

How did early innovations affect the people, economy, and migration patterns of the United States?

Content	<p>This instructional task engages students in content related to the following grade-level expectations:</p> <ul style="list-style-type: none"> • 4.1.4¹ Produce clear and coherent writing to: <ul style="list-style-type: none"> ○ compare and contrast past and present viewpoints on a given historical topic ○ conduct simple research ○ summarize actions/events and explain significance ○ differentiate between the 5 regions of the United States • 4.1.7 Summarize primary resources and explain their historical importance • 4.2.2 Cite evidence to support the key contributions and influence of people in the history of the United States • 4.3.1 Explain how inventions and new processes affected the lives of people, migration, and the economy of regions of the United States
Claims	This instructional task asks students to analyze the impact innovations had on the people and economies of the United States.
Unit Connection	<p>This instructional task helps students explore and develop claims around the content from unit 5:</p> <ul style="list-style-type: none"> • How have our leaders impacted the growth of the United States? (4.2.2) • How inventions and new processes impacted the lives of people, migration, and the economy of the United States (4.3.1)

Supporting Question 1	Supporting Question 2	Supporting Question 3	Supporting Question 4
How did the cotton gin affect the people and economy of the South?	How did the Erie Canal affect the economy and people in New York?	How did the National Roadway affect westward migration and the economy?	What impact did the factory system have on migration/immigration and the U.S. economy?
Formative Performance Task	Formative Performance Task	Formative Performance Task	Formative Performance Task
Students will read about the invention of the cotton gin and the impact it had on the Southern United States.	Students will learn about the construction of the Erie Canal and how it affected New York.	Students will read about the National Road and its impact on migration and the economy.	Students will examine the positive and negative impacts the factory system had on migration, immigration, and the U.S. economy.
Featured Source	Featured Source	Featured Source	Featured Source
Source A: “Patent for Cotton Gin, 1794,” Ourdocuments.gov	Source B: “Building the Erie Canal,” History.com Source C: “Canal History,” New York State Canal Corporation	Source D: “The National Road,” National Park Service	Source E: “The First American Factories,” USHistory.org Source F: Excerpt from “Wealth of Nations,” Adam Smith

Summative Performance Task	Using the sources provided, along with your notes from the tasks, write a well-organized response to the following prompt: How did early innovations affect the people, economy, and migration patterns of the United States?
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¹ This GLE contains multiple parts, which should be taught over the course of several units in grade 4. The GLE requires students to “produce clear and coherent writing.” The part of this GLE addressed in the task is the third bullet.

Formative Performance Task 1

Supporting Question	How did the cotton gin affect the people and economy of the South?
Formative Performance Task	Students will read about the invention of the cotton gin and the impact it had on the Southern \ United States.
Featured Source	Source A: " Patent for Cotton Gin, 1794 ," Ourdocuments.gov
Content and Claims	This instructional task asks students to analyze the impact innovations had on the people and economies of the United States. (4.2.1, 4.3.1)

Featured Source

Source A: "[Patent for Cotton Gin, 1794](#)," Ourdocuments.gov

Steps

1. Explain to students that they will be using various resources to answer the question: "How did early innovations affect the people, economy, and migration patterns of the United States?"
2. Conduct a vocabulary preview with the students prior to reading. Using the graphic organizer and instructional steps below, present each term individually and allow the students to record the information.
 - Present the term and have students write the term in the top left box.
 - Yield: an amount produced of an agricultural or industrial product
 - Supply: a stock or amount of something supplied or available for use
 - Export: a product or service sold abroad
 - Profitable: producing financial gain
 - Ask students to rate their understanding of the word by circling the appropriate response in the top right box.
 - Provide a brief description, explanation, or example of the new term.
 - Have students restate the description, explanation, or example in their own words in the bottom left box.
 - Have students draw a picture, symbol, or graphic to represent the term in the bottom right box. This is a visual representation to help the students remember the meaning of the new word.
 - Repeat this process for each word.
3. Provide students with a copy of Source A: "Patent for the Cotton Gin, 1794" (the image and the written description) and the cause and effect graphic organizer on page 5 as a note-taking guide.
4. Ask students to work in pairs to view the image and read the description and complete the graphic organizer.
5. After students have worked with a peer, conduct a class discussion to share the most important information from the text. Possible guiding questions:
 - What effect did the invention of the cotton gin have on the daily production of raw cotton?
 - How did the increase in cotton production affect America's economy?
 - How were other agricultural industries affected by the growth of the cotton industry?
 - What other technological innovations occurred because of cotton production?

