

THE GREAT LAKES SERIES

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

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Consider Visiting These Web Sites:

<http://www.niagarafallslive.com/>
http://en.wikipedia.org/wiki/Lake_Ontario
<http://www.great-lakes.net/lakes/ontario.html>



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LAKE ONTARIO



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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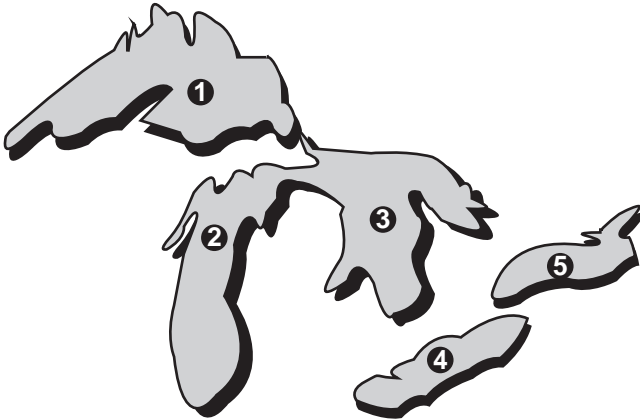
E-Guides available at www.filmideas.com

TIMELINE of **LAKE ONTARIO**

- **5,000 years ago:** The Great Lakes region begins to take on the form which is known today.
- **1570:** The Iroquois Confederation is united.
- **1757:** The first hydroelectric power was used for a saw mill near Niagara Falls.
- **1778:** American colonists, loyal to Britain, flee to the city of Hamilton after the Revolutionary War.
- **1793:** The English build Fort York which later becomes the city of Toronto.
- **1824:** The Erie Canal is built.
- **1829:** The Welland Canal is built.
- **1879:** Thomas Edison invents the first light bulb.
- **1882:** Water was used to generate power for many factories throughout the Great Lakes region.
- **1905:** The first Canadian power station is built by the Ontario Power Company.
- **1931:** After being rebuilt several times today's version of the Welland Canal is finally completed.
- **1958:** Three new power plants replaced older plants.
- **2003:** The world's worst power outage occurs affecting 50 million people and 5 billion dollars in financial losses.

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 and on a separate piece of paper write a brief description about each location.



① _____

② _____

③ _____

④ _____

⑤ _____

LAKE ONTARIO

Formed from a melting ice glacier 5,000 years ago and with a continuous coastline of 5,000 miles long, the Great Lakes region has played a key role in the exploration and settlement of the North American continent. Over the centuries, the Great Lakes have supported native cultures, fur trappers, lumberjacks, miners, fishermen and sailors.

Translated “Shining Water”, Lake Ontario at 193 miles long and 53 miles wide is the smallest of the Great Lakes. However, at a depth of 802 feet it is the third deepest of all the lakes. Throughout the history of North America, Lake Ontario has played an important role for both early native cultures and early European explorers. Because of its rich fertile soil for farming and its role as a major gateway for water transportation, the Lake Ontario region became a strategic battleground during the development of North America. Following the War of 1812, the region prospered as new industries and construction began to emerge. However as industry expanded and population grew, pollution and other environmental issues began to effect the Great Lakes region. Unfortunately, Lake Ontario as the last drainage area, receives pollutants from the other four Great Lakes. Recently, international efforts led by Canada and the United States have been initiated to reverse past mistakes.

The largest Canadian cities located along Lake Ontario include Toronto and Hamilton while the largest U.S. city is Rochester, New York. Coal, water, and nuclear based power plants supply energy for these cities and other areas throughout the Lake Ontario region. Because water is such a key resource used to generate energy, Lake Ontario and the other four Great Lakes are attractive locations for power plants. Although Lake Ontario is considered the smallest of the Great Lakes it receives water from one of the most powerful energy generating waterfalls in the world—Niagara Falls. From small to powerful the waters of Lake Ontario offer us a revealing past and a promising future.

Introduction of *Lake Ontario*

For MORE geography SEE maps on pgs. 12-16

Q & A :

- 1) Q - Name the five Great Lakes?
A - Lake Superior, Lake Michigan, Lake Huron, Lake Erie, Lake Ontario
 - 2) Q - What occupations were supported by the Lake Huron region?
A - Fur Trappers, Lumberjacks, Miners, Fishermen, Sailors.
 - 3) Q - How were the Great Lakes formed?
A - From a melting ice glacier 5,000 years ago.
-

DISCUSSION POINTS / ACTIVITIES:

- 1) Review the geography of the Great Lakes with the use of a map or computer. Discuss the role the Great Lakes had during the exploration and settlement of North America.
 - 2) Assign students to draw a map of Lake Ontario and its surrounding territories.
 - 3) Explain the geological formations which created the Great Lakes 5,000 years ago.
-

