

THE UNIVERSITY OF THE STATE OF NEW YORK  
THE NEW YORK STATE EDUCATION DEPARTMENT

**Middle-Level Learning Experience**

**Robert Fulton and the Steamboat**

**NYSED LEARNING STANDARDS**

Social Studies Standard 1: History of the United States and New York State KI 3, PI 4;  
KI 4, PI 3

Social Studies Standard 3: Geography KI 1, PI 4

Social Studies Standard 4: Economics KI 1, PI 4

**SOCIAL STUDIES CORE CURRICULUM**

Grade 7 – Unit 5: Life in the New Nation

- III. Preindustrial Age: 1790–1860s

C. Technological changes altered the way people dealt with one another.

Improved transportation made travel and communication easier.

**SKILLS**

**Thinking Skills** – Finding and solving multiple-step problems

**Research and Writing Skills** – Getting and organizing information; supporting a position

**Interpersonal and Group Relation Skills** – Participating in group planning and discussion; cooperating to accomplish goals

**Graph and Image Analysis Skills** – Decoding images (graphs, cartoons, paintings, photographs)

**CONCEPTS**

Change

Environment

Environment and Society

Movement of People and Goods

Science and Technology

**MODULE CONTEXT**

Between the War of 1812 and the Civil War, the United States witnessed tremendous industrial growth. Robert Fulton’s invention of the steamboat was instrumental in the success of New York State’s industrial strength by enabling the transportation of passengers—and eventually raw materials and finished goods—throughout the state and the country. This strength was further shown by DeWitt Clinton’s plan to link New York City to the Great Lakes; the plan came to fruition in 1825 with the completion of the Erie Canal. Steamboat travel and the canal system had many positive effects: they lowered the cost of goods and travel, reduced the time needed to move products and people, and helped create new towns and businesses that were linked by waterways.

## FOCUS QUESTIONS

- How did Robert Fulton’s steamboat help improve transportation in New York State and throughout the United States?
- What economic benefits were provided by the steamboat? Who benefited?
- How was steam used to move the steamboat?

## CLASSROOM ACTIVITIES

- Divide the class into groups of four. Students will be told that they have been hired by Robert Fulton to help persuade the general public to use the steamboat for the movement of people and goods throughout the United States.
- In order to sell the steamboat, students will give a four- to five-minute presentation in which they will:
  - Introduce Robert Fulton and his “new” invention.
  - Diagram how steam is used to move the steamboat.
  - Explain why the general public or businesses should use the steamboat, and describe the benefits.
  - Include other useful information that will help sell the steamboat.

### Project Rubric

Content	Excellent 4 points	Good 3 points	Fair 2 points	Unsatisfactory 1–0 points
Introduction of Fulton and invention	Contains all appropriate facts and details about Fulton and the steamboat.	Contains some facts and details about Fulton and the steamboat.	Contains few facts and details about Fulton and the steamboat.	Contains no facts and details about Fulton and the steamboat.
Diagram how steam is used to move the steamboat	Message is very clear and is accurately conveyed through the diagram.	Message is clear and is conveyed through the diagram.	Message is somewhat clear as shown through the diagram.	Message is not clear as a result of poor use of the diagram.
Explain the economic benefits of the steamboat	Clearly identifies economic benefits.	Identifies economic benefits.	Vaguely conveys economic benefits.	Benefits are missing or cannot be identified.
Overall effect	Presentation is very appealing. It is very well organized and contains all of the appropriate information.	Presentation is appealing. It is organized and contains appropriate information.	Presentation is somewhat appealing. It is mostly organized and contains some appropriate information.	Presentation is not appealing. It is disorganized and does not contain appropriate information.

## Background Information

Assign half of the class the job of persuading the general public and the other half the job of persuading businesses. Before students can make a presentation, they should gain some understanding of Robert Fulton and steamboat travel. They should also consider the pros and cons of persuading any individual or business to use a new form of technology. The following sample documents and instructional strategies can be used as a starting point.

- Have students read a short biography of Robert Fulton, like the sample found in the link below. Portions of any biography may need to be edited for clarity and readability. Assign each group the task of listing three to five important things about Fulton that can be used to sell his steamboat as a form of transportation. Students should ask questions about his life, his previous experience with boat making, and the first voyage of the *Clermont*. Sample questions are below.

