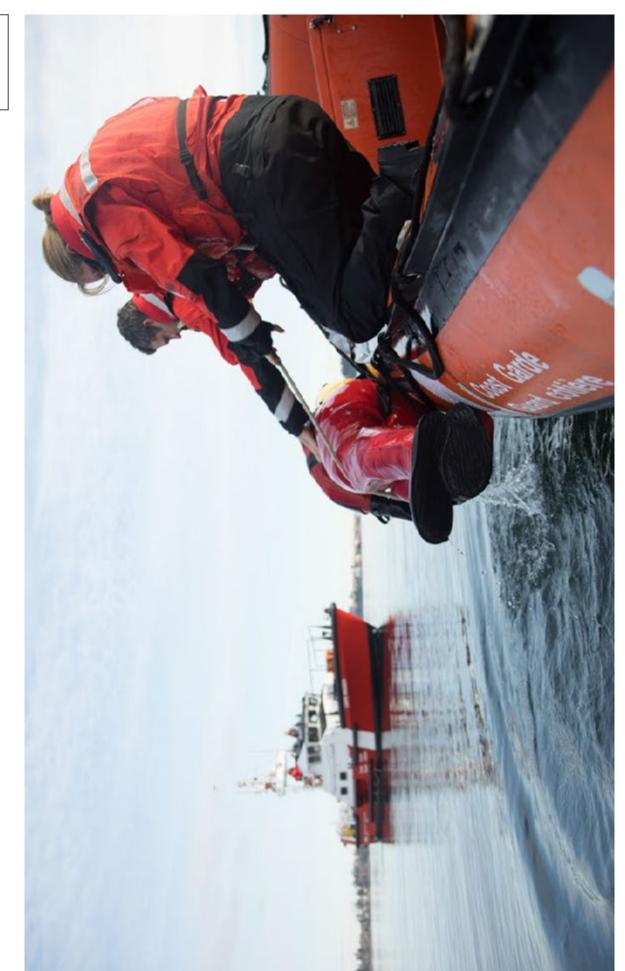






SEARCH AND RESCUE

DESCRIPTION #:



CANADIAN COAST GUARD SERVICE DESCRIPTIONS

- Breaks up ice to allow safe travel through waters from December to May (on Canada's eastern coast), and from June to November (in the Arctic). Important in flood control and allows most Canadian ports to stay open all year.
- Helps mariners confirm their positions, stay inside navigable channels, and avoid marine hazards through the use of buoys, global positioning system stations, lights and fog signals. Issues navigational warnings (NAVWARNs) to keep mariners informed about issues affecting these systems and signals.
- Assists people, vessels and aircrafts that are in imminent danger. These services include responding to and assisting in maritime and aeronautical incidents, alerting and communication services through Marine Communications Traffic Services and coordinating rescue operations.
- Provides safety communication services by radio, manages vessel traffic through Canadian waterways, gives information that supports marine activities, screens vessels entering Canadian waters, and has 24/7 commercial marine telephone call service through 12 centres nationwide.
- Focuses on reducing the impacts of marine pollution in Canadian waters on public safety, the economy, and the environment by responding to marine spills, conducting response planning and exercises, and working with industry to ensure plans are in place in case of incidents.
- Helps to ensure that ships can move safely though Canadian waterways. This includes managing channel bottom (i.e., river bed) surveys by arranging dredging for the St. Lawrence River shipping channel, managing structures that prevent the formation of ice jams, and dredging Canadian portions of channels connecting to the Great Lakes. Provides guidelines for channel design and use based on international standards.
- Works with national and internal public partners, aims to bring awareness to possible maritime threats, and supports on-water law enforcement and responsiveness using Canadian Coast Guard's fleet, on-water expertise, and extensive vessel monitoring systems.

CANADIAN COAST GUARD SERVICE ANSWER KEY

AIDS TO NAVIGATION (ATON)	DESCRIPTION #:	2
ICE BREAKING	DESCRIPTION #:	1
MARINE COMMUNICATIONS AND TRAFFIC SERVICES (MCTS)	DESCRIPTION #:	4
MARITIME SECURITY	DESCRIPTION #:	7
ENVIRONMENTAL RESPONSE (ER)	DESCRIPTION #:	5
WATERWAYS MANAGEMENT	DESCRIPTION #:	6
SEARCH AND RESCUE (SAR)	DESCRIPTION #:	3

CARDS CANADIAN COAST GUARD CAREER AND DESCRIPTION



DECKHAND

Supports navigational officers by carrying out shipboard duties such as steering, lookout, painting, small vessel maintenance and operations, and more to support the vessel's duties and role.

