ADOPT A SHIP

Connecting Classrooms to the Canadian Coast Guard

Activity Booklet

Junior Crew Member Name: _____

Ship: _____

Presented by: Canadian Geographic Education and the Canadian Coast Guard

ROYAL CANADIAN GEOGRAPHICAL SOCIETY

Canadian Geographic EDUCATION

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WELCOME ABOARD

Welcome aboard!

A message from the Commissioner of the Canadian Coast Guard

Thank you for participating in our Adopt A Ship program. By virtually joining our crew, you will get to learn about what we do at the Canadian Coast Guard. We are excited to have you with us on this journey.!

The Canadian Coast Guard ships sail throughout three ocean basins (the Atlantic, Pacific and Arctic), the St. Lawrence waterway, and the Great Lakes. We have 243,000 kilometres of coastline, which is the longest in the world — long enough to go around the Earth six times! It is the role of the Canadian Coast Guard to make sure our waters and coastlines are clean, safe, healthy, and can be enjoyed by Canadians for many years to come.

We have more than 6,000 people working with the Coast Guard doing a variety of jobs. We have at-sea careers, such as mechanics, electricians, cooks, captains, engineers, and riggers, as well as careers ashore, such as instructors, administrative assistants, program policy analysts, marine communications, traffic services officers, and many more.

Coast Guard's employees put markers in the water to help boats find their way, oversee the clean-up of oil spills in the water, break up ice in the winter to keep water from flooding our homes and to help ships get to ports, break up ice in the Arctic in the summertime to escort sealifts bringing goods ashore, help people who run into trouble on the water, and save them when they are in danger. However, that does not mean everything we do is on the water.

Think of all the things you have at home: your tablet, computer, your gaming system, refrigerator, television, and even the clothes and shoes you wear. All these items probably came to Canada by boat from another country. There are thousands of ships that come to Canada each year. Part of our job is to keep them safe by making sure they don't bump into each other on the water and take turns to come to port so they can bring us our stuff! This is the role of our marine communications and traffic services officers. They are like police officers who are providing directions to cars when traffic lights are not working.

To make this all happen, the Coast Guard needs good people to do what we do, and we're always looking for more people to join us. Regardless of your background, race, culture, religious belief, gender, or abilities, we celebrate diversity and promote inclusion. The Canadian Coast Guard College teaches people how to work on one of our ships, even if they've never been on a boat before! The college is open to anyone who wants to join the Coast Guard. In fact, I attended the college and worked as a marine engineer before I became Commissioner.

I hope the Adopt A Ship program will give you a chance to see who we are and what life is like in the Coast Guard. I hope you enjoy this program and I encourage you to please ask a lot of questions. Our people love to talk about what we do because they are proud of their work and love working for the Canadian Coast Guard.

In the meantime, I invite you to visit our E-Book where you will find an interactive history of the Canadian Coast Guard.

Mario Pelletier
Commissioner

Joining the *Terry Fox*

Congratulations on being selected as one of the *Terry Fox*'s honorary crew members!

In the coming weeks, you will have an opportunity to explore many different topics related to the Canadian Coast Guard (CCG) and the various roles the CCG plays in Canada.

Quick facts about the *Terry Fox*

The ship's namesake	CCGS *Terry Fox* was named for Terrance Stanley Fox (1958-1981). Born in Winnipeg, Man., Terry Fox was an accomplished athlete before losing his leg to cancer at the age of nineteen. In 1980, Fox began the Marathon of Hope, a cross-country run to raise money for cancer research. Although he was unable to finish, his legacy continues in the annual Terry Fox Run, the world's largest one-day fundraiser for cancer research. The youngest person ever to be named a Companion in the Order of Canada, Fox is considered a national hero, and to date, more than 800 million dollars have been raised in his name for cancer research.
Program (the ship's main tasks)	The *Terry Fox* is a heavy icebreaker vessel. This means that its main job is to make sure that marine traffic moves safely through or around ice-covered waters. In fact, the *Terry Fox* can move through ice that is 1.2 metres thick at the speed of 3 knots (about 6 km/h). This vessel operates in the Gulf of St. Lawrence during the winter and in the eastern Arctic in the summer. Fun fact: In 2014, the *Terry Fox* was one of the first government ships to reach the North Pole in 20 years! Check out this cool video of the *Terry Fox* breaking through ice northeast of Greenland.
People on board	There are 23 crew members on board (called a "complement"). Amongst these members, 10 are officers and 13 are crew. The officers are the ones in charge. The most senior officer is the Commanding Officer (also called the Captain); they are in charge of the entire ship and all of the crew.
Home port	The vessel's home port is St. John's, Newfoundland and Labrador. This is the port to which the ship always returns. Can you locate St. John's on a map?
Size	This vessel is 88 metres long and 17.8 metres wide — that's about eight school buses in length and two school buses across! If you get the chance, go outside and use a measuring tape or a ruler to get a sense of how long and wide the vessel is.

How to use this activity book

In each section, you will:

1. READ through the information about different topics related to the CCG
2. COMPLETE the activities on each topic
3. WRITE a journal entry to show what you've learned
4. BRAINSTORM questions about each section's topic to ask your vessel
5. TRACK your vessel as you progress through each section
    - You will use www.marinetraffic.com to try to find your vessel. You will be following this vessel until the end of the program. If your vessel does not appear, that's okay! You can ask your teacher for help.
    - Once you select a vessel, you will record its coordinates and location on the map of Canada at the end of every section of your booklet. You can find the coordinates when you hover over your vessel on the interactive map.

1. WHAT IS THE CANADIAN COAST GUARD?

This section will be about getting familiar with the CCG—what the organization does, what your specific ship does on a daily basis, and how the organization helps serve all Canadians.

Task 1: What is the Canadian Coast Guard?

Using the word bank below, fill in the blanks to find out!

sustainable	**waterways**	**land**	**air**
longest	**Fisheries**	**protects**	**helicopters**

The Canadian Coast Guard, an agency of the Department of _____ and Oceans Canada, works 365 days a year, seven days a week, 24 hours a day to keep Canada's _____ safe, secure and accessible. They also have a role in ensuring that Canadian waterways are used in a _____ manner. Canada's coastline is the _____ in the world at about 243,000 kilometres, and the Canadian Coast Guard _____ and secures it all. They do their work not only on oceans but throughout Canada's waterways, and even on _____ and in the _____ . Some ships can even carry _____!

Task 2: What does the Canadian Coast Guard do?

