

TEACHERS GUIDE

to “The Greatest Lake”

Multidisciplinary classroom activities based on the Young Naturalists nonfiction story in *Minnesota Conservation Volunteer*, March-April 2026, mndnr.gov/mcvmagazine.

Minnesota Conservation Volunteer magazine tells stories that connect readers to wild things and wild places. Subjects include earth science, wildlife biology, botany, forestry, ecology, natural and cultural history, state parks, and outdoor life.

Education has been a priority for this magazine since its beginning in 1940. “One word—Education—sums up our objective,” wrote the editors in the first issue. Thanks to the MCV Charbonneau Education Fund, every public library and school in Minnesota receives a subscription. Please tell other educators about this resource.

Every issue now features a Young Naturalists story and an online Teachers Guide. As an educator, you may download Young Naturalists stories and reproduce or modify the Teachers Guide. The [student portion of the guide](#) includes vocabulary words, study questions, and other materials.

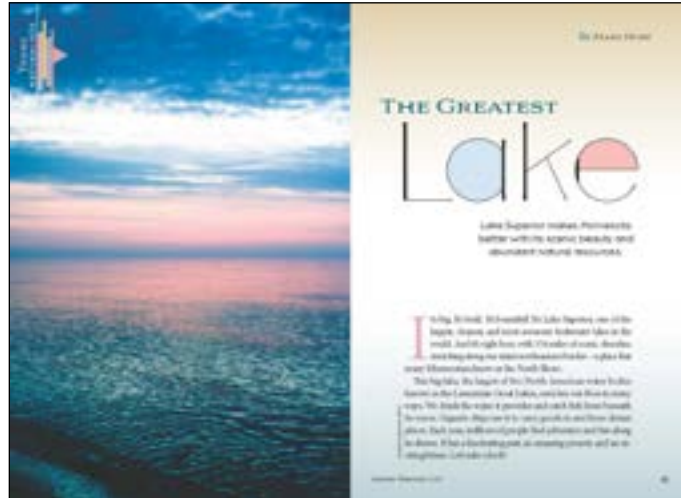
Readers’ contributions keep *Minnesota Conservation Volunteer* alive. The magazine is entirely financially supported by its readers.

Find every issue online. Each story and issue is available in a searchable PDF format. Visit mndnr.gov/mcvmagazine and click on *past issues*.

Thank you for bringing Young Naturalists into your classroom!

“The Greatest Lake”

Multidisciplinary classroom activities based on the Young Naturalists nonfiction story in *Minnesota Conservation Volunteer*, March-April 2026, mndnr.gov/mcvmagazine.



SUMMARY. “The Greatest Lake” Young Naturalist story provides readers with an overview of Lake Superior’s fascinating past, amazing present, and exciting future. Learn what makes Lake Superior such a great lake!

SUGGESTED READING LEVELS. Third through middle school grades

MATERIALS. Young Naturalist story and student study guide; Internet access, and other print and online resources your media specialist may provide; and additional optional resources for extension activities.

PREPARATION TIME. 10–15 minutes, not including time for extension activities.

Estimated instruction time. 30–60 minutes, not including extension activities.

MINNESOTA ACADEMIC STANDARDS APPLICATIONS. “The Greatest Lake” activities described below may be used to support the following Minnesota Department of Education standards for students in grades 3–8.

WRITING BENCHMARKS

Research to Build and Present Knowledge (Benchmarks 3.6.7.7, 4.6.7.7, 5.6.7.7, 6.7.7.7, 6.7.8.8, 7.7.7.7, 7.7.8.8, 8.7.7.7)

Text Types and Purposes (Benchmarks 6.7.1.1, 7.7.1.1, 8.7.1.1)

ARTS

Artistic Process: Create or Make (Benchmarks 0.2.1.2.1, 0.2.1.5.1, 0.3.1.5.1, 4.2.1.2.1, 4.2.1.5.1, 6.2.1.2.1)

LANGUAGE BENCHMARKS

Vocabulary Acquisition and Use (Benchmarks 3.10.4.4, 3.10.6.6, 4.10.4.4, 5.10.4.4, 6.11.4.4, 6.11.6.6, 7.11.4.4, 7.11.6.6, 8.11.4.4, 8.11.6.6)

READING BENCHMARKS: Literacy in Science and Technical Subjects

Key Ideas and Details (Benchmarks 6.13.1.1, 6.13.2.2)

Integration of Knowledge and ideas (Benchmark 6.13.8.8)

WRITING BENCHMARKS:

Text Types and Purposes (Benchmark 6.14.7.7)

WRITING BENCHMARKS: LITERACY IN SCIENCE AND TECHNICAL SUBJECTS

Text Types and Purposes (Benchmark 6.14.1.1)

Research to Build and Present Knowledge (Benchmark 6.14.7.7)

SPEAKING, VIEWING, LISTENING AND MEDIA LITERACY (GRADES 3-8)

