

THE GREAT LAKES SERIES

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|---|-----------------------|
| H | • LAKE HURON (GLH) |
| O | • LAKE ONTARIO (GLO) |
| M | • LAKE MICHIGAN (GLM) |
| E | • LAKE ERIE (GLE) |
| S | • LAKE SUPERIOR (GLS) |

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<http://www.exploringthenorth.com/cophistory/cophist.html>
<http://www.great-lakes.net/teach/history/>



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LAKE SUPERIOR



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The GREAT Lakes
A Hist-ography Series

INSTRUCTIONAL GUIDE

INTRODUCTION TO SERIES

Designed to enhance the social studies curriculum for the intermediate aged student on up. "The Great Lakes" offers students a unique perspective about the vital role these five bodies of water have played in the lives of our ancestors and to this day continue to play that role in many important ways.

As a complementary device with each program, an instructional guide suggests exercises to enhance the learning for teachers, parents and students. These interactive exercises will reinforce and further develop a student's level of comprehension.

The instructional guide provides:

**Subject Profile • Q & A • Discussion Points & Activities
Vocabulary • Geography (Including Maps) • Timeline**

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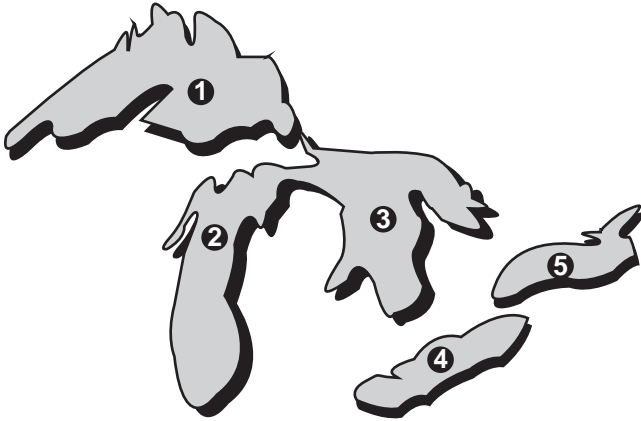
E-Guides available at www.filmideas.com

TIMELINE of **LAKE SUPERIOR**

- **2 billion years ago:** The land beneath the Great Lakes is formed by volcanic activity.
- **600 million years ago:** The Great North American rift weakened the earth's crust causing the land to sink, the sea level to rise and the ocean to flood the land.
- **13,500 years ago:** The melting glaciers from the last Ice Age begin to create the five Great Lakes.
- **5,000 years ago:** The Great Lakes region begins to take on the form which is known today.
- **14,000 BCE:** The arrival of man into the region.
- **5,000 BCE:** The beginning of the old copper culture.
- **1,500 BCE:** The copper culture is replaced by the woodland Native Americans.
- **1615:** Samuel de Champlain becomes the first Frenchman to discover the Great Lakes.
- **1622:** A scout of Champlain, Etienne Brule discovers Lake Superior.
- **1658:** Two young adventures named Radisson and Groseilliers become the first Europeans to circumnavigate Lake Superior.
- **1848:** Julius Eldridge's copper nugget controversy launches the copper mining industry.
- **1931:** Isle Royale
- **1975:** Edmund Fitzgerald sinks into Lake Superior.

Map #2 of **GREAT LAKES**

Study the map and site descriptions on pg. 15. Then write the name of the location on the solid black line. On a separate piece of paper write a brief description about each location.



① _____

② _____

③ _____

④ _____

⑤ _____

LAKE SUPERIOR

These 5 bodies of water, created 10,000 years ago, hold 1/5 of the world's standing fresh water. But Lake Superior holds 10% of all the fresh water on earth and more water than the other four Great Lakes combined.

After being formed from melting ice glaciers over 13,500 years ago, Lake Superior at a depth of 1,300 feet, has developed into one of the world's greatest ecosystems. Throughout its history, Lake Superior has provided inhabitants of its surrounding region with an abundance of resources. From its early inhabitants Paleo-Indians to modern day, Lake Superior continues to offer a tapestry of stories, history, and geological developments.