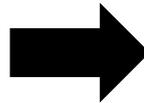
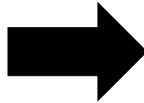
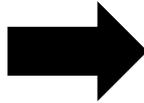
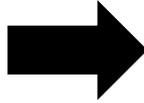
<p>Vocabulary term:</p>	<p>Rate your understanding:</p> <p>1: I have not heard this word before and do not know what it means.</p> <p>2: I have heard this word before, but I do not know what it means.</p> <p>3: I have heard this word before, and I know the meaning. I can use it in a sentence.</p>
<p>Definition in your own words:</p>	<p>Draw a picture of it:</p>

<p>Vocabulary term:</p>	<p>Rate your understanding:</p> <p>1: I have not heard this word before and do not know what it means.</p> <p>2: I have heard this word before, but I do not know what it means.</p> <p>3: I have heard this word before, and I know the meaning. I can use it in a sentence.</p>
<p>Definition in your own words:</p>	<p>Draw a picture of it:</p>

Vocabulary term:	Rate your understanding: 1: I have not heard this word before and do not know what it means. 2: I have heard this word before, but I do not know what it means. 3: I have heard this word before, and I know the meaning. I can use it in a sentence.
Definition in your own words:	Draw a picture of it:

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Definition in your own words:	Draw a picture of it:

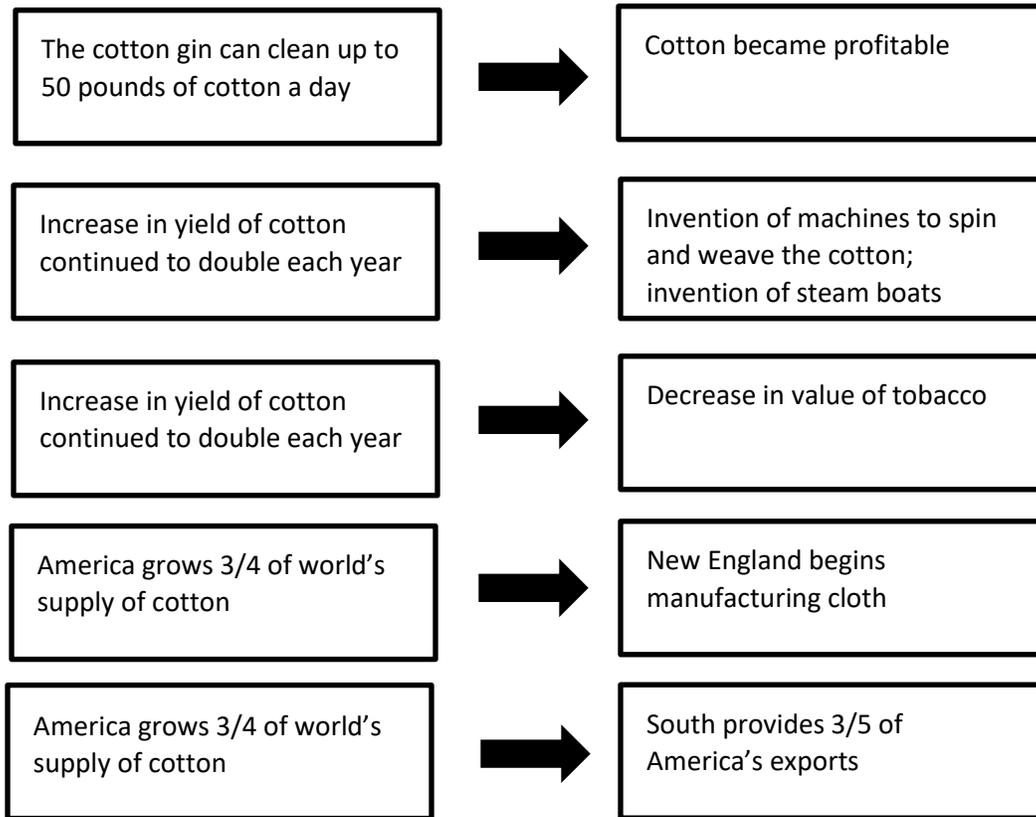
Cause and Effect: The Cotton Gin



Student Look-Fors

1. Students should be able to identify the cause and effect relationship the invention of the cotton gin had on the regional and national economy. A sample completed graphic organizer is included below.
2. Students should be able to identify that cotton production led to new technological innovations:
 - Machines were invented for the purpose of spinning and weaving the cotton into cloth.
 - Steamboats were used to transport the cotton.