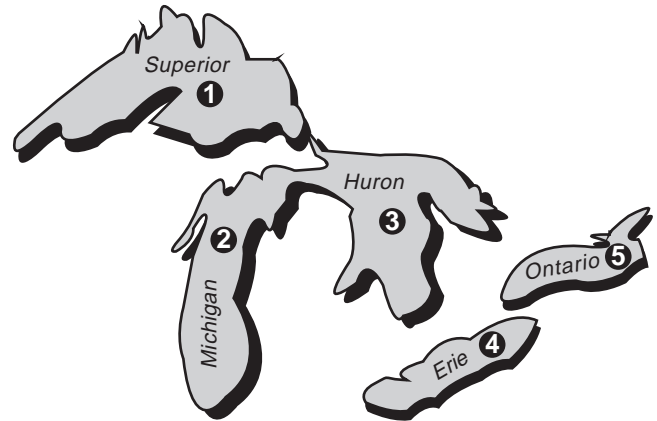
VOCABULARY:

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.

GLACIER: A large body of ice moving slowly across a land surface. It was this type of geological formation which created the Great Lakes 5,000 years ago.

Map #2 of *GREAT LAKES*

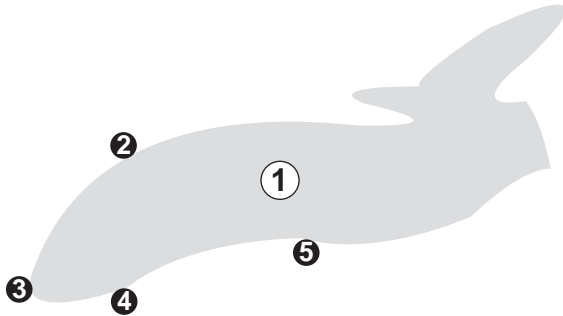
Study the Map & Its Significant Locations



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

Map #1 of LAKE ONTARIO

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 _____

③ _____

④ _____

⑤ _____

An Overview of Hydropower

Q & A:

- 1) Q - What name is given to describe water used to generate electricity?
A - Hydroelectric Power
- 2) Q - What three types of power plants are supported by the Great Lakes?
A - Hydroelectric, Coal and Nuclear
- 3) Q - Where does water generate the most hydroelectric power along the Great Lakes?
A - Niagara Falls
- 4) Q - Who invented the light bulb in 1879?
A - Thomas Edison

DISCUSSION POINTS / ACTIVITIES:

- 1) If possible visit a local power plant.
- 2) Explain how hydroelectric power is generated.
- 3) Assign the students to create a presentation which effectively communicates how different types of power plants generate energy.

VOCABULARY:

HYDROELECTRIC POWER: Electric power generated by water.

THOMAS EDISON: The person who invented the light bulb in 1879.

GRIDS: A network of high power lines which transports electricity from the power plant to remote areas such as cities.

ONTARIO POWER COMPANY: A Canadian company which built the first Great Lakes power station in 1905.

LAKE ONTARIO

Q & A:

- 1) Q - What does Lake Ontario mean in the Iroquois language?
A - "Shining Waters"
- 2) Q - What is the smallest Great Lake according to surface area?
A - Lake Ontario
- 3) Q - What lies along Lake Ontario's southern border? Along its north and western border?
A - State of New York / The Canadian Province of Ontario
- 4) Q - What body of water connects Lake Ontario with Lake Erie?
A - Niagara River
- 5) Q - Where does the water flow after exiting Lake Ontario?
A - St. Lawrence River

DISCUSSION POINTS / ACTIVITIES:

- 1) Assign students to write a brief profile describing the key features or characteristics of Lake Ontario.
- 2) Use a map to indicate the geography associated with Lake Ontario.

VOCABULARY:

LAKE ONTARIO: At 193 miles long and 53 miles wide the smallest of the Great Lakes. However, at a depth of 802 feet it is the third deepest of all the lakes. It's name translated in the Iroquois language is "Shining Water".

NIAGARA RIVER: The body of water which connects Lake Erie with Lake Ontario.