Comprehension and Collaboration (Benchmarks 3.8.1.1, 3.8.2.2, 4.8.1.1, 4.8.2.2, 5.8.1.1, 5.8.2.2, 6.9.1.1, 6.9.2.2, 7.9.1.1, 7.9.2.2, 8.9.1.1)

Presentation of Knowledge and Ideas (Benchmarks 3.8.4.4, 3.8.5.5, 4.8.4.4, 4.8.5.5, 5.8.4.4, 5.8.5.5, 6.9.4.4, 7.9.4.4, 8.9.4.4)

SCIENCE (*CODING IS BASED ON THE 2019 COMMISSIONER APPROVED DRAFT OF MN ACADEMIC STANDARDS IN SCIENCE)

SCIENCE AND ENGINEERING PRACTICES

2. Developing and using models

7. Engaging in argument from evidence

8. Obtaining, evaluating, and communicating information

CROSS CUTTING CONCEPTS

2. Cause and effect

3. Scale, proportion, and quantity

4. System and system models

7. Stability and change

DISCIPLINARY CORE IDEAS

Life Sciences 2: Ecosystems: Interactions, energy, and dynamics

Earth and Space Sciences 3: Earth and Human Activity

SOCIAL STUDIES

Geography (Benchmarks 4.3.4.9.1, 4.3.2.3.1, 6.3.3.6.1, 7.1.1.1.1, 8.1.1.1.1, 8.3.2.3.1)

Citizenship and Government (Benchmarks 4.1.1.1.1, 4.1.4.6.1., 7.1.1.1.1)

For current, complete Minnesota Academic Standards, see www.education.state.mn.us. Teachers who find other connections to standards are encouraged to contact *Minnesota Conservation Volunteer*.

Preview. Introduce students to the Young Naturalists’ story by reading out loud the story’s title, “The Greatest Lake.” Invite students to preview the article’s text features, such as the title, headings, and images, for clues as to what the story will be about. Then, based on the text features, ask students what they predict they will learn. Next, help students make connections with their prior knowledge and experiences by asking questions such as, What do you already know about Lake Superior? Do the images and headings remind you of anything you have experienced or read?.

VOCABULARY PREVIEW. You can find a copy-ready vocabulary list at the end of this guide. Share the words with your students and invite them to guess what they think they mean. Share the words with your students and invite them to share what they think those words mean. Tell them you will be reading a story that will help them understand these words so they can use them in the future.

STUDY QUESTIONS OVERVIEW. Preview the study questions with your class before you read the article. Then read the story aloud. Complete the study questions in class, in small groups, or as an independent activity, or use them as a quiz.

ASSESSMENT. You may use all or part of the study guide, combined with vocabulary, as a quiz. Other assessment ideas include: (1) Have students write multiple-choice, true-false, or short-answer questions based on the story. Select the best items for a class quiz. (2) Use a “Round Robin Retell” format to assess what students learned through the story. Students sit in a circle, and each student paraphrases a key idea from the story. Have students create a concept map or web that graphically organizes the main ideas and story details

EXTENSION ACTIVITIES. Extensions are intended for individual students, small groups, or your entire class. Young Naturalists articles provide teachers many opportunities to make connections to related topics, allow students to follow particular interests, or support academic benchmarks.

1. The story describes many aspects of Lake Superior that make it popular for tourists, from its scenic views and cool breezes to opportunities for fishing and exploring its pebbled beaches. Tourists can enjoy Lake Superior by visiting eight Minnesota state parks, a national scenic trail, and a national forest on or within a few miles of its shores. Invite students to explore these public lands, selecting one of them to make a travel poster or brochure.

2. The Lake Superior Agate, the distinctive stone with rust-colored layers, is one of Minnesota's state symbols. Since these are among the oldest agates in the world, some consider them to be the most ancient of our state symbols! Students can explore more about how they are formed and where to find them through the [Minnesota DNR's Lake Superior Agate Nature Snapshots page](#) that explains why Minnesota has so many agates.

3. This story describes the North Shore as a rocky place, with massive cliffs on the lake, boulders lining the shoreline, and wave-smoothed pebbles covering the beaches. All of these rocks offer clues to how this big lake formed. Using the information from the story, have students create a model or pictorial timeline that depicts the geologic history of the North Shore.

4. The Great Lakes have been home to Ojibwe people since their westward migration to find the place where "food (manoomin) grows on the water." As the original caretakers of the lands and the waters, the lifeways of the Great Lakes Ojibwe are deeply intertwined with the health of these waters. Invite students to learn more about the significance of "Nibi" ([Anishinaabemowin for water](#)) to the Ojibwe people.

5. Beyond Lake Superior, waters throughout Minnesota are an important part of our way of life. Invite students to visit [Water Stories](#), which is a collection of stories from people who live and work in Minnesota. These stories share wide-ranging personal experiences about humans' relationships with water. There are stories of fun and play, as well as stories of work, loss, and change.