The Cotton Gin



Formative Performance Task 2

Supporting Question	How did the Erie Canal affect the economy and people in New York?
Formative Performance Task	Students will learn about the construction of the Erie Canal and how it affected New York.
Featured Source	Source B: "Building the Erie Canal," History.com Source C: "Canal History," New York State Canal Corporation
Content and Claims	This instructional task asks students to analyze the impact innovations had on the people and economies of the United States. (4.2.1, 4.3.1)

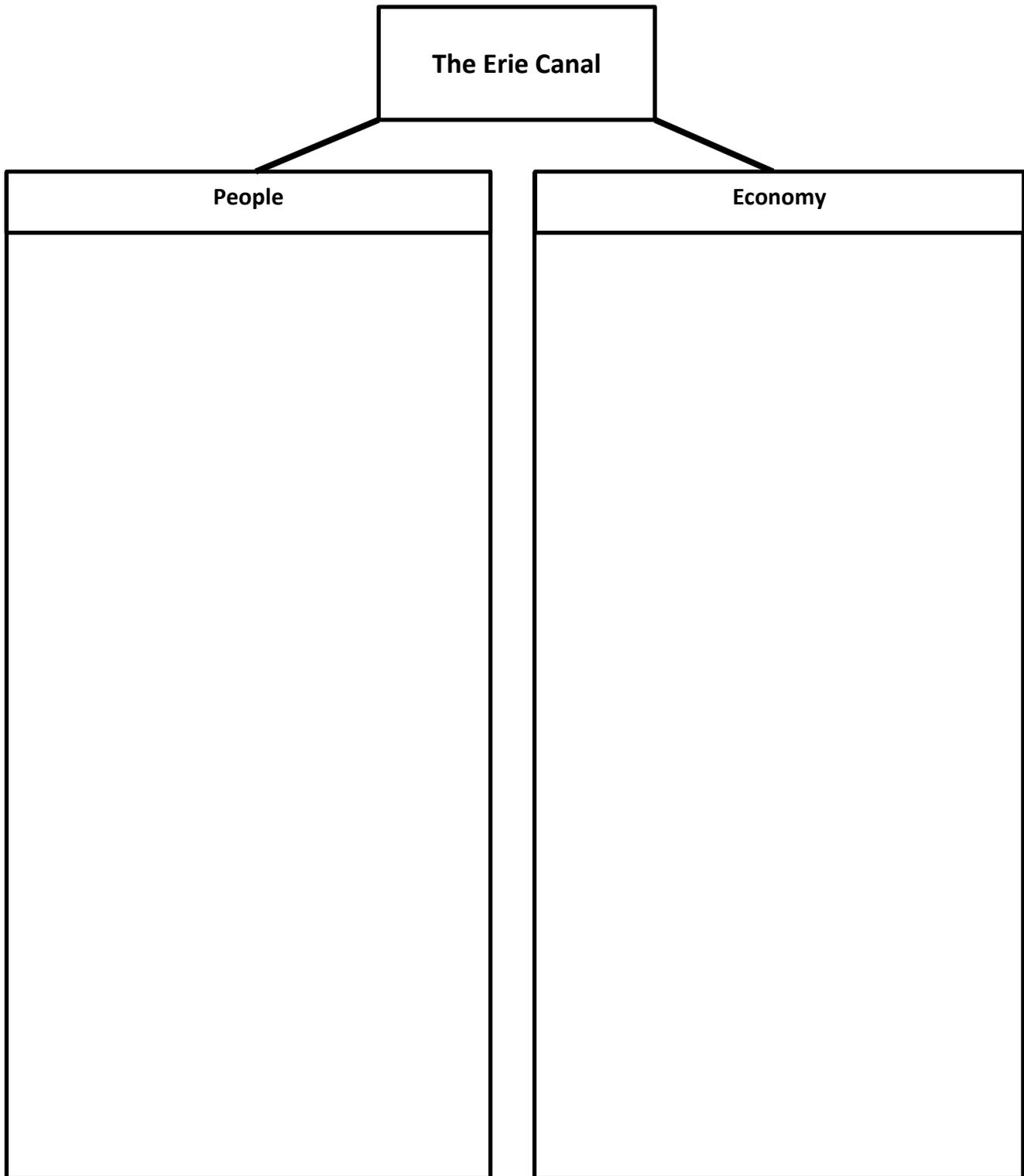
Featured Source

Source B: ["Building the Erie Canal,"](#)History.com

Source C: ["Canal History,"](#) New York State Canal Corporation

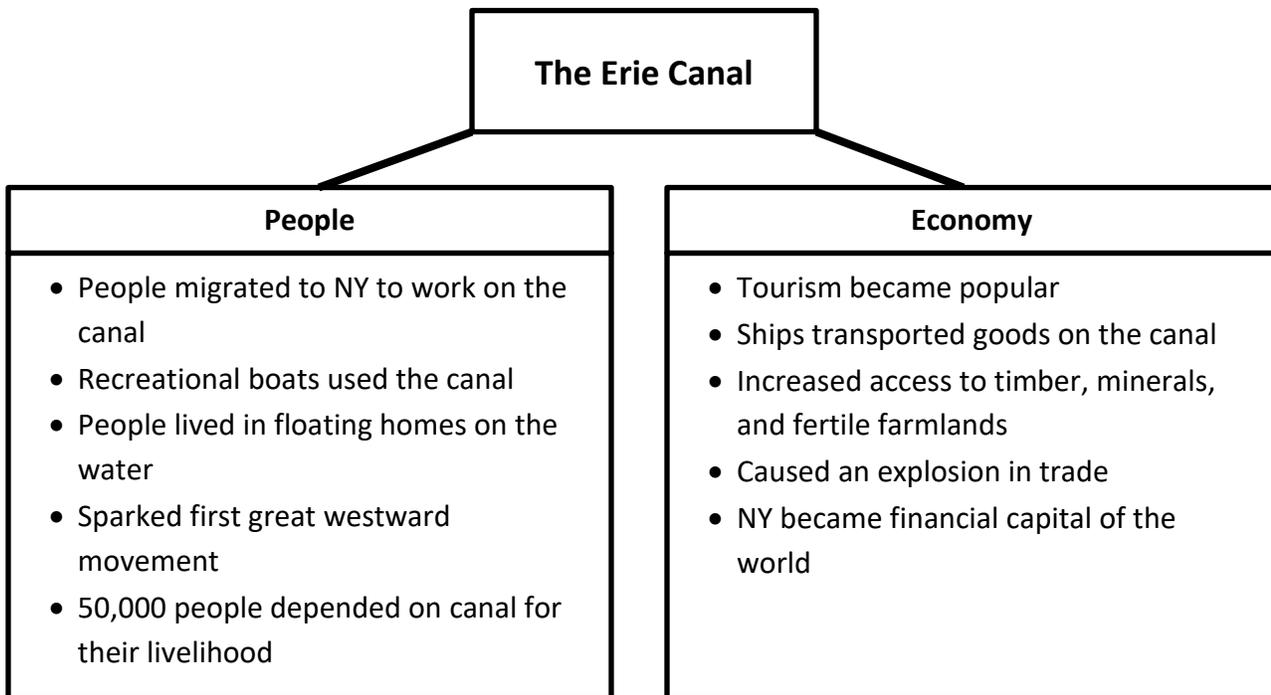
Steps

1. Explain to students they will be investigating how innovations in transportation and travel impacted the lives of Americans, as well as the economy of America.
2. Introduce the lesson to the students by showing Source B: "Building the Erie Canal."
3. Direct students to listen for evidence of the impact the canal had on people and the economy at the time.
4. Following the viewing of the video clip, ask students to share what they learned from viewing the video. Possible guiding questions include:
 - How was the movement of goods affected by the building of the Erie Canal?
 - How did the Erie Canal support the idea of Manifest Destiny?
 - How did the Erie Canal help unify the nation?
5. After the discussion, provide students with access to Source C: "Canal History" and a copy of the Erie Canal graphic organizer on page 8.
6. Divide the class into small groups (2-3 students) using an established classroom routine.
