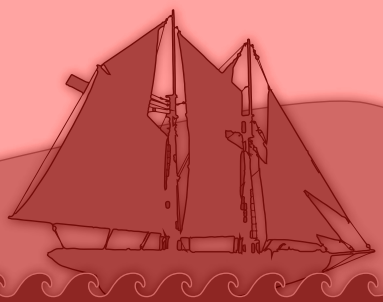
BLUENOSE - BORN TO WIN



Time

1.5 hours (Can be divided over numerous periods.)

Developed by

Canadian Geographic Education

Overview

Students will learn why the Bluenose was so successful at racing and build their own miniature version of the ship to recreate some of the races in which it took part.

PREPARATION: It is suggested that teachers collect clean and recycled materials for a few weeks before this lesson to use in creating the ship models. See the Materials Needed section for ideas.

Subject

History, science, geography, math

Grade Level

Can be adapted for most grade levels but is best suited for grades 6-10.

Learning Goals

Students will:

- List possible reasons for the success of the Bluenose as a racing schooner.
- Discover routes taken by the Bluenose during races.
- Apply their knowledge of science and the Bluenose to create a replica of the Bluenose using everyday materials.
- Investigate how their vessel can navigate a path quickly and efficiently in water.

Lesson Description

Minds on:

Students will watch the Bluenose 100 video titled *Born to Win* and discuss potential reasons for why the Bluenose was such a successful racing schooner.

Action:

Students will explore the interactive map *Charting a Course for Greatness* to learn about the achievements of the Bluenose and familiarize themselves with some of the racing routes taken by this vessel. Students will then create their own mini-Bluenose using everyday and recycled materials and attempt to recreate one of those routes with their vessel in a tub of water.

Conclusion:

Students will reflect on how well their vessels performed and challenges that might be faced by vessels such as the Bluenose.

Lesson Implementation

Minds on

Pass around a few dimes or printouts of a dime. Ask students what they notice about the coin. They might notice Queen Elizabeth II's face on one side, and on the other side, a ship. Ask students if they know what this ship is. Explain that it is the Bluenose, a famous Canadian schooner that was built in 1921 as a fishing and racing ship. Today, students will be exploring what made this schooner so successful as a racing vessel and will then work to build a miniature replica of this famous ship and test it out on the water.

Play the video *Born to Win* on the Bluenose 100 Video Porthole website (bluenose100.ca/video-porthole). As students are watching, they should think about the following questions:

- *Why was the Bluenose built? (Answer: To win the International Fisherman's Cup Race of 1921.)*
- *Why was Bluenose so successful as a racing schooner?*
  Possible answers include:
  - *Placement of masts offers great balance*
  - *Ability to sail into the wind*
  - *Seamanship of Captain Angus J. Walters*
  - *Unique design by William Roué*
  - *Romantic reasons: Golden spike in keel, coins placed under mast*
- *Why is the Bluenose also a fishing vessel, not just a racing vessel? (Answer: It needed to fish in the early months of 1921 in order to qualify for the International Fisherman's Cup Race.)*

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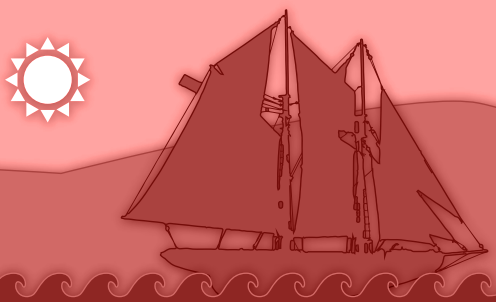


Materials Needed

- The Bluenose 100 website (bluenose100.ca)
- Projector/smartboard
- Devices with access to the Internet
- Paper and writing/drawing utensils
- Waterproof materials needed to build ships (e.g. tinfoil, popsicle sticks, elastics, recycled plastic tubs or bottles, waxed paper for sails, string/twine)
- A large water tub to race ships
- Dimes or print outs of a dime (not included)
- Straws (one per group) or one mini battery-operated fan
- Scissors (for each group)
- Ping pong balls (to act as markers in water)
- Stopwatch
- Tape measure or ruler
- Timekeeping Sheet

Connection to the Canadian Geography Framework

Concepts of Geographic Thinking

- Spatial significance

Inquiry Process

- Ask geographic questions
- Interpret and analyze
- Evaluate and draw conclusions

Geospatial Skills

- Foundational elements
- Spatial representations

Action

The courses

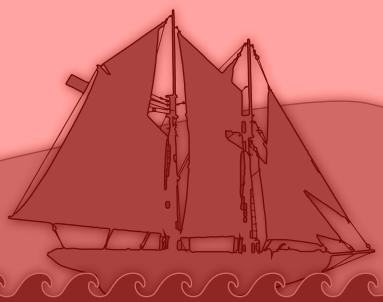
Now that students appreciate the success of the Bluenose as a fishing and racing schooner, they will explore some of the great achievements of this ship using the *Charting a Course for Greatness* page on the Bluenose 100 website (bluenose100.ca/charting-a-course-for-greatness). Have students calculate the full distance travelled by the Bluenose in different races. For an extra challenge, students can also calculate the average speed of the Bluenose in different races. Afterwards, have a class discussion, comparing answers. (The races are mapped in nautical miles, but students can choose to convert their measurements to the metric system.)