6. Scientists are paying close attention to algae blooms in Lake Superior. Because Lake Superior is a cold, low-nutrient lake with less human development on its shores relative to the other Great Lakes, the presence of algae blooms suggests to scientists that climate change is impacting Lake Superior. Students can watch [UMD researchers](#) aboard the [Blue Heron](#), as they gather data to monitor the health of Lake Superior.

WEB RESOURCES

YOUNG NATURALIST STORIES

[Agate Hounds](#)

[George and the Voyaguers](#)

GENERAL TEACHER AND STUDENT RESOURCES

[Minnesota DNR Teachers' Resources](#)

MINNESOTA CONSERVATION VOLUNTEER STORIES

[Catching Waves](#)

[A Superior Success Story](#)

[How Many Fish in Lake Superior](#)

VIDEO RESOURCES

[What's so Great about the Great Lakes](#)

[Why Lake Superior is so Amazing](#)

CURRICULA RESOURCES

[Lake Effects Lake Superior Curriculum Guide for K-8th Grade](#)

[Center for Great Lakes Literacy Lessons and Resources](#)

STUDY QUESTIONS ANSWER KEY

1. Which of the following is NOT true about Lake Superior?

- a) **It is the saltiest of the Great Lakes**
- b) It is the largest of the Great Lakes by volume and surface area
- c) It is the coldest of the Great Lakes
- d) It is the deepest of the Great Lakes

2. Why is Lake Superior sometimes called an inland ocean?

- a) Because of the sea lamprey that live in its water
- b) Because of the melting glaciers that filled its basin with waters
- c) **Because in places along its shoreline, you can look out and see only water**
- d) Because it is connected to the Atlantic Ocean by the St. Lawrence Seaway

3. True or false: The shrimp-like creature called a scud is one of the nonnative species that has disrupted the Lake Superior ecosystem.

False.

4. Which of the following is the dark gray volcanic rock that makes up many of the rock formations on the North Shore?

- a. Agates

b. Basalt

c. Rhyolite

d. Diabase

5. If you wanted to see the tan- or pink-colored rock called rhyolite, which of the following places would be a good place to visit?

a. St. Lawrence Seaway

b. Palisade Head

c. Pebble beaches along the

d. Tallgrass aspen parkland

6. True or False? About 2 million years ago, the surface of the water in the Lake Superior basin was much higher than the lake we see today.

True.

7. Which of the following were the earliest humans to use Lake Superior as a travel corridor?

a. Commercial anglers

b. European explorers

c. Indigenous peoples

d. Fur traders

8. Why has the introduction of nonnative fish, such as salmon and trout, been a problem for Lake Superior? **These nonnative fish species compete with native fish for food, altering the balance of nature in the lake.**

9. Which of the following has disrupted the health of Lake Superior?

a) Climate change

b) Nonnative species

c) Pollution

d) All of the above

10. True or false? Microplastics have helped control the nonnative trout, improving the health of Lake Superior. **False**

Challenge question: Go back through the story to find and list examples of the many ways in which Lake Superior enriches our lives – years ago as well as today. Suggested answer: **We drink the water it provides and catch fish from its waters. It has been a travel corridor for Indigenous peoples, European explorers, and fur traders. Ships use it to carry goods to and from distant places. It supports commercial fishing, and many people like to visit Lake Superior for recreation.**

MINNESOTA COMPREHENSIVE ASSESSMENTS ANSWER KEY.

1. Which of the following would be considered a main idea from the story?
 - a. Lake Superior is home to dozens of species of fish that come in all shapes and sizes.
 - b. Humans are interconnected with Lake Superior's past, present, and future.**
 - c. The North Shore of Lake Superior is a popular tourist destination.
 - d. It is better for Lake Superior to have native species, rather than nonnative species.

2. Using story details, which two species would be found in a similar part of Lake Superior?
 - a. Lake whitefish and scud**
 - b. Cisco and burbot
 - c. Sea lamprey and diabase
 - d. Phytoplankton and rhyolite

3. Which of the following does the story list as examples of the effects of climate change on Lake Superior?
 - a. Bigger and more frequent storms**
 - b. Increased amounts of acid and mercury contaminants in the water
 - c. Fewer tourists wanting to visit the North Shore
 - d. Greater need for shipping regulations to control the spread of sea lamprey

VOCABULARY

Surface area - the total amount of space a lake covers on the Earth's surface (like a giant, flat map of the lake's top)

Volume - the total amount of water a lake holds

Freshwater – water that does not contain salt, like a river or sea

Vast – something that is large, huge, or wide

Bountiful – large in quantity, plentiful

Phytoplankton – tiny algae suspended in the water that capture the sun's energy and use it to live and grow

Zooplankton – microscopic animals that float about in the open water

Pelt – an animal's skin that still has the fur or hair on it

Commercial fishing – catching fish and selling them to make money

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