CAREER

CAREER DESCRIPTION

TWINEHAND

Oversees deckhand (another deck crew position) duties, supports navigation and fishing officers by maintaining nets and lines, lifting gear, and maintaining deck organization for science-based fishing operations.

CAREER

CAREER DESCRIPTION

Supports navigation officers as the key senior position of the deck crew. Oversees all key deck activities such as anchor and tackle operations and maintenance, small vessel maintenance, stowage, and planning the work of the deck crew and training to support the vessel's duties.

BOATSWAIN (PRONOUNCED 'BOSUN')

CARDS CANADIAN COAST GUARD CAREER AND DESCRIPTION

CAREER DESCRIPTION CAREER

RESCUE SPECIALIST

This role is played by one or two deckhands (another deck crew position) with specific training on board a ship. They conduct actual rescue and rescue planning operations at sea, including medical aid, disaster relief, and training.

COMMANDING OFFICER (CAPTAIN)

duties to support the ship's duties.

CAREER DESCRIPTION

all aboard. Oversees the safe conduct of the vessel,

Holds command and authority of the vessel and

CAREER DESCRIPTION

planning routes, restocking supplies, training the crew and ensuring their safety, and administrative

Supports the captain by being responsible for planning the ship's passage, its conduct while at sea, and ensuring that maintenance, training, and safety protocols are updated and met.

MARINE NAVIGATION OFFICER

CANADIAN COAST GUARD CAREER AND DESCRIP

CAREER DESCRIPTION	
CAREER	

CHIEF MARINE ENGINEER

Supports the captain by overseeing the operation and maintenance of all machinery equipment and systems (e.g. propulsion plant, mechanical, refrigeration, electrical) aboard, at sea and ashore, as well as managing the work, training, and well-being of the engineers.

CAREER DESCRIPTION

Supports the chief marine engineer by operating and maintaining mechanical and electrical equipment on the vessel such as the propulsion plant, pumps, generators, and fuel, refrigeration, and hydraulic systems.

MARINE ENGINEERING OFFICER

CAREER DESCRIPTION

STEWARD

Supports the chief cook by performing housekeeping duties for officers on board, including serving meals and cleaning cabins and common areas.

CANADIAN COAST GUARD CAREER AND DESCRIP

CAREER DESCRIPTION	
CAREER	

Supports the logistics officer in assisting with financial responsibilities and human resource duties, inventory tracking, communicating with suppliers, and travel arrangements.

STOREKEEPER

CAREER

Supports the logistics officer by managing the galley (i.e., the vessel's kitchen) operations, including meal planning, ordering supplies, galley cleaning,

CAREER DESCRIPTION

and preparing meals for officers and crew, as well as

managing stewards and second cooks (if any).

CHIEF COOK

CAREER DESCRIPTION

Supports the chief cook by preparing meals and snacks for officers and crew and maintaining a clean galley (i.e., the vessel's kitchen).

CARDS CANADIAN COAST GUARD CAREER AND DESCRIPTION

CAREER DESCRIPTION CAREER

LOGISTICS OFFICER

Supports the captain by overseeing the vessel's logistics department, including provisioning (restocking supplies), stores, sanitation protocol, galley (the vessel's kitchen) operations, and shipboard finances, as well as managing the work, training, and welfare of the cooks, storekeepers, and stewards.

CAREER

ELECTRONICS TECHNOLOGIST

Maintains and updates electronics and computer systems, both ship and shore-based (e.g. communication control systems, electronic navigation equipment).

CAREER DESCRIPTION

MARINE COMMUNICATIONS AND TRAFFIC SERVICES OFFICER (MCTS)

Using shore-based radios and radar, responds to mariners' calls for help, maintains separation between vessels at sea by managing vessel traffic and provides communication between vessels and the shore.

CAREER DESCRIPTION

CARDS CANADIAN COAST GUARD CAREER AND DESCRIPTION

CAREER

CAREER DESCRIPTION

ENGINEER (CIVIL, MECHANICAL, ELECTRONIC, AND ELECTRICAL) - SHORE BASED

Oversees and/or manages a variety of engineering duties ashore, including but not limited to vessel maintenance, engineering design and maintenance, electronic platform or gear maintenance.