The CCG provides many services that make sure that vessels can safely access and travel through Canadian waterways.

Write the correct term next to the definitions listed below to find out what the CCG does.

	Taking care of buoys, lights, fog signals, and global positioning system (GPS) stations, which help vessels travel safely on the water and avoid hazards
	Breaking up ice in waterways to control flooding and helping other vessels travel safely through icy waters
	Responding to pollution and spills in the water and helping to reduce the impact of these spills
	Providing safety communication services by radio and helping manage vessel traffic
	Performing different tasks to make sure that ships can move safely through waterways
	Working to bring awareness to possible threats on the water and supporting law enforcement
	Responding to people, vessels, and aircraft that are in imminent danger

A. Ice-breaking

B. Aids to navigation

C. Search and rescue

D. Marine communications and traffic services

E. Waterways management

F. Maritime security

G. Environmental response

Task 3: A day in the life

What you'll need:

A pencil and pencil crayons or markers

Instructions:

Using the information you just learned about the CCG and the quick facts sheet on page 5, draw a picture in the space provided below of what you think a day in the life of a crew member would be like aboard this ship. Here are some ideas to get you started:

- What is your ship doing? Ice-breaking? Search and rescue?
- What do you think your crew member would be wearing?
- Is there room on your ship for a helicopter?
- What does the outside of the ship look like? How big is your ship?
- What safety equipment would you see on board?
- What tasks might the crew member be doing on board the ship?

A day in the life:

Task 4: Journal

It's time to think about what you have learned and come up with questions to ask the crew on your vessel. What questions came to mind as you were learning about your ship?

The most interesting thing I learned today:

_____

_____

_____

My questions:

_____

_____

_____

_____

Task 5: Track your vessel

Time to track your vessel! Go to www.marinetraffic.com and find your vessel.

What are my vessel's coordinates? _____

What body of water is my vessel located in? _____

Identify the coordinates of your vessel as a point on the map at the end of your booklet. You will be recording the location of your ship until the end of the program.

Don't forget to label your plotted points on the map with a time and date! Try making a legend to organize your points.

2. GETTING TO KNOW THE CREW AND VESSEL

All 23 crew members on the *Terry Fox* are important. Think of all the positions on a sports team or an orchestra. Each player has a special role. What is your favourite position on a team?

Some members on board the vessel have spent time learning and being trained at the Canadian Coast Guard College. At the college, they learned about the skills and information needed to work on board the vessel.

Task 1: Working on the *Terry Fox*!

It's time to learn about what it takes to become a member of the crew on your vessel!

Take some time to explore the links of the crew member roles below. Think about what each of these people do on your vessel and what they need to succeed in that role. Which job interests you the most?

In a group, focus on **one** of the crew member roles and write some notes on the job's description and the things you need to succeed using the information found in the website link provided.

Crew member roles	My notes
Navigation Officer	**What is the job description?** **What skills and education do I need to succeed in this role?**
Marine Engineering Officer	**What is the job description?** **What skills and education do I need to succeed in this role?**

2. GETTING TO KNOW THE CREW AND VESSEL

Crew member roles	My notes
Logistics Officer	**What is the job description?** **What skills and education do I need to succeed in this role?**
Deck hand, Quartermaster, Boatswain	**What is the job description?** **What skills and education do I need to succeed in this role?**
Cook and/or Steward	**What is the job description?** **What skills and education do I need to succeed in this role?**

2. GETTING TO KNOW THE CREW AND VESSEL

Crew member roles	My notes
Rescue Specialist	**What is the job description?** **What skills and education do I need to succeed in this role?**

Task 2: Let's role-play!

This game is inspired by charades. In groups or pairs, prepare a mock interview between yourself and a classmate for one of the jobs above. Once you have finished preparing and practising your mock interview, present it to the class without mentioning the job title. Can your peers guess which job you're interviewing for?

Consider asking the potential job candidate the following questions:

1. Why do you want to work for the Canadian Coast Guard?
2. What skills do you have that would make you good at this job?
3. What about this specific job inspires you?

Task 3: Journal

It's time to think about what you have learned and come up with questions to ask the crew on your vessel. What questions came to mind as you were learning about your ship?

What are some skills that you have that could be useful on board a CCG vessel?

_____

_____

_____

My questions:

_____

_____

_____

_____

Task 4: Track your vessel

Time to track your vessel! Go to www.marinetraffic.com and find your vessel.

What are my vessel's coordinates? _____

What body of water is my vessel located in? _____

Don't forget to label your plotted points on the map with a time and date! Try making a legend to organize your points.

