

Canals and the Growth of America

Literature Annotation: *The Amazing Impossible Erie Canal* by Cheryl Harness (Aladdin Paperbacks, 1995, ISBN 0-689-82584-6) This book depicts the construction and workings of the Erie Canal and its impact on the economy.

Grade Level: 8

Duration: 2-3 class periods

Maryland Voluntary State Curriculum (VSC):

Economics Standard: Students will develop economic reasoning to understand the historical development and current status of economic principles, institutions, and processes needed to be effective citizens, consumers, and workers participating in local communities, the nation, and the world.

4.A.3.a Describe the effects of new technology and resource use on economic growth, such as factories, machinery, roads and the telegraph (Grade 8)

Objective:

Students will be able to analyze the impact of canal technology on the economic growth of the United States.

Economic Vocabulary:

technology - Skills, methods, tools, machines and other things used to perform activities. Technology changes over time and affects the way we live, work, and play.

Materials:

For Teacher:

The Amazing Impossible Erie Canal by Cheryl Harness

Teacher Resource Sheet #1, "Erie Canal Song"

Teacher Resource Sheet #2, "New York: Relief Map"

Teacher Resource Sheet #3, "Erie Canal Character Cards"

Teacher Resource Sheet #4, "Answer Key- Erie Canal Data"

Teacher Resource Sheet #5, "Millions Set Aside for Recreational Use of the Erie Canal and Barge System"

For Student:

Student Resource Sheet #1, "Erie Canal Data"

Student Resource Sheet #2, "Community Celebrates the Canal's Tenth Anniversary"

Student Resource Sheet #3, "Maryland Canals"

Resources:

<http://www.lowbridgeproductions.com/index.html>

The Era of the Erie Canal- FREE streaming videos available

<http://www.epodunk.com/routes/erie-canal/index.html#>

The Erie Canal- A Journey Through History streaming video

<http://www.nysarchives.org/projects/eriecanal/index.html>
Erie Canal Time Machine by the New York State Archives

<http://www.fred.net/kathy/timeline.html>
Chronology of C & O Canal

<http://www.history.rochester.edu/canal/bib/springer/chesohio.htm>
C & O Canal- Canal Boat Children

<http://www.nap.usace.army.mil/sb/c&d.htm>
C & D Canal

http://www.pennways.com/CD_Canal.html
C & D Canal

<http://www.americancanals.org/pennsylv.htm>
Susquehanna & Tidewater Canal

Lesson Development:

1. **Motivation:** Display Teacher Worksheet #1, "The Erie Canal Song." You may also wish to play the song. A Midi Version can be found at <http://www.kididdles.com/lyrics/e014.html>. Ask: What is this song about? Do they know where the Erie Canal is located? Have they ever been to or seen a canal? What is the purpose of a canal? Explain that they are going to investigate the Erie Canal and canals located in Maryland.
2. Display Teacher Resource Sheet #2, "New York: Relief Map." Ask: What the methods of travel and transporting goods were used in the early 1800's? What obstacles were encountered using those methods? Discuss.
3. Read pages 1-4 of *The Amazing Impossible Erie Canal* by Cheryl Harness. What method was proposed to solve the problem of transporting goods west? (*Build a canal to allow boat travel.*)
4. Tell students that they will be participating in a role-play concerning the construction of the Erie Canal. Tell them that it is 1815 and a proposal to construct an overland waterway or canal to connect the Hudson River Valley to Lake Erie at Buffalo has been made. They will be playing the role of a person who might be affected by the building of the canal.
5. Distribute Student Resource Sheet #1, "Erie Canal Data Chart." Break students into groups of seven. Have each student draw a character card (Teacher Resource Sheet #3).
6. As each student presents his/her character to the group, members should complete the appropriate sections of Student Resource Sheet #1. After

groups have completed this exercise, share findings and record information on a transparency. (Answer Key is provided on Teacher Resource Sheet #4).