CAREER

CAREER DESCRIPTION

ENVIRONMENTAL RESPONSE SPECIALIST

Responds to marine-based pollution spills, prepares for spill exercises and plans for responding to spills, and works with public and private partners to assist with emergency planning.



Complete questions about your career below. NAME(S) CAREER TITLE 1. Is your career (circle one) shore-based? seagoing or 2. If your career is seagoing, are you (circle one): an officer deck crew logistics crew **3.** Give a brief job description of your career. **4.** What are the educational requirements and professional experience required for your career? 5. What qualities and interests are required/best-suited for your career? **6.** Is there anything else you think your classmates should know about this career? Why did you choose this career? Could you see yourself pursuing this career?

Job Title

DECKHAND

Job Description

A deckhand is part of the deck crew and is a seagoing career. This position involves carrying out shipboard duties such as steering, lookout, painting, small vessel maintenance and operations, as well as other tasks to support the vessel's duties and role.

Academic training and professional development

To be considered for this career, you must:

- Have a high school diploma
- Meet all of Transport Canada's marine industry standard requirements
- Complete Marine Emergency Duties (MED) training certificate
- Complete a Bridge Watch Training course at a Transport Canada approved marine school and do the written exam for certifications
 - A Bridge Watch Training Program will provide you with MED training, allow you to become familiar with tankers, gain sea experience, and provide hands-on training, all while gaining relevant academic skills. This course is offered across Canada.

Qualities and interests that are essential for the career

- Enjoy working as part of a team
- Are in good physical health and able to carry out manual work (e.g., heavy lifting)

Job Title

TWINEHAND

Job Description

A twinehand is a seagoing career and is part of the deck crew. In addition to performing leading deckhand (another deck crew position) duties, this position involves a specialized role in maintaining nets and lines, lifting gear, and deck organization in support of science-based fishing operations.

Academic training and professional development

To be considered for this career, you must:

- Complete Marine Emergency Duties (MED) training
- Gain fishing experience as a twinehand/leading deckhand on a coast guard fishery vessel during operational periods or as a deckhand on a commercial stern trawler fishing vessel.

Qualities and interests that are essential for the career

- Are in good physical health
- Are skilled in manual work, particularly with knots, nets, and lines
- Are resourceful.
- Take initiative

Job Title

BOATSWAIN

Job Description

A boatswain (pronounced 'bosun') is a seagoing career and is part of the deck crew. As the most senior position of the deck crew, it involves overseeing all key deck activities, such as anchor and tackle operations and maintenance, small vessel maintenance, stowage, and planning deck crew work and training in support of the vessel's duties.

Academic training and professional development

To be considered for this career, you must:

- Have a high school diploma
- Meet all of Transport Canada's marine industry standard requirements
- Complete Marine Emergency Duties (MED) training
- Complete a Bridge Watch Training course at a Transport Canada-approved marine school and do the written exam for certifications
 - A Bridge Watch Training Program will provide you with MED training, allow you to become familiar with tankers, gain sea experience, and provide hands-on training, all while gaining relevant academic skills. This course is offered across Canada.

Qualities and interests that are essential for the career

- Are in good physical health and able to carry out manual work (e.g., heavy lifting)
- Are resourceful.
- Take initiative

Job Title

RESCUE SPECIALIST

Job Description

A rescue specialist is a seagoing position that is part of the deck crew. The duties could involve providing emergency care (before the hospital) in difficult maritime conditions. It involves running actual rescue and rescue planning operations at sea, including medical aid, disaster relief, and training. Rescue specialists are regular ship's crew members who volunteer to undergo the rescue specialist training while carrying out the duties required in their position on board the vessel.

Academic training and professional development

To be considered for this career, you must:

- Be an employee of the Canadian Coast Guard
- Have passed a seafarer's medical assessment as 'fit with no limitations'
- Hold a certificate in Marine Basic First Aid (within three years) and Cardiopulmonary Resuscitation (CPR) (within one year)
- Complete the initial training once hired, taking place over a three-week period, which is valid for three years

Qualities and interests that are essential for the career

- Strong dependability
- Strong seamanship skills
- Problem-solving skills

Job Title

COMMANDING OFFICER (CAPTAIN)

Job Description

A commanding officer is a seagoing career. The commanding officer holds command and authority of the vessel and all aboard by overseeing the safe conduct of the vessel, planning routes, restocking supplies, training the crew and ensuring their safety, and carrying out administrative tasks to support the ship's duties.