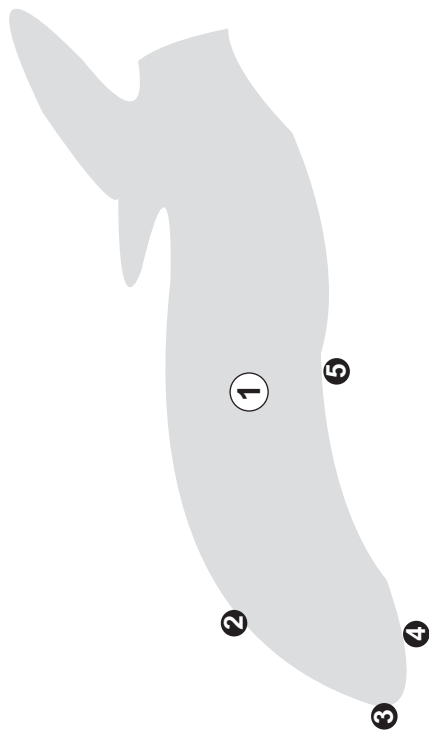
ST. LAWRENCE RIVER: A body of water which receives water exiting from Lake Ontario.

Map #1 of LAKE ONTARIO

Study the modern-day map on pg. 12 and its significant locations numbered 1-5. Then test your geography skills on pg. 14.

- ① **LAKE ONTARIO:** At 193 miles long and 53 miles wide it is the smallest of the Great Lakes. However, at a depth of 802 feet it is the third deepest of all the lakes. It's name translated in the Iroquois language is "Shining Water".
- ② **TORONTO:** The capital city of the Canadian Province of Ontario and is the largest city on Lake Ontario.
- ③ **HAMILTON:** A popular city on Lake Ontario where American colonists, loyal to Britain, escaped to after the Revolutionary War.
- ④ **NIAGARA FALLS:** An area located along the U.S. Canadian border where water from the Niagara River drops approx. 160 ft. into Lake Ontario. It consists of three separate falls named: Horseshoe Falls, Bridal Veil Falls and American Falls. This waterfall is also a tremendous source for electrical power.
- ⑤ **ROCHESTER, NEW YORK:** The largest American city located along Lake Ontario.

Map #1 of **LAKE ONTARIO**



Early Native Peoples of Lake Ontario

Q & A :

- 1) Q - Name two of the five Iroquois Confederation tribes?
A - Mohawks, Cayuga, Onondaga, Oneida, Seneca
- 2) Q - Who united the five Iroquois Confederation tribes?
A - An Iroquois Indian by the Name of Hiawatha
- 3) Q - Who were the main enemy of the Iroquois Confederation?
A - The Algonquin Speaking Tribes
- 4) Q - What caused the Iroquois Confederation to fall from power?
A - Diseases introduced to the area from the arrival of Europeans.

DISCUSSION POINTS / ACTIVITIES:

- 1) Assign the students to research the Iroquois Confederation. After their research have them perform a play which demonstrates how the Iroquois Tribes lived.
- 2) Visit a museum which exhibits how the Iroquois tribes lived.

VOCABULARY:

IROQUOIS CONFEDERATION: An Indian alliance consisting of five Iroquois tribes: Mohawks, Cayuga, Onondaga, Oneida and Seneca. The alliance lasted 200 years and was introduced by an Iroquois Indian named Hiawatha.

LONG HOUSES: Name given to the communal dwelling built by the Iroquois Indians.

European Discovery of Lake Ontario

Q & A :

- 1) Q - What is the first Great Lake to be crossed for those traveling east to west along the St. Lawrence river?
A - Lake Ontario
- 2) Q - What was the first Great Lake discovered by the French?
A - Lake Huron
- 3) Q - Who forced the French to travel around Lake Ontario?
A - The Iroquois Indians
- 4) Q - Who were the Iroquois' European allies? Who were the Algonquin speaking Indians' European Allies?
A - The English / The French

DISCUSSION POINTS / ACTIVITIES:

- 1) Assign the students to write and perform a play which would demonstrate the different Indian cultures and their relationship with early European explorers.
- 2) Assign the students to imagine they are an early European explorer or Indian warrior. How might their lifestyle differ from the comforts of today's contemporary culture.

VOCABULARY:

HURONS: Arch enemy of the Iroquois Indian tribes who eventually became allies with the French.

SAMUEL DE CHAMPLAIN: An early French explorer who discovered Lake Huron in 1615 and befriended the Huron Indians.

Modern Cities of Lake Ontario

Q & A :

- 1) Q - Name the capital city of the Canadian province of Ontario?
A - Toronto
- 2) Q - What was the original name given to Toronto?
A - Fort York
- 3) Q - What city did American colonists, who remained loyal to Britain, escape to after the Revolutionary War?
A - Hamilton
- 4) Q - Name the largest American city along the shores of Lake Ontario?
A - Rochester, New York

DISCUSSION POINTS / ACTIVITIES:

- 1) Use a map to indicate where modern cities along Lake Ontario are located.
- 2) If possible visit some of the major cities located along the shores of Lake Ontario.
- 3) Discuss some of the sites one would visit while traveling through the cities located along Lake Ontario.

VOCABULARY:

TORONTO: The capital city of the Canadian Province of Ontario.