3. MARITIME SAFETY

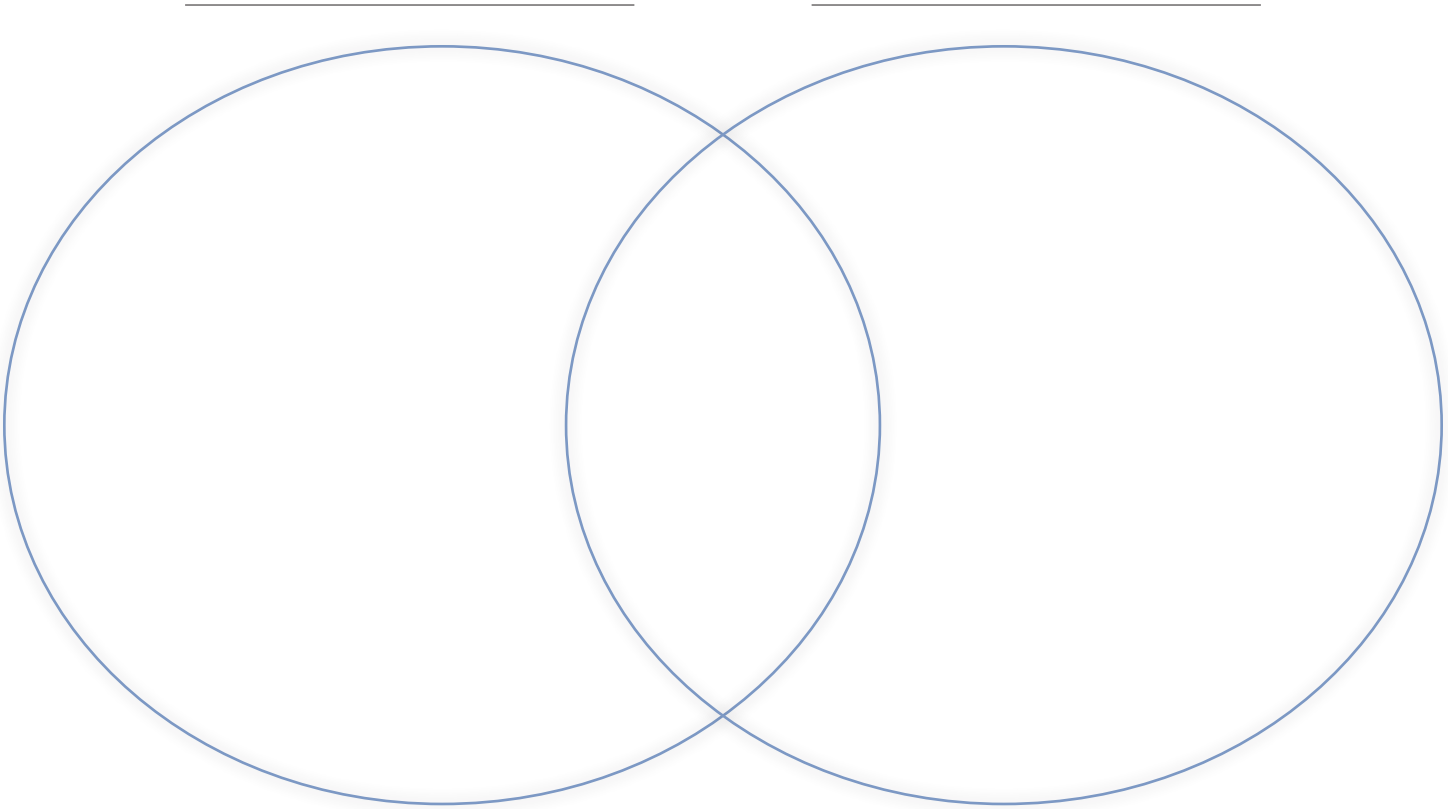
As a member of the CCG, you might be called on for search and rescue missions. This could be a boat that's in distress, a hunter that's trapped on an ice floe, or other emergency situations.

In this section, we're going to learn some important safety tips to start your water safety journey.

Task 1: Personal flotation devices and lifejackets

Did you know that in Canada, it is the law to have enough personal flotation devices (in the correct size) for every person on board a vessel? This is true even on canoes!

Using what you already know, what do you think are the similarities and differences between a lifejacket and a personal flotation device (PFD)? Use the word bank provided and complete the Venn diagram below with the descriptors that fit a lifejacket or a PFD or both.



Can be inflatable	Comes in many colours and styles	Can be worn anytime you are on a boat or near water	Turns you on your back
Bulky	Keeps you afloat	Comfortable	Only comes in red, orange, yellow

Once you have finished, consult this website by the Red Cross for more information and discuss your Venn diagram in groups or as a class. Research more information on lifejackets and PFDs. What are some situations in which a lifejacket would be better than a PFD and vice versa? What is the most important difference between lifejackets and PFDs?

Task 2: What else should you consider when out at sea?

Brrr! The water in Canada can be very cold! Going overboard into cold water is dangerous because it can cause hypothermia (this is when the body loses heat). As the body loses heat, it becomes harder for all the body's systems to work properly. The best way to prevent hypothermia is to practice safe boating, including wearing a lifejacket or PFD and knowing what to do in an emergency.

A cool quiz

Take this quiz to find out what you know about hypothermia! Don't worry about getting questions wrong. The most important thing is that you're learning how to be safe on the water.

Questions

1. Someone has fallen into the cold water and they cannot find their boat or see the shore. How can they help prevent hypothermia if they are wearing a PFD or life jacket?

   a. Move as fast as possible to heat their body up, diving under the water.
   b. Tuck their knees into their chest and hug them with their arms, keeping their head above water.
   c. Float on their backs with their arms and legs spread wide.

2. How much faster does the body lose heat in water than in air (on land)?

   a. 49 times
   b. 25 times
   c. 9 times

3. Which of the following is a symptom of hypothermia?

   a. Confusion or memory loss
   b. Fast speech
   c. Hyperactivity

Once you are finished, discuss the answers with your peers, as well as the following questions.

1. What did you already know versus what you did not know before?
2. What other risks are involved when going overboard? How do these risks differ depending on where you are?
3. What are some other risks of being on board a ship?

Task 3: Journal

Now that you know a little bit about being safe on the water, what other questions do you have about marine safety? Think about what safety skills a crew on board a CCG vessel would need to know.

The most interesting thing I learned today:

_____

_____

_____

My questions:

_____

_____

_____

_____

Task 4: Track your vessel

Time to track a vessel! Go to www.marinetraffic.com and find your vessel.

What are my vessel's coordinates? _____

What body of water is my vessel located in? _____

Don't forget to label your plotted points on the map with a time and date! Try making a legend to organize your points.

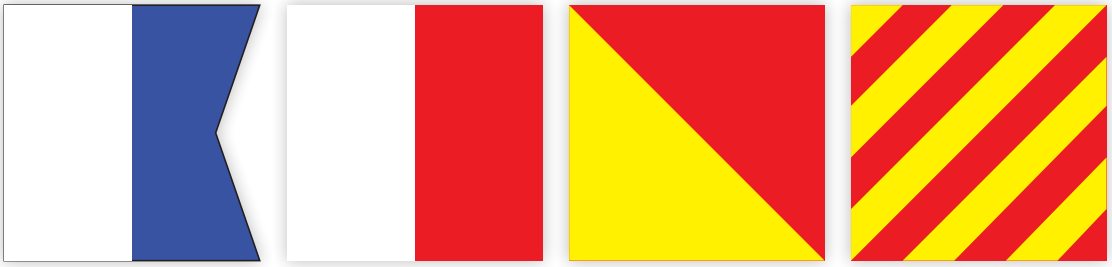
4. COMMUNICATION

Vessels have special equipment on board that helps them navigate the ocean and communicate with other boats and places onshore. This section is all about communicating using as few words as possible. Are you up for the challenge?

Task 1: Signal flags

Communicating to other vessels by speaking to them over radio or other electronic devices is the best way to communicate. But if a vessel loses power, they can communicate using flags! Use this website to explore the meaning of these flags and the letters they can represent.

Can you decode this message?



Answer: _____

Next, referring to the flag alphabet chart provided, think of a word or two. Draw out your message and find a partner to see if they can decipher your message while you decode theirs!

Draw your own message with signal flags!