Academic training and professional development

To be considered for this career, you must:

- Complete a four-year program at the Canadian Coast Guard College and work your way up over time
- Or work your way up over time by gaining sea time, experience on ships, and complete Transport Canada exams and certifications required for a Commanding Officer
- Required licenses:
 - Master, Near Coastal or Canadian Coast Guard Command
 - SAR (Search and Rescue)

Qualities and interests that are essential for the career

- Capable of thinking mathematically and systematically
- Able to use sound judgement
- Well organized
- Are able to communicate effectively and lead a team

Job Title

MARINE NAVIGATION OFFICER

Job Description

A marine navigation officer is a seagoing career. This position supports the captain by being responsible for ship's passage planning, its conduct at sea, and ensuring that maintenance, training, and safety protocols are updated and met. This position helps to safely navigate the ship in all weather and marine conditions.

Academic training and professional development

To be considered for this career, you must:

- Complete a four-year program at the Canadian Coast Guard College
- Or complete a recognized Transport Canada program at another college
- Work your way up over time by gaining experience at sea and completing Transport Canada exams and certifications
- Required license: Watchkeeping Mate, Near Coastal or Canadian Coast Guard Watchkeeping

Qualities and interests that are essential for the career

- Capable of thinking mathematically and systematically
- Able to use sound judgement
- Well organized
- Able to communicate effectively and lead a team

Job Title

CHIEF MARINE ENGINEER

Job Description

A chief engineer is a seagoing officer career that is head of the engineering department. This position involves overseeing the operation and maintenance of all machinery equipment and systems (e.g. propulsion plant, mechanical, refrigeration, electrical), at sea and ashore, as well as managing the work, training, and well-being of the engineers.

Academic training and professional development

To be considered for this career, you must:

- Complete a four-year program at the Canadian Coast Guard College or complete a recognized
 Transport Canada program at another college
- Be employed on a ship, where you can gain experience over time and gradually advance your career by completing Transport Canada exams and certifications
- Required license: Third Class Motorship (minimum)

Qualities and interests that are essential for the career

- Strong in mathematics and physics
- Well organized
- Adaptable
- Detail oriented

Job Title

MARINE ENGINEERING OFFICER

Job Description

A marine engineering officer is a seagoing career that includes a variety of supervisory positions. This position involves supporting the chief marine engineer by operating and maintaining mechanical and electrical equipment such as the propulsion plant, pumps, generators, fuel, refrigeration, and hydraulic systems.

Academic training and professional development

To be considered for this career, you must:

- Complete a four-year program at the Canadian Coast Guard College or complete a recognized
 Transport Canada program at another college
- Be employed on a ship, where you can gain experience over time and gradually advance your career by completing Transport Canada exams and certifications
- Required license: Fourth Class Motorship

Qualities and interests that are essential for the career

- Strong in mathematics and physics
- Organized
- Adaptable
- Detail oriented

Job Title

STEWARD

Job Description

A steward is a seagoing career and is considered part of the logistics crew. This position includes supporting the chief cook by performing housekeeping duties for officers onboard the vessel, including serving meals and cleaning cabins and common areas.

Academic training and professional development

To be considered for this career, you must:

- Have experience in the hospitality or food industry, or janitorial experience
- Required certifications:

 - First Aid, Marine First Aid, and Advanced First Aid

Qualities and interests that are essential for the career

- Enjoy providing excellent service
- Are well organized

Job Title

STOREKEEPER

Job Description

A storekeeper is a seagoing career and is part of the logistics crew. This position includes assisting with staff and financial responsibilities, inventory tracking, communicating with suppliers, and travel arrangements.

Academic training and professional development

To be considered for this career, you must:

- Have a high school diploma
- Have experience at sea (minimum three months)
- Required certifications:

 - First Aid, Marine First Aid, and Advanced First Aid

Qualities and interests that are essential for the career

- Enjoy providing excellent service
- Are well organized
- Are detail oriented

Job Title

CHIEF COOK

Job Description

A chief cook is a seagoing career and part of the logistics crew. This position involves managing galley (i.e., the vessel's kitchen) operations, including meal planning, ordering supplies, galley cleaning, and preparing meals for officers and crew, as well as managing stewards and second cooks (if any).

Academic training and professional development

To be considered for this career, you must:

- Complete a marine cooking program from a recognized institution (Ship's Cook or Provincial Standard)
- Work your way up over time by gaining experience as a cook through cook positions
- Required certifications:

 - First Aid, Marine First Aid, and Advanced First Aid

Qualities and interests that are essential for the career

- Enjoy providing excellent service
- Are well organized

Job Title

COOK

Job Description

A cook is a seagoing career and is part of the logistic crew. This position supports the chief cook by preparing meals and snacks for officers and crew and maintaining a clean galley (i.e., the vessel's kitchen).