Place students in small groups and explain to them that they will be building a miniature replica of the Bluenose and "sailing" a plotted course. Groups should first select which Bluenose course they would like to try to "sail" from the *Charting a Course for Greatness* page. They will have the opportunity to create a scaled-down version of this course and have their schooner navigate it.

Building the ship and course

Explain to students that they will now get to build a replica of the Bluenose using recycled materials. Distribute the collected materials as evenly as possible to each group. Students should create their model using only these materials. Have students think about what they learned in the video about why the Bluenose was successful, and give them time to complete their own research about the topic as well. To get inspiration for their model, students can research Bluenose blueprints online. Students can also revisit the *Born to Win* video for inspiration. Students can use the information they gather to decide how they would like to construct their model. Have students consider how the Bluenose was built, but also how they can construct an efficient ship using the materials they have. Remind students that they will be testing out their model in a tub of water, attempting to navigate a course in the shortest time possible. Give students time to collaboratively build their models.

Next, have students create a plan for a scaled-down version of the course they've chosen by creating a map. This map should include distances (in centimetres), a start and end point, and the total distance they will travel. Explain to students how to scale down a course to fit the size of the tub they will be "sailing" in. For example, if the Bluenose travelled about 33 kilometres (18 nautical miles) in one direction, they could plot that on their map as 33 centimetres. They might need to scale the distances down further, having 16.5 centimetres on their map represent 33 kilometres in real life. Remind students to stay as true as possible to the directions and angles taken by the Bluenose in the original course. They can use an online calculator to convert the nautical miles featured on the maps to kilometres (note: 1 nautical mile is about 1.9 kilometres).



The race

Once students have completed their models and maps, begin setting up the water tub. Assign a student as a timekeeper. Ask for volunteers to race their ship first or draw group names. For each group:

1. Students will explain why they built their ship the way they did and what materials they chose to use.
2. Students should plot out their course in the tub of water using a tape measure or ruler. Group members will stand around the tub of water and hold a ping pong ball on the water's surface to act as markers where their ship will need to turn (similar to buoys bobbing in the water). A student in the group will be chosen as the "captain".
3. Have the group explain why this course was significant to the Bluenose (there will be repeats as multiple groups might choose the same course).
4. When the timekeeper starts their stopwatch, the captain can begin the course.
5. The captain should blow through the straw to navigate their ship through the water to the markers. Alternatively, the captain can use the battery operated fan to navigate their ship.
6. The timekeeper will stop the watch once the ship reaches its final point.

Record groups' times along with the complete distance they travelled on the Timekeeping Sheet. Groups should calculate the average speed at which they travelled in centimetres per second. To do this, have them complete the following equation: Distance (in centimetres) ÷ by time (in seconds) = average speed (cm/s)

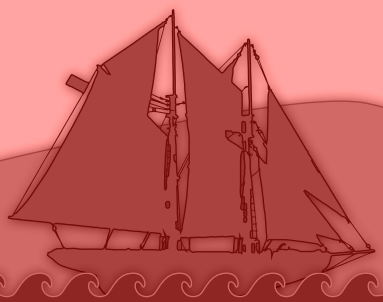
Conclusion and Consolidation

After all groups have had a chance to race their ships, have students reflect on the successes and challenges faced by ships. Announce which group completed their course the fastest. Ask students the following questions:

- *Why might the ships have performed differently?*
- *What would you change about your ship if you were to race again?*
- *What factors (including geography) influence a ship's ability to navigate waters?*
- *What challenges did the Bluenose face in different races?*

Extend your geographical thinking

- Learn about the Bluenose and Bluenose II through the Bluenose 100 website: bluenose100.ca.
- Discover the symbolism of the Bluenose with our lesson plan, *Commemorate Canada - Bluenose*.
- Invite the captain of a vessel to speak to your class about challenges navigating waters.



Modifications

- The teacher can choose not to complete races in water, but focus more on building accurate replicas of the Bluenose.
- Strategic grouping of students can be done by pre-assigning groups.
- Students can be the ones to gather the recycled materials for their ships.
- All students can complete the same course or simply a straight line.
- Extension: Students can create a formal blueprint of their ship along with accurate measurements.

Assessment Opportunities

- Observational notes can be made during discussions and the building phase.
- Students can share their models with other groups before the race for feedback.
- Students' models can be used for assessment.

Sources and Additional Resources

- See a drawing of the Bluenose through the Museum of History website: historymuseum.ca/blog/drawing-of-bluenose.
- Explore the history of the Bluenose and the future of the Bluenose II through the Bluenose 100 website: bluenose100.ca.
- Learn more about the Bluenose through videos found on Bluenose 100's Video Porthole: bluenose100.ca/video-porthole.
- Visit Nova Scotia Archives' page on the Bluenose: archives.novascotia.ca/bluenose/archives/?ID=7.

TIMEKEEPING SHEET

Use this table to keep track of teams' times as they complete their course. Once completed, teams can calculate their average speed in cm/s by using the following equation:

Distance (centimetres) ÷ by time (seconds) = centimetre per second (cm/s).

Team Name	Course distance (cm)	Time (s)	Average speed (cm/s)