While searching for a legendary shortcut to China called the "Northwest Passage" Samuel de Champlain became the first Frenchman to discover the Great Lakes in 1615. Forty-three years later in 1658 two teenage adventurers from Quebec named Radisson and Groseilliers, became the first Europeans to circumnavigate Lake Superior. Although their successful journey proved that Lake Superior was not the "Northwest Passage", they found enough animals with fur pelts that launched the French Canadian fur industry. Along with fur, timber and fishing also became important industries throughout the Lake Superior region. However, as the natural resources for these industries became depleted new ways to generate commerce were developed. Since the shores of Lake Superior was rich with hard rock and metal bearing ores copper mining became Lake Superior's next boom industry. As the mining industry evolved it provided the steel used to produce automobiles and beams for skyscrapers. Lake Superior with its unique characteristics played a vital role during America's robust industrial age. As America grew so too did the role of Lake Superior. Along with its iron producing shores Lake Superior has also become the water highway for ocean bound ships. From its geologic origins to its present day, Lake Superior continues to reveal stories from the past while maintaining a vital role today and for the future.

Introduction & Geography: *Lake Superior*

Q & A : For MORE geography SEE maps on pgs. 12-16

- 1) Q - Name the five Great Lakes?
A - Lake Superior, Lake Michigan, Lake Huron, Lake Erie, Lake Ontario
- 2) Q - What occupations were most attracted to the Lake Superior region?
A - Fur Trappers, Lumberjacks, Miners, Fishermen, Sailors.
- 3) Q - How much of the world's fresh water is found in the five Great Lakes?
A - 1/5
- 4) Q - How many people live within 100 miles of the Great Lakes?
A - 50 million

DISCUSSION POINTS / ACTIVITIES:

- 1) Review the geography of the Great Lakes with the use of a map or computer. Discuss the sizes of the lakes and how they create their own weather activity.
- 2) Assign students to draw a map of Lake Superior and its surrounding territories.

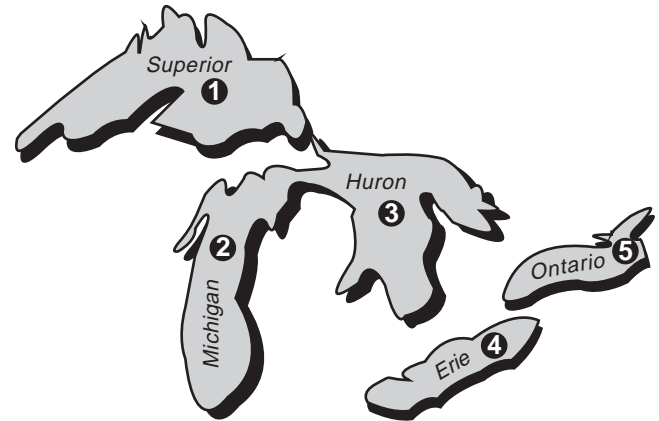
VOCABULARY:

OCEANIC: Term used to describe the large tides and currents of the Great Lakes.

The GREAT LAKES: Five bodies of water located in the upper central part of North America. 1/5 of all the fresh water found on earth is held by these five bodies of water.

Map #2 of **GREAT LAKES**

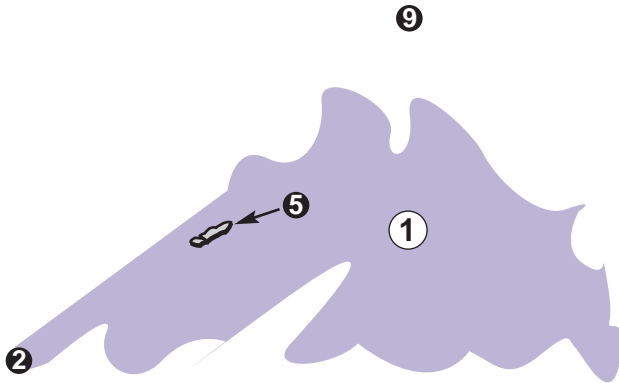
Study the Map & Its Significant Locations



- ① SUPERIOR
- ② MICHIGAN
- ③ HURON
- ④ ERIE
- ⑤ ONTARIO

Map #1 of LAKE SUPERIOR

Study the map & its locations on pgs. 12 & 13. Then on the solid black line write the name of the location. On a separate piece of paper write a brief description of each location



