

RESOURCE LIBRARY
ACTIVITY : 50 MINS

The Erie Canal

Students interact with maps to analyze the geography of the New York region and identify how elevation influenced the development of trade, trade routes, and the growth of cities in that region.

GRADES

3, 4

SUBJECTS

Geography, Human Geography, Physical Geography, Social Studies, U.S. History

CONTENTS

5 PDFs, 1 Image

OVERVIEW

Students interact with maps to analyze the geography of the New York region and identify how elevation influenced the development of trade, trade routes, and the growth of cities in that region.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/the-erie-canal/>

DIRECTIONS

1. Distribute the blank student worksheet and introduce the activity.

Distribute the worksheet The Erie Canal and Population in New York and tell students that they will label features as they learn about them, including:

- states
- major cities

- mountain ranges
- rivers
- canals
- Great Lakes
- oceans

2. Build background on transportation, trade, and the location of New York.

Explain to students that to trade something means to exchange goods for money or other goods. People will move trade goods across large distances, but they will look for the fastest and easiest routes to do so to save time and the cost of shipping. Invite a volunteer to point out the state of New York on a wall map of the United States. Ask:

- *What about the location of New York makes it a good location for trade between New York and the other states of Ohio, Pennsylvania, or Michigan?* (its location next to Lake Erie and Lake Ontario)
- *What about the location of New York makes it a good location for trade between the United States and Europe?* (its location next to the Atlantic Ocean)
- *How do you think people moved heavy loads over long distances in the early 1800s?* (with ships or horses and wagons)
- *What kinds of products do you think were moved from place to place in this area in the early 1800s?* (food products such as wheat; lumber; manufactured goods)

Have students label the states (New York, New Hampshire, Vermont, Massachusetts, Connecticut, Pennsylvania, Ohio, New Jersey), ocean (Atlantic), Great Lakes (Lake Erie, Lake Ontario), and Canada on their worksheets.

3. Analyze the impact of elevation and mountain regions.

Project the map Mountain Regions of New York and point out the locations of Lake Erie and New York City. Also point out the map key that shows the elevation in feet. Ask: *What do the darker colors show?* Elicit from students that the dark colors are mountains. Ask: *How could traders from the Lake Erie region get goods to New York City in the fastest and easiest way without going over mountains?* Make sure students understand that the 1800s were before automobiles, trains, and airplanes existed. If needed, prompt students to look at other features in lower elevations until they identify rivers. Tell students that putting heavy loads on boats in water was much easier than moving heavy loads up and down mountains. Help students to label the Allegheny Plateau, Catskill Mountains, and Adirondack Mountains on

their worksheets.

4. Map the best transportation route from New York City to Lake Erie.

Explain to students that, at first, traders used routes with the lowest elevation plus existing rivers. Project the map Major Rivers of New York and point out Albany. Tell students that Albany is New York's state capital and that it became a city because it was an important site of trade. Then point out the Hudson and Mohawk Rivers. Ask:

- *What about these rivers makes them important transportation routes? (They are in areas of low elevation.)*
- *How could goods move from Lake Erie to the mouth of the Mohawk River? (over land with low elevation)*

Have students draw the easiest and fastest transportation route from New York City to Lake Erie on their worksheets. Provide support, as needed.

5. Discuss the Erie Canal and how it solved problems caused by the landscape.

Tell students that in addition to using existing rivers, people in the 1800s could also create canals, or manmade rivers. Project the map The Erie Canal of New York and explain that engineers built the Erie Canal to create a water route for boats between Lake Erie and the Mohawk River. Have students label the Erie Canal on their worksheets. Ask students to brainstorm the possible benefits of creating a canal, including the ability to avoid natural features like mountains or waterfalls. Students may wonder if it would have been easier to build a canal to Lake Ontario instead of all the way to Lake Erie. Ships might then carry goods from Lake Ontario to Lake Erie along the Niagara River. Ask students to imagine why this might not have been a good option. Show them the provided photograph of Niagara Falls. Discuss how challenging it would have been for a boat to travel that river.

6. Determine the probable location of New York's largest cities today.

Project the Erie Canal of New York map again. Have students analyze the locations of New York State's major rivers, the Erie Canal, and other landforms and then mark with Xs on their worksheets where they think the state's six most populous cities are. Have students share their ideas with a classmate and give reasons for why they located the cities where they did. Give them the opportunity to adjust locations based on their discussions.

7. Check students' mapping of city locations.

Show students the map Major Cities in New York, which includes the six largest cities in New York, and have students compare it to their maps. Point out to students that these cities are located along the Hudson River, Mohawk River, and Erie Canal. Ask: *Why do you think cities grew along the Hudson River and Erie Canals?* (Cities grow where trade takes place because factories are built and the people who work in them live nearby.) Have students label the six cities on their worksheets and discuss what they learned in the process.

8. Have students complete all worksheets.

Have students check to make sure their set of worksheets includes all of the features discussed. If students need support, review any missing features and help them add the features to their worksheets.

- States: New York, Ohio, Pennsylvania, Michigan
- Major cities: Buffalo, Rochester, Syracuse, Albany, Yonkers, New York City
- Mountain ranges: Allegheny Plateau, Catskill Mountains, Adirondack Mountains
- Rivers: Mohawk River, Hudson River
- Canal: Erie Canal
- Great Lakes: Lake Erie, Lake Ontario
- Ocean: Atlantic Ocean

TipMapping

When working with maps, use the scale bar to engage students with the content of the map. Using the scale bar, students can measure the real-world distance between places on the map.

Tip

Have students practice using the language of location, such as near, next to, between, far from, and more. The language of location includes relative location, for example, "The Mohawk River flows between the Adirondacks and the Catskills." Students can also use cardinal directions to describe location, for example, "The Adirondack Mountains are north of the Catskill Mountains" or "The Erie Canal runs east to west."