7. Assign half of the groups the job of reading the article to identify the impact the canal had on the lives of people and the other half of the groups the job of reading the article to identify the effect it had on the economy.
8. Combine two groups of students (one from each side) into a larger group (4-6 students) so that each side of the graphic organizer is represented.
9. Have each side share their findings in their new group so each student has a complete graphic organizer.
10. After all groups have completed their organizers, call on students/groups to share a piece of information from their organizers. Record this information on a class chart in the front of the room to ensure students have all of the information they need.
11. Direct students to work independently to write a paragraph explanation about the impact the Erie Canal had on the lives and economy of Americans.



Student Look-Fors

1. Students should be able to communicate that the canal had several positive economic impacts, such as:
 - The canal provided access to timber, minerals, and fertile farmland, which was previously difficult to reach.
 - Tourism along the canal resulted in business growth.
 - The massive increase in trade and transportation of goods along the canal led to New York becoming the financial capital of the world.
2. Students should be able to communicate that the canal had several positive impacts on peoples’ lives, such as:
 - Over 50,000 people depended on the canal for their livelihood.
 - People enjoyed the canal for recreational purposes; it was more than a means for transporting goods.
 - Some families lived in floating houses on the canal.
 - Construction of the canal provided jobs to many immigrants.
 - This sparked first great westward movement.
3. A sample completed graphic organizer is included below.