① _____

② _____

⑤ _____

⑨ _____

Formation of the Great Lakes

Q & A :

- Q - What major geological development formed the land beneath the Great Lakes?
A - Volcanoes
- Q - What developed 600 million years ago which caused the Great Lakes land to sink? What kind of rock was created due to this sinking land mass?
A - Great North American Rift / Limestone & Shale
- Q - What became the last major geologic development to form the great lakes?
A - Melting glaciers from the last ice age known as the Wisconsin Icesheet

DISCUSSION POINTS / ACTIVITIES:

- Discuss the geological developments which formed the Great Lakes.
- Visit a local museum which demonstrates how the Great Lakes were formed.
- Assign the students to create a presentation which effectively communicates the geological origins of the Great Lakes.

VOCABULARY:

VOLCANOES: A hill or mountain which, when eruption occurs, expels hot molten lava.

GREAT NORTH AMERICAN RIFT: A geological development which occurred 600 million years ago. During this time the earth's crust weakened and the land began to sink eventually causing sediments to be compressed into limestone and shale.

WISCONSIN ICESHEET: The name given to a massive ice glacier. The water from this melting glacier filled the lakebeds which are known today as the Great Lakes.

LAKE SUPERIOR

Q & A:

- 1) Q - What lake holds the largest volume of water in the world?
A - Lake Superior
 - 2) Q - Name the Canadian Province located along Lake Superior's northern border? Name the three states located along the southern border of Lake Superior?
A - Ontario / Minnesota, Wisconsin, Michigan
 - 3) Q - What is a "Seich"?
A - A wave caused by a combination of differing barometric pressures and water temperatures on the lake.
 - 4) Q - What river is the main source of water for Lake Superior?
A - Pigeon River.
-

DISCUSSION POINTS / ACTIVITIES:

- 1) Assign the students to create a map of Lake Superior indicating significant points of interests.
 - 2) If possible invite a meteorologist to your school to explain the unusual weather patterns formed by the Great Lakes.
 - 3) Discuss the important features of Lake Superior, i.e. size, seich, the area surrounding or bordering the lake etc.
-

VOCABULARY:

SEICH: A wave caused by a combination of differing barometric pressures and water temperatures on the lake.

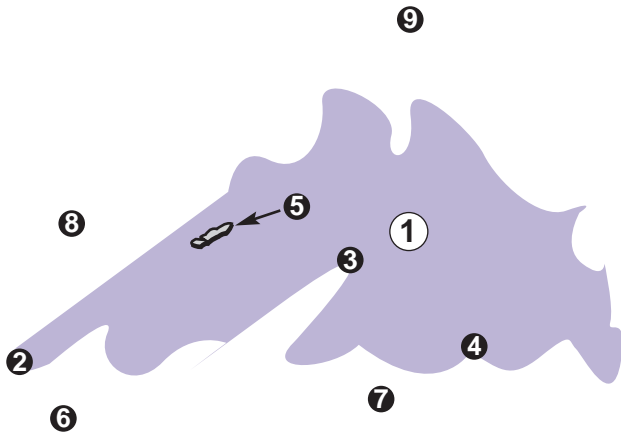
PIDGEON RIVER: The main source of water for Lake Superior.

Map #1 of LAKE SUPERIOR

Study the modern-day map on pg. 12 and its significant locations numbered 1-9. Then test your geography skills on pg. 14.

- 3) **COPPER ISLAND:** Located on the tip of the Keweenaw Peninsula, this small town once popular for mining, is today a point of departure for thousands of tourists who take a ferry ride to Isle Royal.
- 4) **MARQUETTE:** The largest city on Michigan's Upper Peninsula. Named after the French explorer Jacques Marquette who navigated through the Great Lakes region during the late 1600's.
- 5) **ISLE ROYALE:** Is the largest island in Lake Superior and was designated a national park in 1931.
- 6) **WISCONSIN:** One of three U.S. states located along Lake Superior's southern border.
- 7) **UPPER PENINSULA:** Part of the state of Michigan which is one of three U.S. states located along Lake Superior's southern border.
- 8) **MINNESOTA:** One of three U.S. states located along Lake Superior's southern border.
- 9) **ONTARIO:** A Canadian province located along Lake Superior's northern border.