### [Biography of Robert Fulton](#) (PDF)

Source: Allen Johnson & Dumas Malone (eds.), *Dictionary of American Biography*, 1943  
Courtesy of the New York State Library

1. What skills did Fulton develop as a child? Describe how these skills led to his interest and ability in boat making.
2. What boat-building experience did Fulton gain while living in France?
3. How did the steamboat work?
4. How fast could the *Clermont* travel on the Hudson River?
5. What did Fulton do after his steamboat became a success?

- Next, have students read the following newspaper accounts of the first successful trip of Fulton's steamboat, the *Clermont*. The second account was written by Fulton himself and directed to the newspaper's editors. Have students answer the questions below either individually or in their groups after they complete the reading.

Mr. Fulton's ingenious [original] Steam Boat, invented with a view to the navigation of the Mississippi from New-Orleans upwards, sails to-day from the North River, near the State Prison, to Albany. The velocity [sic] of the Steam Boat is calculated at four miles a hour; it is said that it will make a progress of two against the current of the Mississippi; and if so it will certainly be a very valuable acquisition [addition] to the commerce of the Western States.

*New York American Citizen*, August 17, 1807  
 Courtesy of the New York State Library

New York, August 20.

To the Editor of the *American Citizen*:

Sir,

I arrived this afternoon at 4 o'clock, in the steam boat, from Albany. As the success of my experiment gives me great hope that such boats may be rendered of much importance to my country, to prevent erroneous [inaccurate] opinions, and give some satisfaction to the friends of useful improvements, you will have the goodness to publish the following statement of facts:

I left New-York on Monday at 1 o'clock, and arrived at Clermont, the seat of Chancellor Livingston, at 1 o'clock on Tuesday, time 24 hours, distance 110 miles; on Wednesday I departed from the Chancellor's at 9 in the morning, and arrived at Albany at 5 in the afternoon, distance 40 miles, time 8 hours; the sum of this is 150 miles in 32 hours, equal near 5 miles an hour.

On Thursday, at 9 o'clock in the morning, I left Albany, and arrived at the Chancellor's at 6 in the evening; I started from thence [there] at 7, and arrived at New-York on Friday at 4 in the afternoon; time 30 hours, space run through 150 miles, equals 5 miles an hour. Throughout the whole way my going and returning the wind was ahead; no advantage could be drawn from my sails – the whole has, therefore, been performed by the power of the steam engine.

I am, Sir, Your most obedient, Robert Fulton.

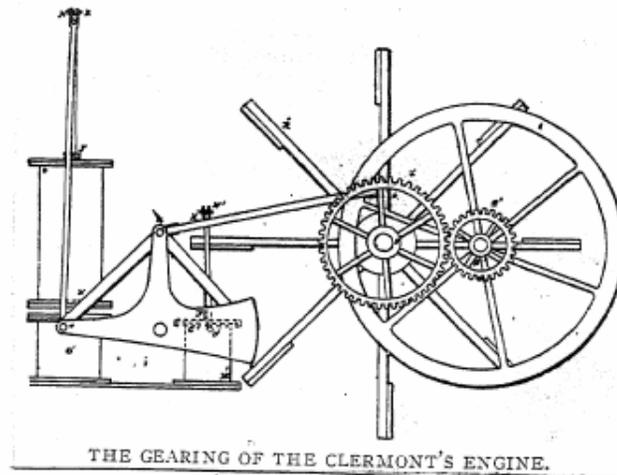
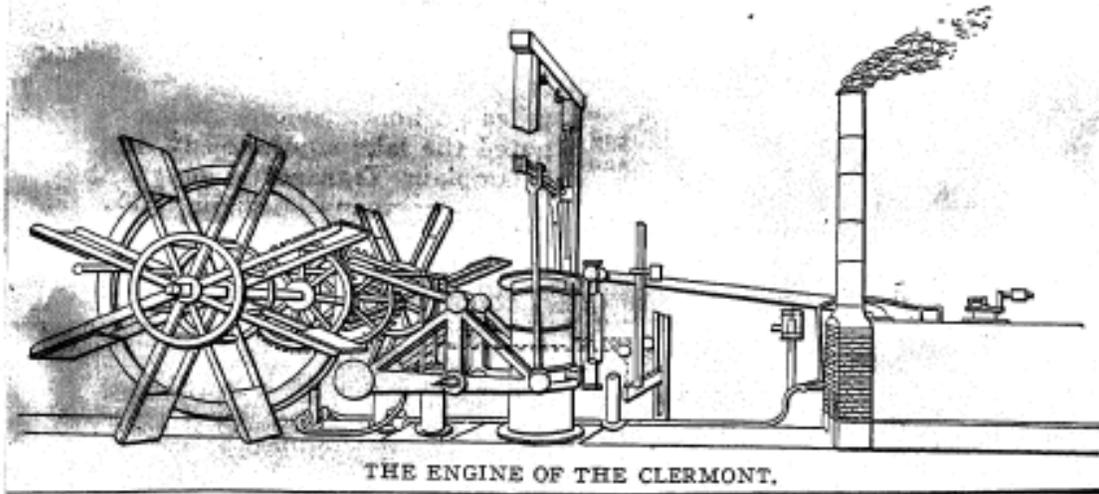
[below the letter]: We congratulate Mr. Fulton and the country on his success in the Steam Boat, which cannot fail of being very advantageous [favorable]. We understand that not the smallest inconvenience is felt in the boat either from heat or smoke.