Academic training and professional development

To be considered for this career, you must:

- Complete a marine cooking program from a recognized institution (Ship's Cook or Provincial Standard)
- Required certifications:

 - First Aid, Marine First Aid, and Advanced First Aid

Qualities and interests that are essential for the career

- Enjoy providing excellent service
- Are well organized

Job Title

LOGISTICS OFFICER

Job Description

A logistics officer is a seagoing career and is head of the logistics department. This position oversees the vessel's logistics department, including provisioning (restocking supplies), stores, sanitation protocol, galley (the vessel's kitchen) operations, and shipboard finances, as well as managing the work, training, and well-being of the cooks, storekeepers, and stewards.

Academic training and professional development

To be considered for this career, you must:

- Get a Logistics Certificate (a training course provided by the Canadian Coast Guard College)
- Obtain some experience in a logistics department

Qualities and interests that are essential for the career

- Good financial management skills
- Organizational skills
- Attention to detail

Job Title

ELECTRONIC TECHNOLOGIST

Job Description

An electronics technologist is a shore-based career. It involves maintaining and updating operational electronics and computer systems, both ship and shore-based (e.g. communication control systems, electronic navigation equipment).

Academic training and professional development

To be considered for this career, you must:

- Successfully complete the three-year marine electronic development training at the Canadian Coast Guard College
- Meet the minimal requirements to apply, which include:
 - A high school diploma
 - A degree/diploma in electronics technology from an accredited post-secondary institution

Qualities and interests that are essential for the career

- Strong in mathematics and physics
- Organized
- Detail oriented
- A problem solver
- Computer literate

Job Title

MARINE COMMUNICATIONS AND TRAFFIC SERVICES OFFICER (MCTS)

Job Description

A career in Marine Communications and Traffic Services (MCTS) is a shore-based career. Using shore-based radios and radars, this position responds to mariners' calls for help, maintains separation between vessels at sea by managing vessel traffic, and provides communication between vessels and the shore.

Academic training and professional development

To be considered for this career, you must:

- Complete MCTS Officer Training, which is offered only at the Canadian Coast Guard College
 - This 25-week program (offered in French and English) consists of mixed theory and practical classes that replicate real-life situations. Upon completion of the program, students do three to six months of on-the-job training at an MCTS Centre to become certified as an MCTS officer.

Qualities and interests that are essential for the career

- Have excellent oral communication skills
- Are bilingual (where applicable)
- Are able to multitask
- Can type 30 words per minute

Job Title

ENGINEERS (CIVIL, MECHANICAL, ELECTRONIC, AND ELECTRICAL)

Job Description

Civil, mechanical, electronic and electrical engineers are shore-based careers. This career category can include a range of different engineering positions ashore. These positions can oversee and/or manage a variety of engineering duties ashore, including but not limited to vessel maintenance, engineering design and maintenance, electronic platform or gear maintenance.

Academic training and professional development

To be considered for this career, you must:

- An engineering degree from a recognized post-secondary institution
- Engineering experience
- Required Certifications:

 - Red Seal Trade certification or Transport Canada First, Second or Third Class Motorship
 - > Transport Canada Second Class Marine Engineering certification (or higher)
 - Canadian Coast Guard Electrical Certificate

Qualities and interests that are essential for the career

- Strong in mathematics and physics
- Organized
- Detail oriented
- A problem solver
- Computer literate

Job Title

ENVIRONMENTAL RESPONSE SPECIALIST

Job Description

An Environmental Response Specialist is a shore-based career. This position involves responding to marine-based pollution spills, preparing for spill exercises and planning the response to spills, and working with public and private partners to assist with emergency planning.

Academic training and professional development

To be considered for this career, you must:

- A diploma from the following, or similar programs:
- A Radio Operators certification (maritime) or higher
- A Small Vessel Operators Certificate (SVOP)
- An ICS Certification
- A Marine certificate

Qualities and interests that are essential for the career

For this career, it is important that you are:

- Planning skills
- Problem solving skills
- Organization skills
- An interest in environment issues

Students who participate in two work terms through the Environmental Response Federal Student Work Experience Program (FSWEP) gain most of the experience and qualifications needed to be hired into a Response Specialist position upon graduation.