4. COMMUNICATION

INTERNATIONAL FLAGS AND PENNANTS

ALPHABET FLAGS				NUMERAL PENNANTS
Alfa	Kilo	Uniform		1
Bravo	Lima	Victor		2
Charlie	Mike	Whis-key		3
Delta	Novem-ber	Xray		4
Echo	Oscar	Yankee		5
Foxtrot	Papa	Zulu		6
Golf	Quebec	SUBSTITUTES		7
Hotel	Romeo	2nd Substitute		8
India	Sierra	3rd Substitute		9
Juliett	Tango	CODE (Answering Pennant or Decimal Point)		0

Task 2: Crane hand signals

It can be hard to hear your fellow crew members on board a vessel, especially when you're operating a big crane that has heavy cargo attached. Sometimes, cargo is so big or far away that the crane operator can't see the other side or how close it is to where it needs to go. That is why crew members use hand signals to help communicate what direction the cargo needs to go and when to stop. Here are a few:

- **Hoist:** To raise up cargo
  1. Raise your arm to the side so your hand is level with your head and your elbow is bent at 90°.
  2. Hold your index finger up (like the symbol for "we're number one!").
  3. Draw a circle with your finger so your forearm moves in a circle.

- **Lower:** To lower cargo
  1. Place your arm by your side so your hand is level with your hip and your elbow is bent at 90°.
  2. Point your index finger to the ground.
  3. Draw a circle with your index finger, moving your entire arm.

- **Stop:** Stop moving the cargo
  1. Bring your arm up beside you with your elbow extended and hand open, in line with your shoulder, palm facing the floor.
  2. Bending your elbow, move your hand forward and back in a "that's enough" motion.

- **Hoist slowly:** To raise up cargo slowly
  1. Hold one arm up, across your body, palm facing the floor.
  2. With the index finger of your other hand pointing up, trace circles in the palm of the hand facing down.

- **Swing the boom (the arm of the crane):** Move the long arm of the crane
  1. Raise your arm and point sideways in the direction you want the boom to move.

If you want to learn more, visit the Canadian Centre for Occupational Health and Safety's Crane and Hoist Hand Signals site or Work Safe BC's Hand signals for hoist and crane operations.

Try it out yourself!

Pick a partner and practice giving and receiving crane hand signals. One person holds an object in their hands. Their arms will act like the crane's boom (the crane's arm), moving this cargo from one place to another. The other person communicates in what direction to move the object using only hand signals. Change roles. Were you able to remember the different hand signals?

4. COMMUNICATION

Task 3: Journal

You now know different types of communication that crew members use on board the ship to signal other vessels. What other tools do you think your ship uses to communicate? What questions do you have about the way crew members on board the ship communicate with each other and with the shore?

The most interesting thing I learned today:

_____

_____

_____

My questions:

_____

_____

_____

_____

Task 4: Track your vessel

Time to track your vessel! Go to www.marinetraffic.com and find your vessel.

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What body of water is my vessel located in? _____

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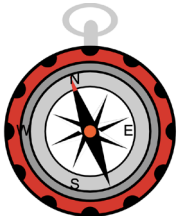
5. NAVIGATION AND CHARTS

Compass vs. Gyrocompass



Your vessel uses something called a gyrocompass. Most compasses are magnetic and work with magnetism to find north, but a gyrocompass does not. This means that it will still work around magnets and ferrous metals (like a ship's steel hull). Gyrocompasses will find true north based on the Earth's rotation, not magnetic north. True north aims at the North Pole and does not move, while magnetic north aims at the constantly moving magnetic North Pole.

Task 1: Make a compass

Even if you cannot create your own gyrocompass, you can find your own way to point towards the magnetic north right from your classrooms. Watch this video by SciShow Kids to help you out.

You will need:

- A sewing needle
- Scissors
- Aluminium foil or wax paper
- A clear container of water with a flat bottom
- A magnet
- An adult to help

Wait for more instructions from your teacher to know what to do!

Now that you've made your own compass, discuss why a ship would need this type of tool. What is the relationship between a compass and a map? Why is it important?

Task 2: Nautical charts

Compasses are one of the most important tools for navigating the waters accurately and safely. These compasses are most useful when paired with a map, but not just any kind of map. Sea goers of all kinds, such as the captain of the *Terry Fox*, use a specific type of map called a nautical chart.

What are nautical charts?

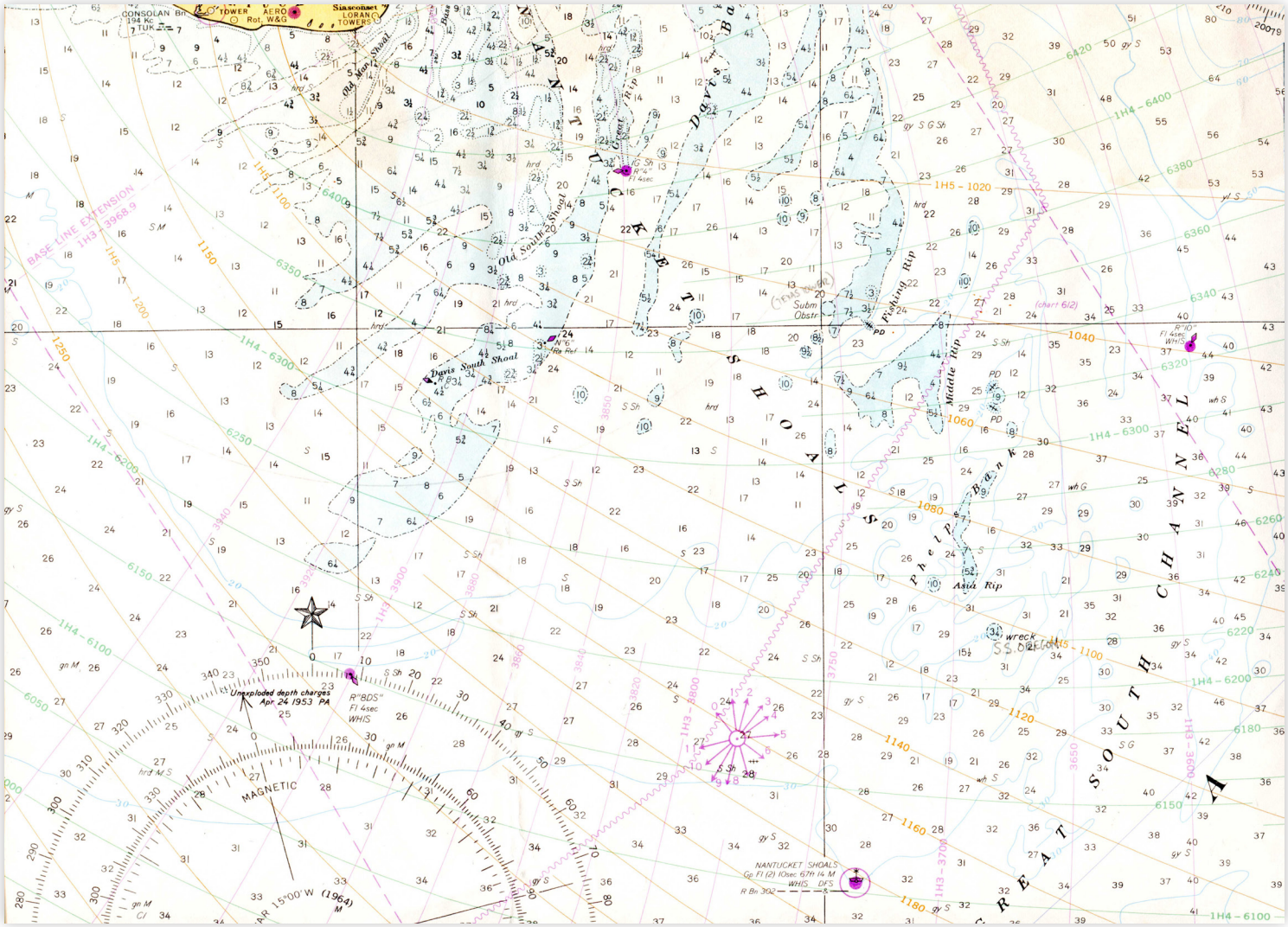
Nautical charts are maps made especially for travel by sea. Some of their features include lighthouses, buoys, wrecks, information about the seafloor and shoreline, water depth, shipping lanes, and so much more. This means that nautical charts are jam-packed with information.