7. Read the remainder of *The Amazing Impossible Erie Canal* by Cheryl Harness. Have students record additional information on Student Resource Sheet #1. Discuss.
8. Revisit the last three pages of the story (the page beginning with “That’s a fact: the longest in the least time...”) Ask: What was the impact of the Erie Canal? (*Cheaper shipping costs, transformed life in the wilderness, new goods going west, new towns began, old towns became bigger and richer, connection between old states and new...*)
9. Distribute Student Resource Sheet #2, “Community Celebrates the Canal’s Tenth Anniversary.” Have students read and answer the accompanying questions. Discuss.
10. Tells students that the Erie Canal is not the only canal that helped to spur America’s Economic Growth. At this time you may wish to display a map of canals in the United States. (Nystrom’s *Atlas of United States History* (2000) has a nice representation on page 52.) Note that several canals were located in Maryland.
11. Distribute Student Resource Sheet #3, “Maryland Canals.” Assign each group a different Maryland Canal (Chesapeake and Ohio, Susquehanna and Tidewater, and Chesapeake and Delaware.) Groups should research their assigned canal and complete the graphic organizer. (See resources for helpful websites.) After they have completed their research, groups should create a visual presentation (poster, power point, etc.) detailing their assigned canal. That presentation should include the information from the graphic organizer, a map of Maryland with their canal, and other pertinent information. They should share their presentations with the class.
12. **Assessment:** Have students write a short essay (2-3 paragraphs) that responds to the following prompt.

Discuss the importance of canals to the economic growth of the United States. Be sure to include specific examples.
13. **Closure:** Ask: Do we still use canals to transport goods? How has technology changed our need for canals? How are some canals being used today? Display Teacher Resource Sheet #5, “Millions Set Aside for Recreational Use of the Erie Canal and Barge System.” Discuss.

Erie Canal Song
Low Bridge, Everybody Down
(Written by: Thomas Allen in 1905)

I've got a mule, and her name is Sal,
Fif-teen miles on the Er-ie canal,
She's a good ol' worker and a good
ol' pal,
Fifteen miles on the Er-ie can-al,
We've hauled some barges in our
day,
Filled with lum-ber coal and hay,
And ev'ry inch of the way we know
From Al-ba-ny to Buff-a-lo OH

Chorus

Low bridge ev'-ry bod-y down,
Low bridge for we're com-in to a
town,
And you al-ways know your
neighbor,
You'll always know your pal,
If you've ev-er navigated on the Er-ie
can-al

We'd better look round for a job old
gal,
Fif-teen miles - on the Er-ie can-al,
You bet your life I wouldn't part with
Sal,
Fif-teen miles on the Er-ie can-al,

Giddap 'there gal we've passed that
lock,
We'll make Rome fore six o'clock,
So, it's one more trip and then we'll
go,
Right back home to Buff-a-lo OH

Oh, where would I be if I lost my pal?
Fif-teen miles on the Er-ie can-al.
Oh, I'd like to see a mule as good as
Sal,
Fif-teen miles on the Er-ie can-al,
A friend of mine once got her sore,
Now he's got a busted jaw,
'Cause she let fly with her iron toe,
And kicked him in to Buff-a-lo OH

Don't have to call when I want my
Sal,
Fif-teen miles on the Er-ie can-al,
She trots from her stall like a good
old gal,
Fif-teen miles on the Er-ie can-al,
I eat my meals with Sal each day,
I eat beef and she eats hay,
And she ain't so slow if you want to
know,
She put the "Buff" in Buff-a-lo OH

<http://www.eriecanalvillage.net/pages/song.html>

New York: Relief Map



http://www.lib.utexas.edu/maps/us_2001/new_york_ref_2001.jpg

Erie Canal Character Cards

Manufacturer #1

I am looking for new markets to sell my cloth. There are many people moving across the Appalachians to the Great Lake Region. I need to transport large amounts to make a profit. It costs between \$90 and \$125 per ton to ship west. We would also like to be able to pay less for food.

Manufacturer #2

Farmers in the west need the tools I make so that they can produce more efficiently. Shipping them overland means I have limited ability to ship large quantities. Another way to transport my goods would also help those farmers ship us their crops more cheaply.

Ohio Farmer

I moved to this territory because land was plentiful and cheap. I can produce a lot of grain but it costs between \$90 and \$125 per ton to ship east where there is a demand for my crops. My family wants manufactured goods from the east like cloth, shoes, furniture, and glassware, but they are very expensive.

New Farmer from Massachusetts

I'm thinking about relocating to an area of Indiana where land is very inexpensive and very fertile. One of my neighbors has been trying to discourage me from going because he claims the shipping costs are so high I would have trouble staying in business.

Irish Immigrant

Several of my fellow Irishmen have heard that they could get work constructing some canal. We would receive wages of 80 cents a day for 10-12 hours which is more than I am getting now. Plus the distance is well over 300 miles so it should take a couple of years. This means steady work. Local men along the route will also be hired.

Builder/Designer

Governor Dewitt Clinton has hired a group of us to make an overland waterway to connect New York City to Lake Erie and Buffalo. The total distance is 363 miles long, has a constant depth of four feet, will be 28 feet wide at the bottom and 40 feet wide at the top. There is an ascent and descent of 675 feet through 83 locks. There will be 18 aqueducts so the canal can go over rivers and large streams.