Formative Performance Task 3

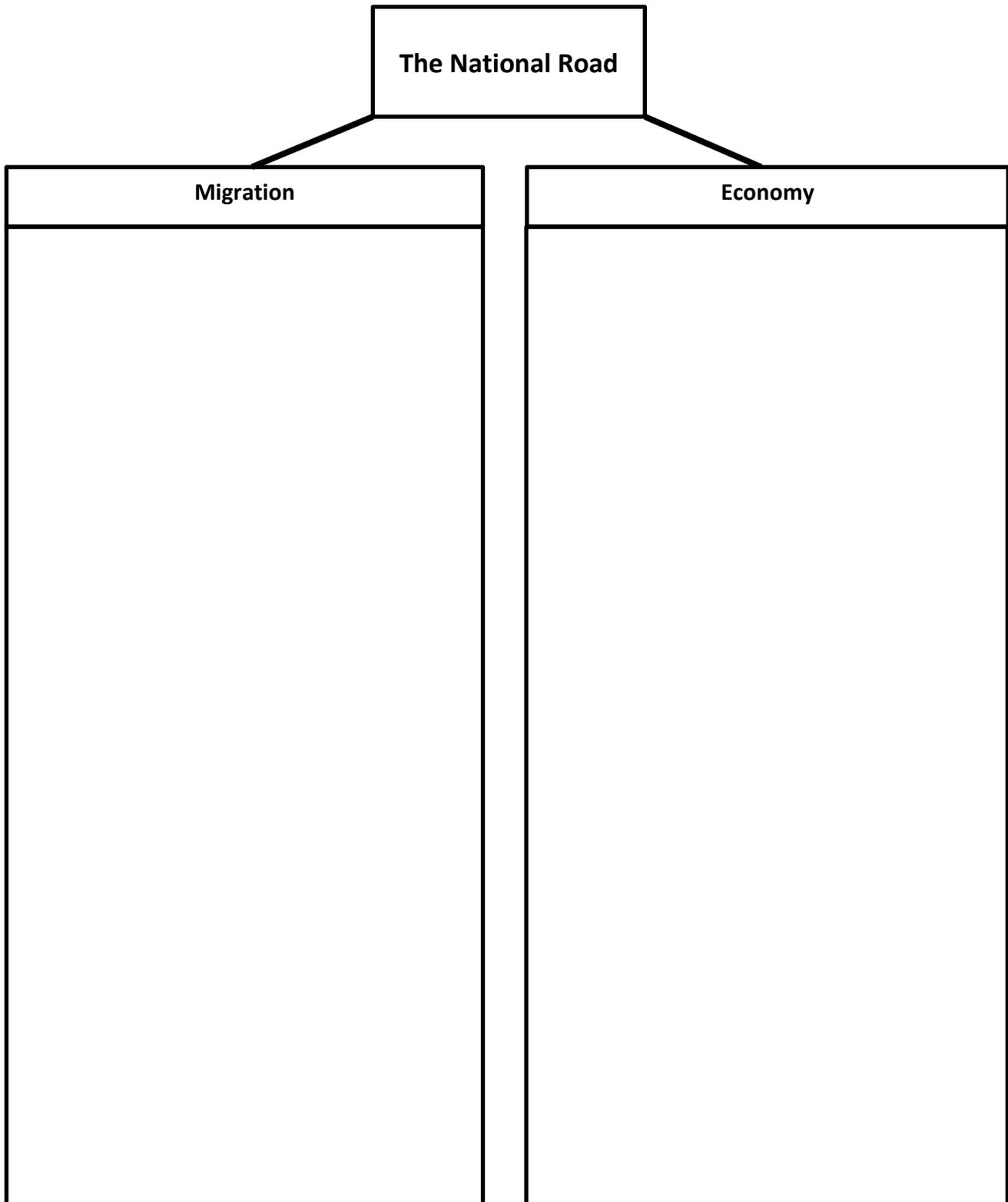
Supporting Question	How did the National Roadway affect westward migration and the economy of the United States?
Formative Performance Task	Students will read about the National Road and its impact on migration and the economy.
Featured Source	Source D: " The National Road ," National Park Service
Content and Claims	This instructional task asks students to analyze the impact innovations had on the people and economies of the United States. (4.2.1, 4.3.1)