Take a look at this interactive map to begin familiarising yourself with some of the basic features of a nautical chart. Make sure to click on the view tab in the menu bar on the left-hand corner of the website and select some features to explore.

Every feature on a nautical chart is there for a reason. You may have noticed a compass rose or many colourful dots on the map. If you zoomed in more closely, you may have seen those dots transform into little triangular shapes with different colours.

5. NAVIGATION AND CHARTS

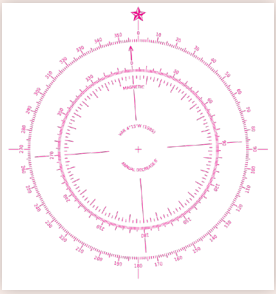
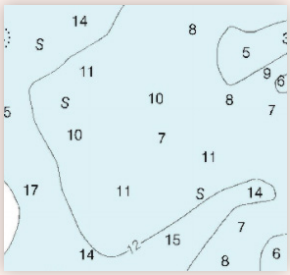
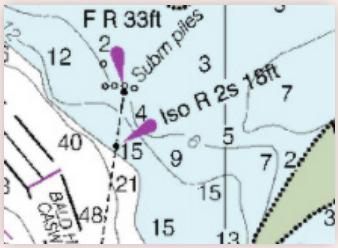
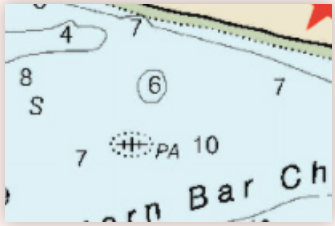
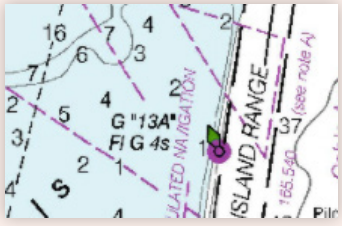
While the interactive map has its own features, other nautical charts may look more like this one:



Symbols

Needless to say, nautical charts are very complex maps that involve a lot of studying to decipher. Take a look at some of the symbols you will find on most nautical charts. You can learn more here about symbols, abbreviations and terms used to interpret nautical charts published by the Canadian Hydrographic Service.