Bridges will have to be constructed to carry the canal over roads and farms that will be cut by the waterway. It's quite an undertaking.

Since we have never done anything like this before, we have no idea how long it will take or whether it will work. The geography will cause us problems and so will the materials and methods of construction.

There are lots of hills, mountains, rivers, and swamps in the region that will be a challenge.

Politicians (1817)

We think the construction of a canal that provides continual water transportation for shipping between New York and Lake Erie at Buffalo will bring economic growth and prosperity to the whole state.

There are many resources in this area that can be used for many economic activities and we want to be able to make use of them. It will improve the standard of living for the people who live in this region.

Answer Key- Erie Canal Data

<p>Vital Statistics:</p>	<p>Built: 1817-1825 Length: 363 miles # of Locks: 83 Connected: Hudson River to the Great Lakes Cost: \$7 million</p>
<p>Who were the groups that wanted the canal? Manufacturers Farmers Laborers Politicians Merchants Consumers</p>	<p>What benefits did they expect from the canal? Wanted new markets to sell goods. Needed lower shipping costs.</p> <p>Needed to ship their crops east more cheaply. Wanted to connect to markets like New York City.</p> <p>Looking for jobs that required physical strength and were steady and lasting.</p> <p>Wanted the economy to grow.</p> <p>Lower costs meant that they could sell a higher volume of their goods more cheaply</p> <p>Prices would go down on many goods</p>
<p>What productive resources did they need for construction?</p>	<p>Natural Resources: timber, rocks, water, horses Human Resources: construction workers, blacksmiths engineers Capital Resources: tools, equipment, picks, shovels, wagons, boats</p>
<p>What were the problems of trade in this region?</p>	<ul style="list-style-type: none"> • There were many natural obstacles (rivers, hills, mountains, and swamps) that made shipping expensive. • It was difficult to haul large amounts at one time. • Equipment (horse and wagon) breakdowns
<p>What types of jobs were created because of this canal?</p>	<ul style="list-style-type: none"> • Increased the number of farmers, manufacturers, and merchants. • Increased the demand for construction workers, engineers, suppliers, blacksmiths, and boat builders.

Millions Set Aside for Recreational Use of the Eerie Canal and Barge System

Erie Gazette, Summer 2000

The New York State Legislature has approved several million dollars for the development of the New York State Barge Canal System as a tourist and recreational resource. Although the original Erie Canal had tough competition from the railroads and the interstate highways, it managed to stay in business until 1994. The Erie Canal was enlarged between 1836 and 1862. Boats on the canal were then able to carry 250 tons of freight, while the earlier ones were limited to 30 tons. Tolls were abolished in 1882 and more canals were added between 1903 and 1918. Technology changed the methods of operation to steam, diesel, and electricity. Small size and high labor costs caused the shutting down of the barge/canal system for commercial traffic.

Student Resource Sheet #1

Erie Canal Data

Vital Statistics:	Built: Length: # of Locks: Connected: Cost:
Who were the groups that wanted the canal?	What benefits did they expect from the canal?
What productive resources did they need for construction?	Natural: Human: Capital:
What were the problems of trade in this region?	
What types of jobs were created because of this canal?	
Current Use of Canal	

**Community Celebrates the Canal's Tenth Anniversary
Erie Gazette, Fall 1835**

What a success the Erie Canal has had over the 10 years since its opening. We are gathered here to celebrate the waterway that connects New York City, as well as the state, with the areas of Ohio, Indiana, and Illinois. Water transportation has historically been the least expensive way to ship large quantities of goods efficiently. Many jobs have been created, from the construction of 2000 canal boats to the employment of 8,000 men and 9,000 horses that help transport the goods along the canal. When first opened, shipping costs were \$90 -\$125 per ton for goods to go between New York and the Great Lakes. Today, that cost has dropped to \$4 per ton. What an advantage for all producers, whether farmer, merchant, or manufacturer. The consumer has also benefited from lower prices and a wider variety of goods and services.

Questions:

1. What happened to the cost of transporting goods?
2. What does this mean to consumers?
3. How did the construction of the Erie Canal affect employment in New York City? In New York State?
4. How did the completion of the canal affect farmers in western New York?

Maryland Canals

Name of Canal _____

When was the canal built?	Built:
Length of Canal	
# of Locks	
Location	
Goods Transported	
Economic Impact of Canal	
Current Use	