*New York American Citizen*, August 22, 1807  
 Courtesy of the New York State Library

1. How much time did the journey take from New York City to Albany? From Albany back to New York City? What was the average speed?
2. Why was the *Clermont*'s first trip considered a success?
3. What implications did the success of the *Clermont*'s first trip have for travel throughout the country?
4. Why would Fulton write such a letter to the editor of a newspaper?

- Next, have students analyze a line drawing of a steamboat engine. Students should explain through pictures and words how the engine powers the steamboat. Assign students to compare this engine to the ways that other types of boats are powered. Students can list the advantages and disadvantages of these various types of power.

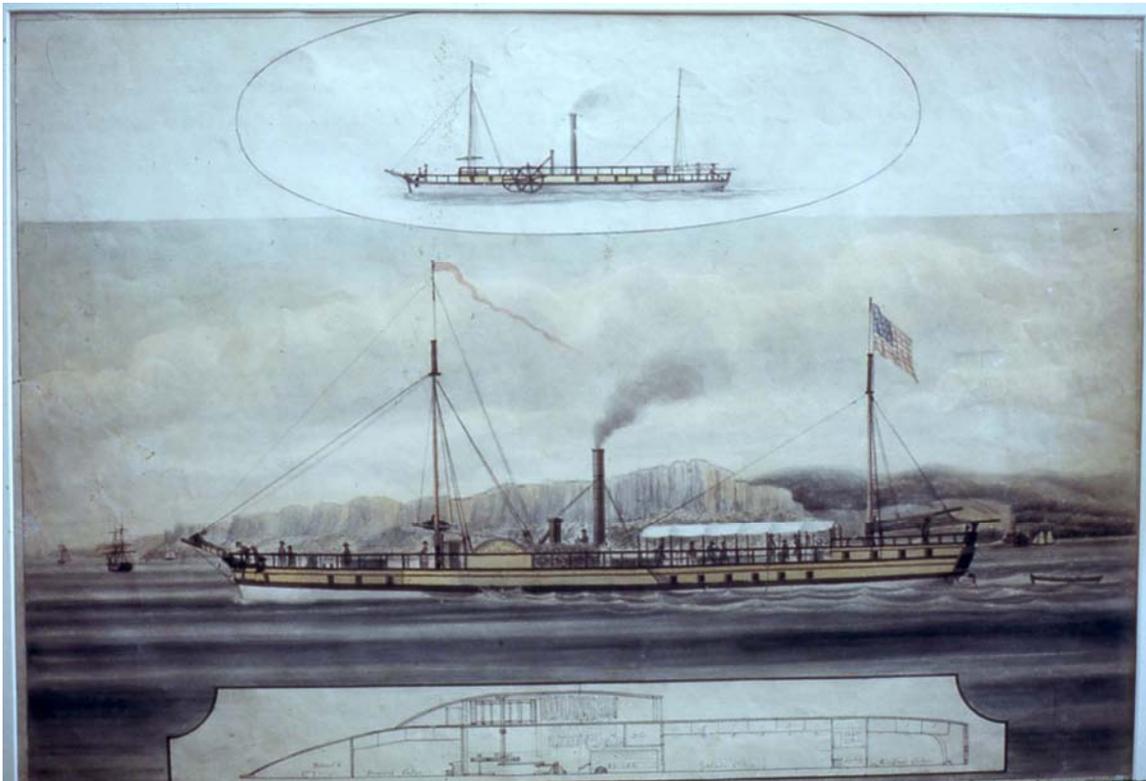
**The Engine of the Clermont,**  
Charles Hallenbeck, *Annals of Steamboating on the Hudson River, 1807-1908*



Courtesy of: New York State Library  
(the smudges are from the glue leeching through from the back of the print)

- Students should examine paintings and drawings of a full steamboat to understand its design. Using the painting below, they should prepare an explanation on how a steamboat operates. They should also list advantages to moving people and goods using this type of boat.