Tip

Play for students the song “Fifteen Miles on the Erie Canal,” written in 1905 by Thomas S. Allen. You can find many versions of the song online and use it to broaden students’ understanding of canal boats and the time period.

Informal Assessment

Have students summarize their learning by looking at their map and writing a paragraph demonstrating their understanding of why humans built canals and cities where they did in this region. Ask: *Why did people build cities and canals in New York? Why did they build them where they did?* Check that students described the locations of rivers, mountains, Niagara Falls, and also the need to transport goods to/from New York City.

Extending the Learning

- Trade and transportation play major roles in the development of cities and regions across the globe. Identify other port cities like New York City that are important hubs of trade and have students locate them on a map. For a focus on ports in the United States, map the following major ports: Port of South Louisiana (in between Baton Rouge and New Orleans), Port of Houston (in Texas), and Port of Long Beach (in California). Have students research what kinds of goods pass through these ports and discuss with students how activity at these ports has affected the development of cities in these regions.
- Have students look at the location of first settlement of each of the original 13 colonies to see how many of these locations included both a good, deep water port and a major river that went inland for trade from within the colony to the outside world.
- Have students research other canals and how they helped trade, such as the Panama Canal, the Suez Canal, and canals in Europe.

OBJECTIVES

Subjects & Disciplines

Geography

- Human Geography
- Physical Geography

Social Studies

- U.S. History

Learning Objectives

Students will:

- describe the location of New York as an important location for transportation and trade in the 1800s
- label locations and features of the New York region on a map
- identify mountains and high elevation regions on a map
- identify low elevation regions on a map
- predict transportation routes based on elevation using a map
- identify cities on a map and differentiate population size based on map symbology
- explain how water transportation routes can offer economic benefits in trade

Teaching Approach

- Learning-for-use

Teaching Methods

- Brainstorming
- Discussions
- Hands-on learning
- Visual instruction

Skills Summary

This activity targets the following skills:

- Geographic Skills
 - Acquiring Geographic Information
 - Analyzing Geographic Information
 - Answering Geographic Questions
 - Organizing Geographic Information

National Standards, Principles, and Practices

NATIONAL COUNCIL FOR SOCIAL STUDIES CURRICULUM STANDARDS

- **Theme 3:**

People, Places, and Environments

NATIONAL GEOGRAPHY STANDARDS

- **Standard 1:**

How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information

- **Standard 11:**

The patterns and networks of economic interdependence on Earth's surface

- **Standard 12:**

The processes, patterns, and functions of human settlement

COMMON CORE STATE STANDARDS FOR ENGLISH LANGUAGE ARTS & LITERACY

- **Reading Standards for Informational Text K-5:**

Key Ideas and Details, RI.3.3

THE COLLEGE, CAREER & CIVIC LIFE (C3) FRAMEWORK FOR SOCIAL STUDIES STATE STANDARDS

- **Causation and Argumentation: D2.His.14.3-5:**

Explain probable causes and effects of events and developments.

- **Human-Environment Interaction: Place, Regions, and Culture: D2.Geo.5.3-5:**

Explain how the cultural and environmental characteristics of places changes over time.

- **Human-Environment Interaction: Place, Regions, and Culture: D2.Geo.6.3-5:**

Describe how environmental and cultural characteristics influence population distribution in specific places or regions.

- **Human Population: Spatial Patterns and Movements: D2.Geo.7.3-5:**

Explain how cultural and environmental characteristics affect the distribution and movement of people, goods, and ideas.

Preparation

What You'll Need

MATERIALS YOU PROVIDE

- Erasers
- Pencils
- Wall map of the United States

REQUIRED TECHNOLOGY

- Internet Access: Required
- Tech Setup: 1 computer per classroom, Projector

PHYSICAL SPACE

- Classroom

GROUPING

- Large-group instruction

BACKGROUND & VOCABULARY

Background Information

The Erie Canal opened up a waterway for the transportation of trade goods from the Midwest region of the United States to New York City and beyond. The canal also allowed cities along the path of the canal to flourish. The geography of New York state made it possible to carve this canal route through the Mohawk Valley and between groups of mountains to the north and south. Recognizing the connection between transportation systems and physical geography is important to understand these systems and plan for the future.

Prior Knowledge

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Recommended Prior Activities

- None

Vocabulary

Term	Part of Speech	Definition
canal	noun	artificial waterway.
capital	noun	city where a region's government is located.
city	noun	large settlement with a high population density.
elevation	noun	height above or below sea level.
good	noun	object or service that serves a human need or want.
Great Lakes	noun	largest freshwater bodies in the world, located in the United States and Canada. Lake Huron, Lake Ontario, Lake Michigan, Lake Erie, and Lake Superior make up the Great Lakes. skills for reading and interpreting maps, from learning basic map
map skills	noun	conventions to analyzing and comprehending maps to address higher-order goals.
mountain range	noun	series or chain of mountains that are close together.
natural feature	noun	characteristic of a geographic region that was not created by humans.
ocean	noun	large body of salt water that covers most of the Earth.
region	noun	any area on Earth with one or more common characteristics. Regions are the basic units of geography.
state	noun	political unit in a nation, such as the United States, Mexico, or Australia.
trade	noun	buying, selling, or exchanging of goods and services.
transportation	noun	movement of people or goods from one place to another.

For Further Exploration

Books

- Kendall, Martha E. *The Erie Canal*. National Geographic Children's Books: Washington, D.C., 2008.

Interactives

- [The Hudson: The River That Defined America](#)

Websites

- [Erie Canalway National Heritage Corridor](#)
- [New York State Canals: Canal History](#)
- [National Park Service: Erie Canalway National Heritage Corridor](#)

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