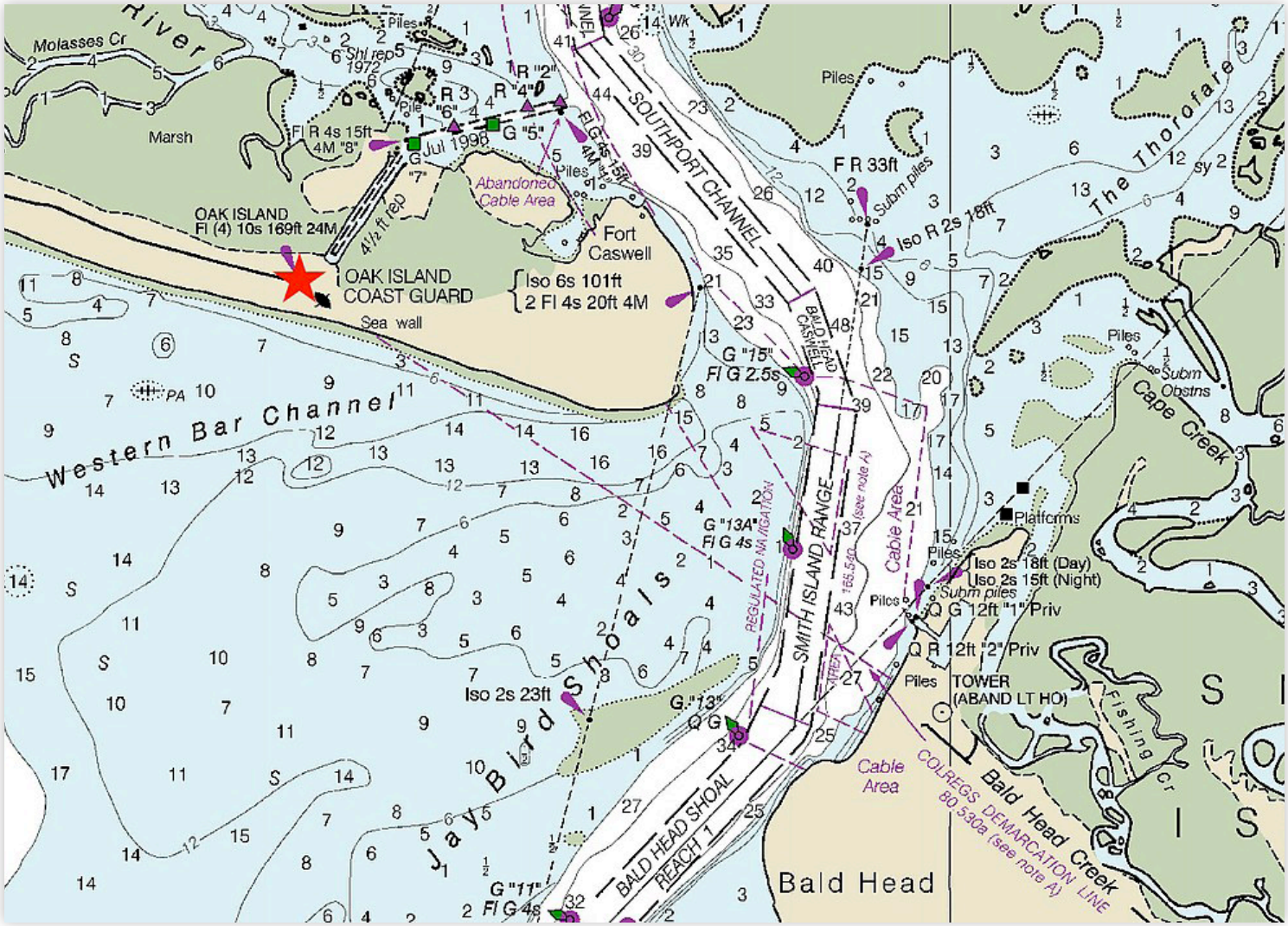
5. NAVIGATION AND CHARTS

Symbol		Purpose
Nautical compass rose		A compass rose is a symbol that shows cardinal directions. A nautical version is a bit more complex. The outer circle of the nautical compass rose is aligned with true north and points straight towards the top of the map, while the inner circle shows magnetic north and how much it varies for the particular area that is mapped. Learn more here.
Depth		Similar to topographical maps, depth shows elevation from the sea floor. This is indicated by numbers labelling different areas of the water. The higher the number, the deeper the water.
Beacons		Beacons with lights are shaped like teardrop symbols that show the direction of the light. They are often accompanied by a dot to show where they are positioned, but they can also have other shapes that provide more information about what type of beacon it is.
Shipwrecks		Shipwrecks are important landmarks to map so that sailors do not crash into a wreck that is submerged or partially submerged in the water. The symbols used to represent them vary in shape but are often circled with a dotted line.
Buoys		Buoys can come in a variety of shapes, such cylindrical, spherical, conical or even rectangular. They help ships to navigate around different depths or obstacles.

5. NAVIGATION AND CHARTS

I spy!

Using the nautical chart below, can you identify some of the symbols from above? Are there any symbols that were not mentioned that you can see? Can you find similar symbols on the interactive map?



Task 3: Journal

Now that you've been introduced to the nautical chart and its many symbols, are there any other thoughts or questions you have about nautical charts or navigation in general?

The most interesting thing I learned today:

_____

_____

_____

My questions:

_____

_____

_____

_____

Task 4: Track your vessel

Time to track your vessel! Go to www.marinetraffic.com and find your vessel.

What are my vessel's coordinates? _____

What body of water is my vessel located in? _____

Don't forget to label your plotted points on the map with a time and date! Try making a legend to organize your points.