Featured Source

Source D: "[The National Road](#)," National Park Service

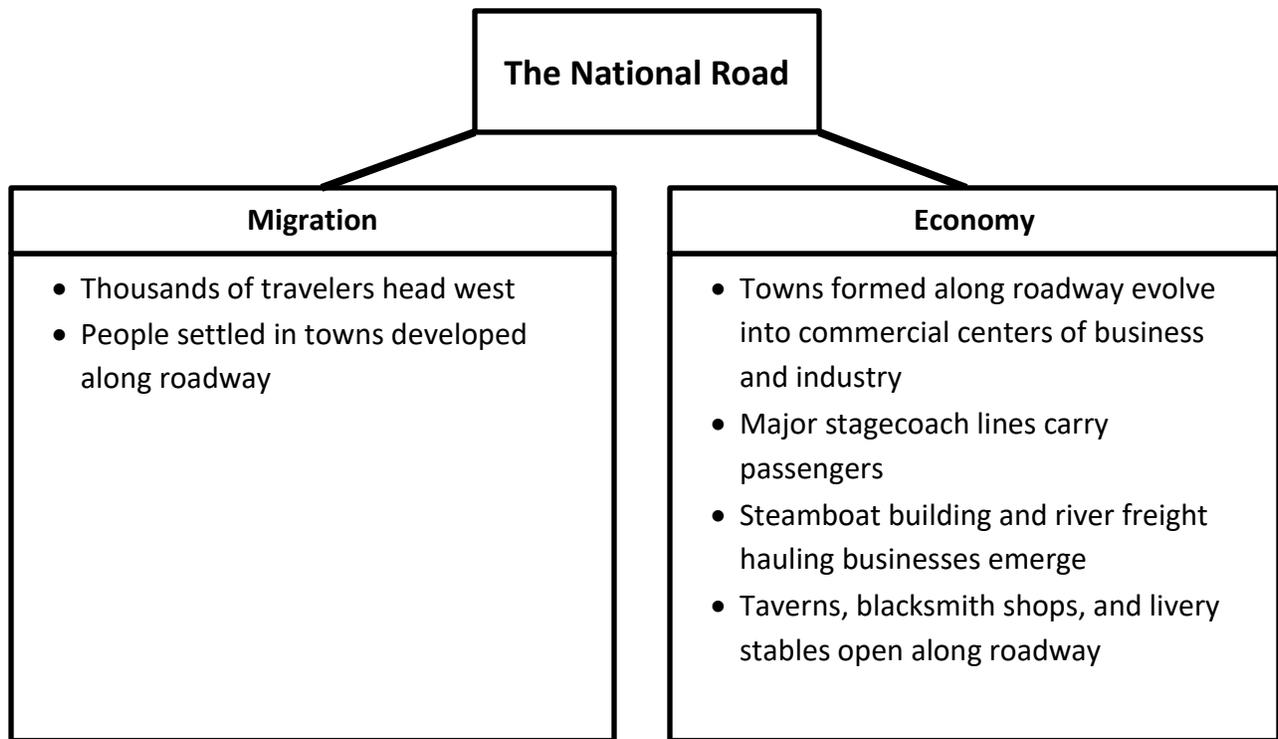
Steps

1. Explain to the students that with industry increasing and westward migration on the rise, the nation faced many difficulties in both transporting goods and people over long distances. Water travel was difficult since most rivers run north to south (not east to west), and wagon travel was slow due to geographical obstacles. One solution to this problem was the opening of the National Road in 1811.
2. Provide students with the graphic organizer below, and explain they will be reading an article to identify the impact the National Road had on both migration and the economy.
3. Provide students with Source D: "The National Road" and a copy of the graphic organizer on the next page.
4. Have students work with a partner to complete the organizer.
5. Ask pairs to share their responses with the class.
6. As responses are given and verified by the class, record them on a class anchor chart. Possible guiding questions:
 - How did the construction of the National Road affect westward migration in the U.S.?
 - How did the National Road provide economic opportunities to Americans?
 - What impact did the roadway have on the transportation of goods?



Student Look-Fors

1. Students should be able to communicate that the roadway allowed thousands of travelers to head west.
2. Students should be able to communicate that as use of the roadway increased; towns began to form along the route. These towns evolved into commercial centers of business and industry.
 - Major stagecoach lines opened up to transport passengers.
 - Steamboat building and river freight hauling industries developed in major towns along roadway.
 - Smaller, locally owned businesses such as taverns, blacksmith shops, and livery stables also opened.
3. People settled along the roadway, thus increasing the population of the towns.
4. A sample of what a completed graphic organizer might look like is included below:



Formative Performance Task 4

Supporting Question	What impact did the factory system have on migration/immigration and the U.S. economy?
Formative Performance Task	Students will examine the positive and negative impacts the factory system had on migration, immigration, and the U.S. economy.
Featured Sources	Source E: "The First American Factories," USHistory.org Source F: Excerpt from "Wealth of Nations," Adam Smith
Content and Claims	This instructional task asks students to analyze the impact innovations had on the people and economies of the United States. (4.2.1, 4.3.1)

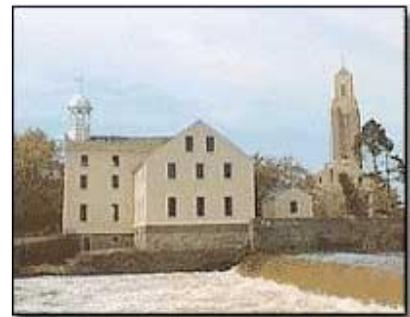
Featured Sources

Source E: "The First American Factories²," USHistory.org

25d. The First American Factories

There was more than one kind of frontier and one kind of pioneer in early America.