Map #1 of **LAKE SUPERIOR**



① **LAKE SUPERIOR:** One of the five Great Lakes which holds 10% of all the fresh water on earth and more water than the other four Great Lakes combined. If judged by the amount of fresh water it holds, Lake Superior is the world's largest lake.

② **DULUTH, MINNESOTA / SUPERIOR, WISCONSIN:** Once a busy port located on the western most portion of the Great Lakes waterway. Today, these two cities have a combined population of over 100,000 people and is the largest metropolitan area on the Lake Superior.

Early Man and the Great Lakes

Q & A:

- 1) Q - What is the meaning of BCE?
A - Before Common Era
- 2) Q - What is a Clovis Point?
A - It is a type of stone spear head made by early Paleo-Indians
- 3) Q - What metal became popular for the early native people?
A - Copper
- 4) Who replaced the copper Indian culture?
A - Woodland Native Americans
- 5) What items did the early native people make with copper?
A - Knives, Axe Blades, Jewelry

DISCUSSION POINTS / ACTIVITIES:

- 1) Discuss the types of animals early Paleo-Indian cultures hunted. Explain how these early native cultures extracted the copper from the hard rock.

VOCABULARY:

BCE: Before Common Era .

CLOVIS POINT: A stone spear head made by early Paleo-Indians used to hunt animals.

COPPER CULTURE: The first Native American Indians to melt and fashion objects out of metal.

Native Tribes Around the Lakes

Q & A :

- 1) Q - Who lived along the North Shore of Lake Superior?
A - The Chippewa
- 2) Q - What does it mean to be a hunting and gathering society?
A - These are societies who hunt animals for meat and gathered fruits, grains and vegetables for food.
- 3) Q - Name the two primary groups of Native Indians who lived throughout the Great Lakes area?
A - The Algonquin and Iroquois
- 4) Q - What were the two major differences between the Iroquois and Algonquin?
A - 1) Language and 2) Iroquois was an agricultural society and the Algonquin was a hunting gathering society.

DISCUSSION POINTS / ACTIVITIES:

- 1) Discuss the different characteristics of the Native Indian cultures who occupied the Lake Superior region.
- 2) Have the students research the different Indian tribes and then create a presentation which explains the similarities and difference between the different tribes.

VOCABULARY:

ALGONQUIN: A group of Native Indian cultures who were primarily a hunting gathering society.

IROQUOIS: A group of Native Indian cultures who were primarily an agricultural community.

Lake Superior Today / Environment

Q & A :

- 1) Q - Name the two cities along Lake Superior's most western port?
A - Duluth, Minnesota / Superior, Wisconsin
- 2) Q - What is the name of Lake Superior's southern border?
A - The Upper Peninsula
- 3) Q - What is the largest island of Lake Superior?
A - Isle Royale
- 4) Q - What is one of the worst environmental problems in Lake Ontario today?
A - Large quantities of asbestos

DISCUSSION POINTS / ACTIVITIES:

- 1) Discuss the environmental issues effecting Lake Superior today. What steps are being taken to solve these environmental problems. How did the environment of Lake Superior become so crippled.
- 2) Instruct the students to contact environmental agencies to learn more about the Lake Superior region. Perhaps invite an environmentalist to your school to discuss Lake Superior.

VOCABULARY:

UPPER PENINSULA: An area of the state of Michigan located along the southern borders of Lake Superior.

ISLE ROYALE: The largest island of Lake Superior. It was designated a National Park in 1931.

ASBESTOS: A fiber-like mineral inextinguishable when set on fire and chemically resistant. Large quantities of this material is the by-product of industrial pollution and spilled cargos of sunken ships.