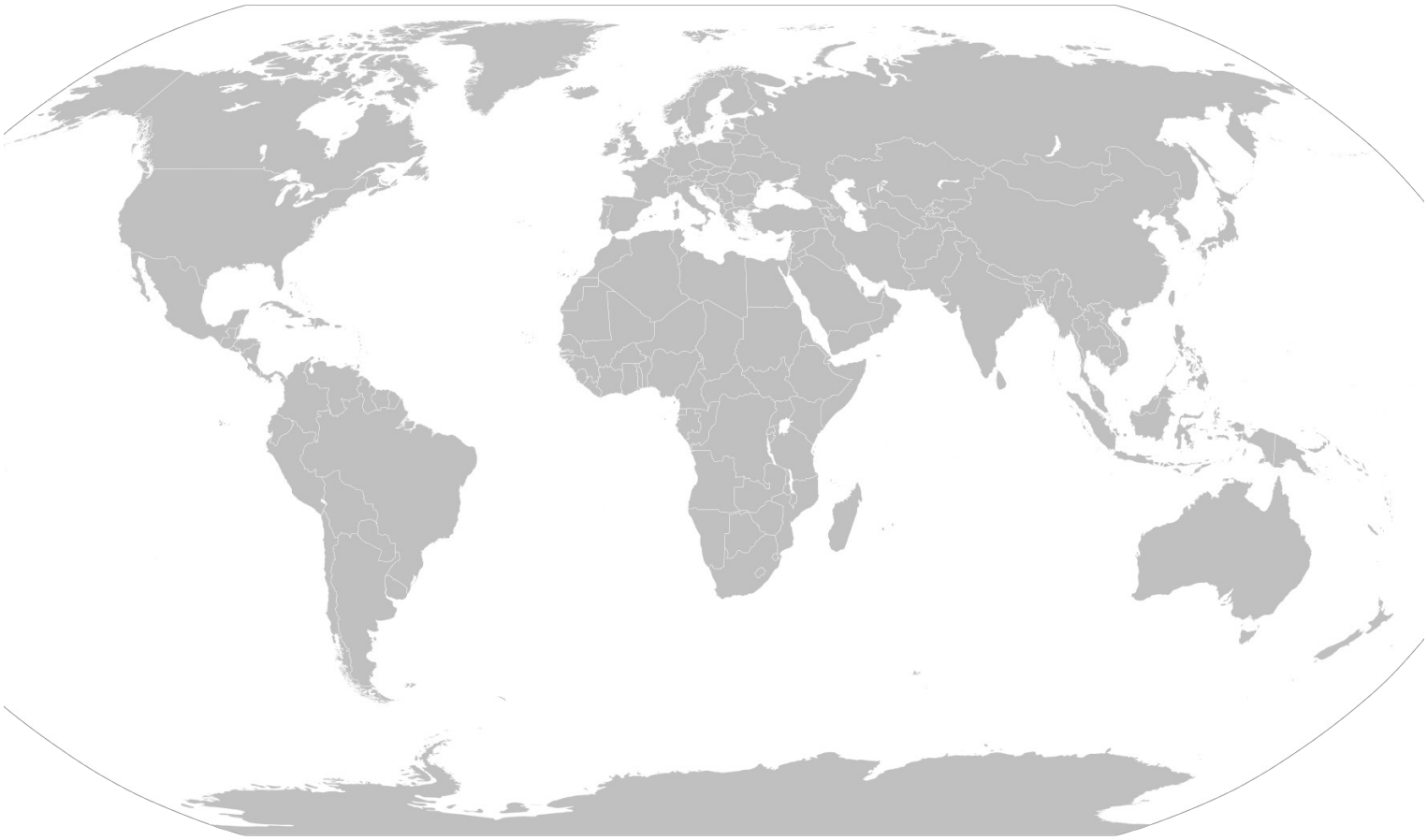
6. MOVING THROUGH WATERS SAFELY

Large vessels are responsible for moving cargo all over the world. The clothing we wear, the food we eat, and the devices we use may have all been on a boat at one time in their journey. Transporting food and material across water in Canada is a cost-effective way of moving things and is more environmentally friendly than other methods of transportation (like trucks or trains). To be able to move items across water, vessels need to be able to safely travel through the water. This is where the CCG comes in! They break up ice so that ships can pass through. They maintain the buoys and other tools that help keep all vessels safe on the water. CCG vessels also patrol the water, responding to emergencies that other ships may experience.

Task 1: Mapping your lunch

Do you think the Canadian Coast Guard had anything to do with what you ate today? In this activity, you will track where items in your lunch came from and then decide if you think the CCG had any part in bringing the food to you!

Look at the ingredients in your lunch and make points on the map below to indicate what parts of the world your food might have come from (you may have to do a bit of research). For example, many avocados come from Mexico.



Task 2: The journey of your lunch

Now that you've discovered where your food comes from, choose one ingredient to trace a path on the map from its starting point to your city. Answer the following questions:

1. How do you think the food item got to your city?

2. What obstacles might have been faced during transportation (e.g., ice, geographical features)?

3. What role do you think the CCG played in getting the food to your city?

Task 3: Journal

The Canadian Coast Guard plays an important role in getting goods to all Canadians. What other questions do you have about the CCG and transporting goods?

The most interesting thing I learned today:

_____

_____

_____

My questions:

_____

_____

_____

_____

Task 4: Track your vessel

Time to track your vessel! Go to www.marinetraffic.com and find your vessel.

What are my vessel's coordinates? _____

What body of water is my vessel located in? _____

Don't forget to label your plotted points on the map with a time and date! Try making a legend to organize your points.

7. WEATHER AND GEOGRAPHY

Crew members aboard Canadian Coast Guard vessels and Marine Communications and Traffic Services officers on shore know that it is important to continually monitor the forecasted weather and the geography of the area they are in or travelling through. What the vessel is able to do depends on the weather conditions of the day and also on the geography of the region.

Task 1: Planning your route

1. Being able to read maps and weather signs is essential aboard any type of vessel to plan your voyage and avoid problems. Brainstorm what types of weather and geography might affect your vessel. Write your ideas below.

Weather	Geography

2. Now, visit the Government of Canada's Marine Forecasts and Warnings for Canada website to help you answer the following questions.

   a. What warnings (if any) are in effect? How are they communicated to the ships? Is your vessel located in any of the affected areas?

   b. Explore the different areas and different warnings. Pick one type of warning. What precautions do you think a vessel would need to take to help navigate the vessel in these conditions safely?

3. Visit Google Earth and find the region that your vessel is in. What types of geographical features do you notice that might affect your vessel's voyage? For example, is it a fairly straight path that your vessel has to take or does it need to move around obstacles?

Task 2: Tracking your weather

The CCG has many methods of monitoring weather and getting information to help them plan their activities and voyage. You can do the same at home or at school! There are simple ways that you can track the weather in your own backyard, such as, creating your own weathervane to figure out the direction of the wind. For a visual aid while creating this activity, visit the PBS Kids activity Where is the wind going?

Materials

- A 10 cm X 10 cm piece of cardboard
- A piece of plasticine or playdough
- A pencil with an eraser on the end
- A straw
- A pin
- Construction paper
- A compass
- A marker
- Scissors

Instructions

1. On the cardboard, write the direction "north" on the top edge, "east" on the right edge, "south" on the bottom edge, and "west" on the left edge.
2. Using the construction paper, cut out an arrowhead (triangle) and tail (a trapezoid).
3. Cut a small slit into each end of the straw. Insert the arrowhead in one slit, and the tail in the other.
4. Put the plasticine or playdough in the middle of the cardboard and insert the pencil, point side down, into it.
5. With a teacher, parent or guardian's help, hold the straw horizontally over the eraser and attach it with the pin in the centre. Make sure that the straw is able to spin easily in any direction once you've attached it.
6. With your teacher, parent or guardian, take your weathervane outside. Using the compass, find north. Arrange your weathervane on the ground so that the north direction on your cardboard aligns with the direction north as shown by your compass. You may need to place rocks on the cardboard base of the weathervane so it doesn't tip over or fly away.
7. Stand back and observe which way the arrow points. The arrow will point in the direction from where the wind is coming.

   a. From which direction is the wind blowing?

   b. Is the arrow turning fast or slow? What does this mean?

   c. What do you think your ship does with wind information? How do you think the wind affects other factors important to the CCG, such as the cargo aboard the ship and the body of water the ship is sailing on?

Task 3: Journal

Today, you learned that it is important to monitor the weather and understand the geography of a region in order to navigate safely through it. Think about what type of weather your vessel might experience at different times of the year; how would they handle different conditions?

The most interesting thing I learned today:

_____

_____

_____

My questions:

_____

_____

_____

_____

Task 4: Track your vessel

Time to track your vessel! Go to www.marinetraffic.com and find your vessel.

What are my vessel's coordinates? _____

What body of water is my vessel located in? _____

Don't forget to label your plotted points on the map with a time and date! Try making a legend to organize your points.

8. THE ARCTIC

Task 1: What do you know about the Indigenous communities in the Arctic?

Using Can Geo Education's *Indigenous Peoples Atlas of Canada*, please answer the following questions:

1. How long have the Inuit lived in Canada?

2. What does the term Inuit Nunangat refer to?

3. What are the four regions of Inuit Nunangat?

4. Pick a subject that interests you from the table of contents and read about it in the Atlas. Write a small paragraph describing some of the key points of what you read. What did you learn that you didn't know before? Do you have any questions about the topic?