**Richard Varick De Witt (1858), Clermont (Three-Part Study)**



Courtesy of: Albany Institute of History & Art

—Students should also explain how new modes of transportation change life. Using the painting below, they can describe how a steamboat could impact the daily life of villages, towns, and cities across New York State and the United States. They should list evidence from the painting to support their description.

**Edward Lamson Henry (1910), Clermont Making a Landing at Cornwall**



Courtesy of: Albany Institute of History & Art

- Students should generate their own questions in order to complete their research for the presentation. Provide them with the following questions as a guide. As they list group responses to these questions, have them brainstorm and respond to any other questions that can help sell the steamboat to businesses and individuals.
  1. How does steam power move a steamboat?
  2. Why would a business or a passenger not want to use a steamboat for transportation?
  3. What is projected to be the overall effect of the steamboat on transportation throughout New York State and the United States in 5 years? In 10 years?

**MODIFICATIONS FOR SPECIAL EDUCATION & ELL STUDENTS:**

- Students may consult with the regular education teacher regarding additional resources and support.
- During resource room period, students may work with their special education or ELL teacher to further explore sources.
- Remedial reading and ELA teachers should be aware of the assignments. They may also provide further assistance to students.
- Media center and library staff will pull additional resources and compile them for students.
- Additional time may be allotted when submitting assignments.
- Assignments will be broken down into different stages to accommodate students.
- Visual assistance (flowcharts, pictures, illustrations) may also help students with the assignments.

**VOCABULARY**

canal  
freight  
goods

Industrial Revolution  
raw materials

steamboat  
transportation

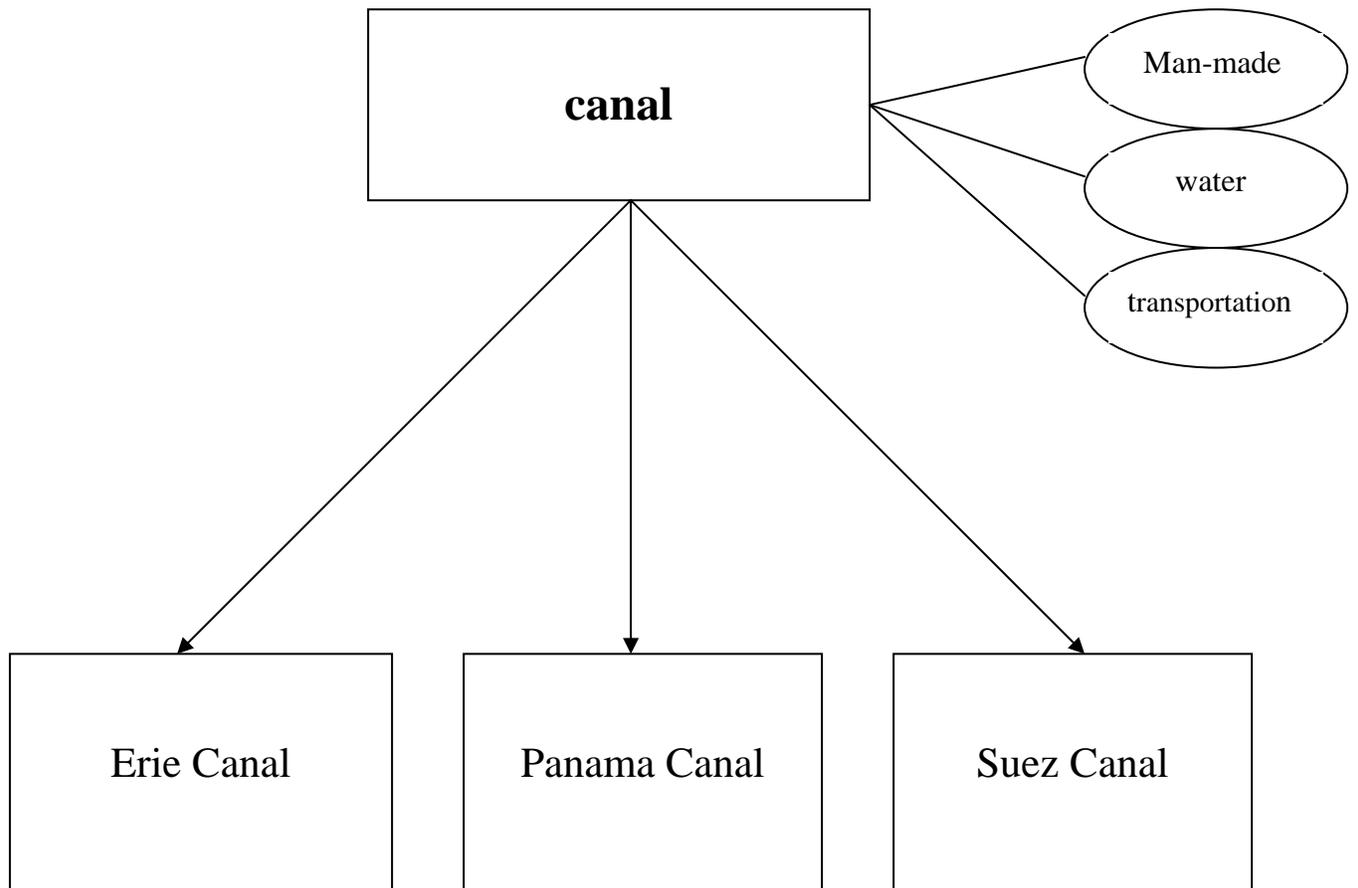
**ADDITIONAL ACTIVITIES:** Ask the class to examine the “Robert Fulton and the Steam Boat” vocabulary list. Introduce Canal Concept Map graphic organizer to the class. Divide the class into small groups-. Assign each group a vocabulary word from the list and ask each group to complete the blank concept map for the word.