While many people were trying to carve out a new existence in states and territories continually stretching to the West, another group pioneered the **AMERICAN INDUSTRIAL REVOLUTION**. They developed new, large forms of business **ENTERPRISE** that involved the use of power-driven machinery to produce products and goods previously produced in the home or small shop. The machinery was grouped together in factories.



Slater Mill, founded in 1793 by Samuel Slater, is now used as a museum dedicated to textile manufacturing.

Part of the technology used in forming these new business enterprises came from England, however, increasingly they came from American inventors, scientists, and mechanics.



Although the Lowell mills had better conditions than British textile mills, workers still suffered long hours and excessive restrictions on their activities.

The first factory in the United States was begun after George Washington became President. In 1790, **SAMUEL SLATER**, a cotton spinner's apprentice who left England the year before with the secrets of textile machinery, built a factory from memory to produce spindles of yarn.

The factory had 72 spindles, powered by nine children pushing foot treadles, soon replaced by water power. Three years later, **JOHN AND ARTHUR SHOFIELD**, who also came from England, built the first factory to manufacture woolens in Massachusetts.

² Source: [USHistory.org](https://www.ushistory.org) shared through [Creative Commons license](https://creativecommons.org/licenses/by/4.0/).

From these humble beginnings to the time of the Civil War there were over two million spindles in over 1200 cotton factories and 1500 woolen factories in the United States.

Dear Father,

I received your letter on Thursday the 14th with much pleasure. I am well, which is one comfort. My life and health are spared while others are cut off. Last Thursday one girl fell down and broke her neck, which caused instant death. She was going in or coming out of the mill and slipped down, it being very icy. The same day a man was killed by the [railroad] cars. Another had nearly all of his ribs broken. Another was nearly killed by falling down and having a bale of cotton fall on him. Last Tuesday we were paid. In all I had six dollars and sixty cents paid \$4.68 for board. With the rest I got me a pair of rubbers and a pair of 50 cent shoes. Next payment I am to have a dollar a week beside my board...

I think that the factory is the best place for me and if any girl wants employment, I advise them to come to Lowell.

-Excerpt from a Letter from Mary Paul, Lowell mill girl,
December 21, 1845.

From the **TEXTILE INDUSTRY**, the factory spread to many other areas. In Pennsylvania, large furnaces and rolling mills supplanted small local forges and blacksmiths. In Connecticut, tin ware and clocks were produced. Soon reapers and sewing machines would be manufactured.

At first, these new factories were financed by business partnerships, where several individuals invested in the factory and paid for business expenses like advertising and product distribution.

Shortly after the War of 1812, a new form of business enterprise became prominent — the corporation. In a **CORPORATION**, individual **INVESTORS** are financially responsible for business debts only to the extent of their investment, rather than extending to their full net worth, which included his house and property.

First used by bankers and builders, the corporation concept spread to manufacturing. In 1813, **FRANCES CABOT LOWELL, NATHAN APPLETON** and **PATRICK JOHNSON** formed the **BOSTON MANUFACTURING**



The invention of interchangeable parts allowed factories to create clocks like this one in mass quantities.

COMPANY to build America's first integrated textile factory, that performed every operation necessary to transform cotton lint into finished cloth.

Over the next 15 years they charted additional companies in Massachusetts and New Hampshire. Others copied their corporation model and by 1840 the corporate manufacturer was commonplace.

Lowell and his associates hoped to avoid the worst evils of British industry. They built their production facilities at Massachusetts. To work in the textile mills, Lowell hired young, unmarried women from New England farms. The "**MILL GIRLS**" were chaperoned by matrons and were held to a strict curfew and moral code.

Although the work was tedious (12 hours per day, 6 days per week), many women enjoyed a sense of independence they had not known on the farm. The wages were about triple the going rate for a domestic servant at the time.

The impact of the creation of all these factories and corporations was to drive people from rural areas to the cities where factories were located. This movement was well underway by the Civil War. During the 1840s, the population of the country as a whole increased by 36%. The population of towns and cities of 8,000 or more increased by 90%. With a huge and growing market, unconstrained by European traditions that could hamper their development, the corporation became the central force in America's economic growth.

Source F: Excerpt from "Wealth of Nations," Adam Smith

"I have seen a small manufactory of this kind where ten men only were employed, and where some of them consequently performed two or three distinct operations. But though they were very poor,... they could, when they exerted themselves, make among them about twelve pounds of pins in a day.... Those ten persons, therefore, could make among them upwards of forty-eight thousand pins in a day.... But if they had all wrought [worked] separately and independently, and without any of them having been educated to this peculiar business, they certainly could not each of them have made twenty, perhaps not one pin in a day."

