

# CANADIAN GEOGRAPHIC IN THE CLASSROOM

**Article** 'Commemorate Canada - War on the Water'

**Issue** July/August 2020



## Time:

90 minutes

## Developed by:

Canadian Geographic Education

## Overview/focus question:

How did the Royal Canadian Navy assist in the Second World War? What tools did navigators use to determine their location at sea? How are coordinates, latitude and longitude used to help determine your location?

## Subject/topic:

History, Geography, Second World War, Mapping

## Grade level:

Grade 4-8

## Learning Goals

- Students will learn about the important role that the Royal Canadian Navy played in the Second World War.
- Students will examine a map displaying the different sunken ships from the Second World War.
- Students will learn the importance of coordinates, latitude and longitude.
- Students will use Google Earth to explore the latitude and longitude of different locations in the world.

## Materials Needed

- Print or online copies of "[War on the water: Charting Canada's critical role in the passage of ships during the Second World War](#)" by Nick Walker in the July/August 2020 edition of *Canadian Geographic* (pages 30-31)
- Electronic devices to access Google Earth
- Guess Where worksheet

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## Connection to the Canadian Geography Framework

### Concepts of Geographic Thinking

- Spatial significance
- Interrelationships
- Geographic perspective

### Inquiry Process

- Ask geographic questions
- Acquire geographic resources
- Interpret and analyze
- Communicate
- Reflect and respond

### Geospatial Skills

- Foundational elements
- Spatial representations

## Lesson Description

### Minds on:

Students will begin to think about the importance of understanding location without the use of technology. Students will consider the similarities and differences between finding directions now versus 75 years ago.

### Action:

Students will read the *Canadian Geographic* article "[War on the water: Charting Canada's critical role in the passage of ships during the Second World War](#)" by Nick Walker and discuss the importance of navigation. Students will learn about coordinates, latitude and longitude and complete an activity to practice finding coordinates using Google Earth.

### Conclusion:

Students will share different locations they explored and find the coordinates of some of the sunken vessels included in the map in the *Canadian Geographic* article.

## Lesson Implementation

### Minds on

Start by asking your students what they would do if they wanted to go home right now. How would they get there? Discuss different modes of transportation. Follow up by asking students what they would do if they didn't know how to get home and what tools they would use to find their way home. Discuss their answers. Ask if any students know whether their house is north, east, south or west of the school and, if they don't know, what tools they would use to find out.

Next, ask students if they think they would use the same tools as discussed if they were trying to find their way home 75 years ago. Have a discussion about the kind of technology that would have been available to them at that time (e.g., physical maps). Lead this into a discussion about how the Second World War ended 75 years ago, and how the soldiers would use maps to help them fight in the war.

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## Action

Have your students read “War on the water: Charting Canada’s critical role in the passage of ships during the Second World War” and discuss how the navy would have used maps to help them navigate at sea during the Second World War. Give students time to examine the map and understand what information is being presented.

While your students are looking at the map, ask them to locate the Canadian vessel that was sunk farthest north and then the farthest south. Next, ask your students to locate the axis vessels sunk by Canadians that are located the farthest west and then farthest east.

Canada played an essential part in the Battle of the Atlantic and maps were vital to the success of the Royal Canadian Navy, helping to guide and navigate them throughout the ocean.

Ask your students to consider what they would do if they were in the middle of the ocean with no visible landmarks., How would they describe their exact location?

Have students use their electronic devices to access Google Earth. Ask them to click on “Map Styles” and turn on the gridlines. Use Google Earth to explain the following:

When using a map, the best way to describe a location would be using coordinates, which lists the latitude and longitude of a location. Latitude and longitude are imaginary lines that help geographers pinpoint specific locations on Earth.

Latitude measures how far north or south you are from the equator, these are also known as parallels because they run parallel to the equator. The equator is the starting point for measuring latitude, therefore it is at 0 degrees. The further away from the equator, the larger the degree until you reach 90 degrees, either north or south.

Longitude is the imaginary line that measures how far east or west a location is from the Prime Meridian, which is an imaginary line that passes through Greenwich, England, and part of Africa. To measure longitude, it’s important to know that the Prime Meridian is measured at 0 degrees. Since the Earth is a sphere, we measure in 360 degrees, there being 180 to the east of the Prime Meridian and 180 degrees to the west of the Prime Meridian.

When writing the coordinates of a location, you list its latitude, followed by a comma, and then its longitude. For example, the approximate coordinates of Ottawa, Canada, are 45° N, 76° W.

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Hand out the Guess Where worksheet and have students work in partners. With their partner, one at a time, students will choose a location on Google Earth and write the approximate coordinates. Ask students to round the coordinates to the closest whole number. Once they have chosen their coordinates and written them down, their partner will use Google Earth and ask yes or no questions to try to guess their partner's chosen coordinates.

Example questions:

- Is it east of the Prime Meridian?
- Is it north of the equator?
- Is it between 50 and 60 degrees south?

Encourage students to each choose a location at least two times.

Students will then identify different places using coordinates on the worksheet.

## Conclusion and Consolidation

Once students have had the chance to explore Google Earth and different coordinates, allow them to share a location they chose and what questions were helpful in finding the location. Ask students if any of them chose coordinates that were not on land but in the water. Remind students that this is how the Royal Canadian Navy would have navigated at sea throughout the historic battles of the Second World War. Using Google Earth and the map provided in the "War on the water: Charting Canada's critical role in the passage of ships during the Second World War" article, ask students to finish their worksheet by finding the coordinates of some of the identified sunken vessels.

Finish the lesson by discussing with students how easy or difficult they think it would have been to navigate without digital and satellite technology and access to tools such as Google Earth.

## Extend your geographical thinking

- Create a quiz asking students to identify locations by their coordinates.
- Ask students to find different locations on the same line of latitude or longitude.
- Ask students to identify different landmarks by the coordinates.
- As this is an introductory lesson to coordinates, latitude and longitude, expand on this lesson by teaching students about the degrees, minutes and seconds of latitude and longitude.
- Students can map different locations of the different sunken vessels using a mapping software.
- Continue the lesson by talking about compasses, and make compasses as a class.

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## Modifications

- Students can complete the worksheet on a device.
- Print out world maps with grid lines rather than having students use a computer.
- Complete the activity as a class before they complete it in partners to check for understanding.

## Assessment Opportunities

- Collect students' worksheets for assessment.
- Assess students' learning based on their participation in conversation throughout the lesson.

## Sources and Additional resources

- [How to Make Your Own Compass](#)

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## GUESS WHERE WORKSHEET

### My coordinates:

1. Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_
2. Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_
3. Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

### My partner's location:

1. Coordinates: \_\_\_\_\_
2. Coordinates: \_\_\_\_\_
3. Coordinates: \_\_\_\_\_



### What can you find at these coordinates?

1. What continent is at 10° south and 60° west? \_\_\_\_\_
2. What continent is at 20° south and 130° east? \_\_\_\_\_
3. What ocean can be found at 30° north and 40° west? \_\_\_\_\_
4. What country is at 20° north and 100° west? \_\_\_\_\_
5. What ocean is at 20° south and 80° east? \_\_\_\_\_

### Coordinates of a sunken vessel:

1. Coordinates: \_\_\_\_\_ Who the vessel belonged to: \_\_\_\_\_
2. Coordinates: \_\_\_\_\_ Who the vessel belonged to: \_\_\_\_\_
3. Coordinates: \_\_\_\_\_ Who the vessel belonged to: \_\_\_\_\_