HAMILTON: A popular city on Lake Ontario where American colonists, loyal to Britain, escaped to after the Revolutionary War.

ROCHESTER, NEW YORK: The largest American city located along Lake Ontario.

The Effects of Industry

Q & A :

- 1) Q - What are the two main causes for pollution along the Great Lakes?
A - 1) Material Waste from Industries; 2) Population Growth
- 2) Q - What Canadian town was home to the biggest polluters of Lake Ontario during the turn of the 20th century?
A - Hamilton
- 3) Q - Why does Lake Ontario receive pollutants from the other four Great Lakes?
A - Because it is last in line of drainage for the other four Great Lakes.

DISCUSSION POINTS / ACTIVITIES:

- 1) Discuss what international efforts are being conducted to improve the environment throughout the Great Lakes region.
- 2) Invite an environmentalist to speak about the dangers of pollution and how it effects the waters of Lake Ontario or other bodies of water near your local community.
- 3) Assign the students to research pollution and its effects on the environment. Debate the pros and cons of expanding industry and population growth.

VOCABULARY:

LOVE CANAL: An area near Buffalo, New York, Lake Ontario and Niagara Falls where chemical waste used for plastic products caused one of the worst cases of pollution ever to be recorded along the Great Lakes region.

POLLUTION: Debris or material which when improperly disposed creates an impure or unclean environment.

Grand Canals and Lake Ontario

Q & A :

- 1) Q - Why was the Erie Canal built in 1824?
A - To connect the Hudson River and New York Harbor directly to Lake Erie
- 2) Q - Why does the Erie Canal bypass Lake Ontario?
A - To avoid Niagara Falls
- 3) Q - Where is the closest location the Erie Canal comes to Lake Ontario?
A - Rochester, New York
- 4) Q - What border was officially established after the War of 1812?
A - The U.S. - Canadian border
- 5) Q - Who eventually won control of the Great Lakes region?
A - The Iroquois and their English allies

DISCUSSION POINTS / ACTIVITIES:

- 1) Assign the students to research how the Lake Erie Canal was constructed.
- 2) Discuss why canals are built.

VOCABULARY:

ERIE CANAL: A man-made water channel built in 1824 to connect the Hudson River and New York Harbor directly to Lake Erie.

ROCHESTER, NEW YORK: The closest location whereby the Erie Canal comes to Lake Ontario. Ten years after the opening of the Erie Canal this area began to experience rapid growth.

Welland Canal and Lake Ontario

Q & A :

- 1) Q - Who proposed that the Welland Canal be built?
A - William Merritt
 - 2) Q - Why was the Welland Canal built?
A - To permit ships to travel directly from Lake Erie into Lake Ontario and from there through the St. Lawrence River and into the Atlantic Ocean.
 - 3) Q - What is an Isthmus?
A - A narrow strip of land that separates two bodies of water.
 - 4) Q - How many times was the Welland Canal originally built then rebuilt?
A - Six times
-

DISCUSSION POINTS / ACTIVITIES:

- 1) Discuss how locks work. Perhaps invite an engineer to explain how canals are built and locks operate.
-

VOCABULARY:

WILLIAM MERRITT: A Canadian who proposed that the Welland Canal be built.

WELLAND CANAL: A man-made water channel originally built in 1829 to permit ships to travel directly from Lake Erie into Lake Ontario and from there through the St. Lawrence River and into the Atlantic Ocean.

ISTHMUS: A narrow strip of land that separates two bodies of water.

LOCKS: A system which raises and lowers ships as they pass through different levels of water.

Niagara Falls

Q & A :

- 1) Q - Where is Niagara Falls located?
A - On the Niagara River
 - 2) Q - Niagara is three separate falls. Name these three falls?
A - Horseshoe Falls; Bridal Veil Falls; American Falls
 - 3) Q - What separates the three falls?
A - Goat Island
 - 4) Q - What border is along the Niagara River?
A - The U.S.-Canadian border
 - 5) Q - Name the tourist boat which offers an exciting way to experience Niagara Falls?
A - The Maid of the Mist
-

DISCUSSION POINTS / ACTIVITIES:

- 1) Imagine you are aboard the Maid of the Mist. Describe the sights and sounds one may experience while visiting Niagara Falls.
 - 2) If possible visit Niagara Falls.
-

VOCABULARY:

NIAGARA FALLS: An area located along the U.S. Canadian border where water from the Niagara River drops approx. 160 ft. into Lake Ontario. It consists of three separate falls: Horseshoe Falls, Bridal Veil Falls and American Falls. This waterfall is also a tremendous source for electrical power.

The MAID OF THE MIST: A tourist boat which travels through Niagara Falls.