Task 2: What is the importance of the Arctic to the Inuit?

"The weather, which we had learned and predicted for centuries, had become uggianaqtuq—a Nunavut term for behaving unexpectedly, or in an unfamiliar way. Our sea ice, which had allowed for safe travel for our hunters and provided a strong habitat for our marine mammals, was, and still is, deteriorating…the human fatalities that had been caused by thinning ice, the animals that may face extinction, the crumbling coastlines, the communities that were having to relocate — in other words, the many ways that our rights to life, health, property and a means of subsistence were being violated by a dramatically changing climate."

- Sheila Watt-Cloutier, *The Right to be Cold: One woman's story of protecting her culture, the Arctic and the whole planet*

This quote mentions a few of the many consequences that Indigenous communities, as well as the land, ice, and animals in the Arctic are facing as a result of climate change. Take some time to conduct research using the *Indigenous Peoples Atlas of Canada*, the Nunavut Climate Change Secretariat website, and the World Wildlife Fund Canada site to fill out the table provided.

Humans	Animals	Land and water
According to the quote, who is being affected by climate change in the Arctic? 1. _____ 2. _____	According to the quote, what animals are being affected by climate change in the Arctic? 1. _____	According to the quote, what aspects of land and/or water are being affected by climate change in the Arctic? 1. _____ 2. _____
Based on your research, what impact has climate change had on the everyday lives of humans in the Arctic? What other questions do you have about humans living in the Arctic?	Based on your research, what impact has climate had on the habitats of animals in the Arctic? What other questions do you have about animals living in the Arctic?	Based on your research, what impact has climate change had on the land and water in the Arctic? What other questions do you have about the Arctic environment?

Task 3: The CCG's commitment to the Arctic

In 2017, the CCG announced the Oceans Protection Plan. Watch this video by the Canadian Coast Guard to determine what the goal of the Oceans Protection Plan is for Indigenous communities.

_____

_____

In 2018, the CCG officially announced the Arctic as the fourth Coast Guard region (the other three are Western, Central, and Atlantic), with the goal to improve collaboration with Inuit, First Nation, and Métis, while also better meeting the needs of Arctic communities.

In pairs or groups, take some time to read through the details of the Oceans Protection Plan and list three of the goals the government wishes to accomplish in collaboration with local Indigenous communities across Canada and specifically in the Arctic.

1. _____
2. _____
3. _____

Discuss with your class what you've discovered.

Task 4: Journal

Today, you learned a little about the Indigenous communities that live in the Arctic and their growing relationship with the CCG. There is still so much to reconcile about Indigenous rights in the Arctic as well as across Canada. Think about some of the interesting things you learned and any remaining questions you may have.

The most interesting thing I learned today:

_____

_____

_____

My questions:

_____

_____

_____

_____

Task 5: Track your vessel

Time to track your vessel! Go to www.marinetraffic.com and find your vessel.

What are my vessel's coordinates? _____

What body of water is my vessel located in? _____

Don't forget to label your plotted points on the map with a time and date! Try making a legend to organize your points.

9. REFLECT AND CELEBRATE!

We've reached the end of the journey!

Task 1: Track your vessel

It is time to plot the coordinates of your chosen vessel one last time.

Once you are done, take a look at all the places your vessel has visited. Discuss with your classmates the places you found interesting, the reasons for why your vessel may have visited certain places, and think about any other questions or thoughts you may have about your vessel and its activities.

What are my vessel's coordinates? _____

What body of water is my vessel located in? _____

Don't forget to label your plotted points on the map with a time and date! Try making a legend to organize your points.

Task 2: Self-reflection

Now, it's time to think about what you've learned and reflect about your time with your ship! Use the table on the next page to draw or write about the prompt in each box.

9. REFLECT AND CELEBRATE!

My self-reflection

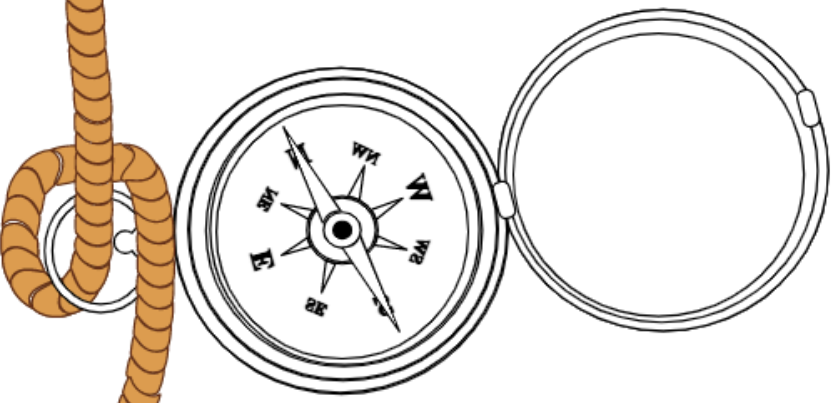
My name: _____

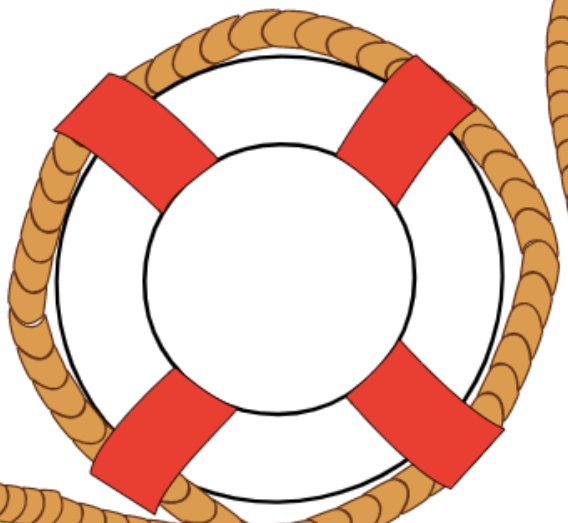
My vessel: _____

What I learned:	**What I want to learn more about:**
The job I would choose:	**From all the places my vessel has visited, I would like to visit:**
The thing that excites me most about the CCG:	**My favourite part of the Adopt A Ship program:**

Congratulations!

You have completed the Adopt a Ship program!
Thank you for your participation. We hope you've enjoyed your time and learned something new. The CCG was happy to have you as an honorary member of the *Terry Fox* crew!





9. REFLECT AND CELEBRATE!

Vessel-tracking map