The Wreck of the Edmund Fitzgerald

Q & A :

- 1) Q - Name the French explorer who built the first large size sailing ship capable of navigating through the Great Lakes?
What was the name of the ship?
A - Rene Robert La Salle / The Griffon
 - 2) Q - Name the super freighter which sank during a storm on Lake Superior November 10th, 1975?
A - Edmund Fitzgerald
 - 3) Q - What cargo was the Edmund Fitzgerald carrying when it met its tragic fate?
A - Iron ore pellets called taconite
-

DISCUSSION POINTS / ACTIVITIES:

- 1) If possible visit a maritime museum and learn about the shipwrecks on the waters of the Great Lakes.
 - 2) Assign the students to learn more about the Edmund Fitzgerald via the library, internet etc.
-

VOCABULARY:

RENE ROBERT LA SALLE: A French explorer who was the first to build a large size ship capable of sailing the Great Lakes.

THE GRIFFON: The name of the large size ship Rene Robert La Salle built. After setting sail in August of 1679 the ship while carrying fur pelts was lost during its return voyage.

EDMUND FITZGERALD: A super freighter which sank into Lake Superior during a severe November storm.

The Arrival of the French

Q & A :

- 1) Q - Who was the first Frenchman to discover the Great Lakes in 1615?
A - Samuel de Champlain
 - 2) Q - What was Champlain looking for when he discovered the Great Lakes?
A - A shortcut to China called the Northwest Passage.
 - 3) Q - Name the two young adventurers who became the first to circumnavigate Lake Superior?
A - Radisson and Groseilliers
 - 4) Q - What industry emerged after Lake Superior was proven not to be the Northwest Passage ?
A - The French Canadian fur Industry
 - 5) Q - Why did the fur, timber and fishing industries change from boom to bust?
A - Because natural resources were being depleted, and in some cases extinct, from the Lake Superior region.
-

DISCUSSION POINTS / ACTIVITIES:

- 1) Discuss the pros and cons for developing industries along the Lake Superior region.
-

VOCABULARY:

SAMUEL DE CHAMPLAIN: The first Frenchman to discover the Great Lakes in 1615.

RADISSON & GROSEILLIERS: Two teenage adventurers who became the first Europeans to circumnavigate Lake Superior.

Iron Ore and Iron Men

Q & A :

- 1) Q - Why are the shores of Lake Superior different than the other four Great Lakes?
A - Lake Superior is surrounded by hard rock and metal bearing ores while the other Great Lakes are surrounded by gravel and clay.
- 2) Q - Who bought a legendary copper nugget for \$150.00 dollars in 1848?
A - Julius Eldridge
- 3) Q - Name the geological formation which was discovered in 1890 & became the location for a main iron ore deposit?
A - Masabi Range
- 4) Q - What was produced from iron ore?
A - Steel which was used to produce automobiles and beams for skyscrapers.

DISCUSSION POINTS / ACTIVITIES:

- 1) Assign the students to research how iron ore is mined and then how it is converted into steel to manufacture products like automobiles.

VOCABULARY:

MASABI RANGE: A geological formation where a rich iron ore deposit was discovered in 1890.

IRON ORE: A mineral deposit found in rock which is extracted and converted into steel and is then used to manufacture products like automobiles.

JULIUS ELDRIDGE: A man who bought a copper nugget from the Indians for \$150.00. After the government seized the nugget a controversy followed. The publicity initiated by the controversy launched the Lake Superior copper mining industry.

The Great Inland Waterway

Q & A :

- 1) Q - What is the French interpretation of Lake Superior?
A - "Above Them All"
- 2) Q - Why are locks used for ships along the five Great Lakes?
A - The locks regulate the water levels between lakes.
- 3) Q - What happens between Lake Erie and Lake Ontario?
A - The water level drops 183 feet creating Niagara Falls.

DISCUSSION POINTS / ACTIVITIES:

- 1) Imagine you are traveling through the Great Lakes region. Discuss what you would see during your journey.
- 2) Instruct the students to research how a lock system, like the one used on the Great Lakes, is designed and how it works.
- 3) Discuss why the Great Lakes is described as a giant staircase.

VOCABULARY:

LOCKS: A means of altering the height of a waterway to allow the passage of ships.

NIAGARA FALLS: An area between Lake Erie and Lake Ontario where the water drops 183 feet.

PORTAGE: A term used to describe Native Americans and early French explorers who carried their canoes on the land while traveling between lakes.