# Canal Concept Map

What is it? (definition)

Long strip of water made for boats  
or for irrigation; waterway

What is it like?



What are some examples?

## Concept Box

<b>Definition</b>	<b>Characteristics (descriptors)</b>
<b>In own words:</b>	
<b>Examples</b>	<b>Visual (draw a picture)</b>

Word:

|

## **INTERDISCIPLINARY CONNECTIONS**

English Language Arts Standard 1: Listening & Reading KI 1, PI 2

English Language Arts Standard 1: Speaking & Writing KI 2, PI 1 & 6

- Interpret and analyze information from multiple source documents on Robert Fulton, the steamboat, and transportation in the nineteenth century.
- Prepare oral and written reports on Robert Fulton, the steamboat, and transportation in the nineteenth century.

Math, Science and Technology Standard 1: Analysis, Inquiry, and Design Mathematical Analysis KI 1, PI 1

Math, Science and Technology Standard 5: Technology Technological Systems KI 4, PI 3

- Compare quantities and express mathematical relationships between modes of transportation in the nineteenth century.
- Diagram the process of using steam to power a boat.

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- Assignments will be broken down into different stages to accommodate students.
- Visual assistance (flowcharts, pictures, illustrations) may also help students with the assignments.

## SUGGESTED RESOURCES AND MATERIALS

Ford, Carin. 2004. *Robert Fulton: The Steamboat Man*. Berkeley Heights, NJ: Enslow Publishers.

Johnson, Allen, and Dumas Malone (eds.). 1943. *Dictionary of American Biography*. New York: Charles Scribner's Sons.

Morgan, John. 1977. *Robert Fulton*. New York: Mason/Charter.

Sale, Kirkpatrick. 2001. *The Fire of His Genius: Robert Fulton and the American Dream*. New York: Simon & Schuster.

Sutcliffe, Alice Cary. 1909. *Robert Fulton and the "Clermont": The Authoritative Story of Robert Fulton's Early Experiments, Persistent Reports, and Historic Achievements. Containing Many of Fulton's Hitherto Unpublished Letters, Drawings, and Pictures*. New York: The Century Co.

## WEBSITES

Robert Fulton

[http://www.pbs.org/wnet/historyofus/web04/features/bio/B07\\_2.html](http://www.pbs.org/wnet/historyofus/web04/features/bio/B07_2.html)

Steamboat on the Hudson

<http://pbskids.org/bigapplehistory/early/topic17.html>

Maps and Images – Industrial Revolution

<http://www.pbs.org/wnet/historyofus/tools/browser4b.html>