Steps

1. Explain to students that while some innovations, such as those previously discussed, aided in the collection and movement of goods, there were also major innovations in the production of goods from the raw products being harvested across the continent and abroad. Tell students one example of this was the implementation of the factory system.
2. Provide students with Source E: "The First American Factories" and distribute a copy of the Pros and Cons graphic organizer to each student. A sample of the graphic organizer is included on page 17.
3. Have students read the article to identify the pros and cons of the factory system.
4. Ask them to list their findings in the appropriate columns on the chart.

5. After reading, have students share their charts with a partner to compare their results. Give students the opportunity to make any necessary revisions based on their peer discussions.
6. Call on students/partners to share a piece of information they have on their chart.
7. Record the information on the board or a class anchor chart.
8. Direct students to make final revisions to their organizers as other students share.
9. Provide an overview of specialization in the factory system. Explain to students that though the factories were responsible for producing a product for market, the workers in the factory system were trained in only phases of the production. This meant that the workers performed specialized tasks and were not individually responsible for the making of the product from start to finish.
10. Give each student a copy of Source F: Excerpt from “Wealth of Nations.”
11. Direct students to read and analyze the excerpt to find evidence of the impact of specialization on the production rate.
12. After reading, lead a class discussion to check for understanding, and ask students to add to their notes.
Possible guiding questions:
 - What evidence of specialization did you find in the text?
 - What was the average daily production rate of the workers?
 - How would the production rate have been different if the workers had not been divided into specialized tasks?
 - How many workers were employed at this factory?
 - Based on the author’s observations, what could be inferred about the benefits of specialization in larger factories?
 - What impact would specialization have on the profits of the companies using this system?

Pros and Cons of the American Factory System

Pros

Cons

Student Look-Fors

1. Students should identify the positive impacts associated with the factory system.
 - New technologies came from American inventors, scientists, and mechanics.
 - The mass production of goods resulted from this system.
 - Females were given opportunities to be economically independent.
 - Mill girls received higher wages than if they would have had they taken jobs as domestic servants.
 - The population of cities increased as people left rural areas to seek work in the factories.
 - There was an increase in the nation’s population as a whole.
2. Students should identify the negative impacts associated with the factory system.
 - The factory system resulted in the closing of most small businesses.
 - Factory workers suffered long work hours.
 - Safety of workers was an issue; many workers were injured or killed.
3. A sample of what a completed graphic organizer might look like is included below:

Pros	Cons
<ul style="list-style-type: none"> • Many new technologies came from American inventors, scientists, and mechanics • Mass production of goods • Economic independence for females • Mill girls paid higher wages than for domestic work • Spread of wealth to investors and corporations • Increase in population of cities as people left rural areas for work at factories • Increase in population, as a whole 	<ul style="list-style-type: none"> • Small businesses taken over/shut down by large factories • Poor work safety—many workers injured or killed • Long work hours

Summative Performance Task

Compelling Question	How have inventions and new processes affected the lives of people, migration, and the economy of the United States?
Summative Performance Task	Using the sources provided, along with your notes from the tasks, write a well-organized response to the following prompt: How did early innovations affect the people, economy, and migration patterns of the United States?

Teacher Overview

In this summative performance task, students are asked to write a response to the compelling question using evidence from the sources they explored throughout the four formative performance tasks.

Throughout this instructional task, students have explored how early innovations affected Americans, as well as the local and national economies; this information will be an essential part of a well-developed essay. Before the summative performance task, it may be helpful for students to review the sources provided and the writing/graphic organizers created during the formative assessment tasks. Doing so should help them to develop their interpretations and to highlight the appropriate examples and details to support their writing.

Student Prompt

Using the sources provided and your notes, write a well-organized response to the following prompt: How did early innovations affect the people, economy, and migration patterns of the United States?

Student Look-Fors

1. Scoring Notes
 - An exemplar response may include but is not limited to:
 - A clear understanding of how early innovations affected the people, economy, and migration patterns of the United States.
 - Support for the claims using information gained from sources.
 - Students' written responses should follow the English language arts standards for written expression at grade 4.
2. A strong response:
 - References documents appropriately.
 - The cotton gin allowed for increased yields of the crop, making it a profitable business. (Source A)
 - The country became the world's leading exporter of cotton. (Source A)
 - New technologies, such as steamboats and spinning and weaving machines, were introduced to aid the transportation of cotton and the manufacturing of cotton products. (Source A)
 - As cotton production increased, the value of other crops, such as tobacco, decreased. (Source A)

- The need to access and transport resources and goods more easily resulted in innovations like the Erie Canal. (Source C)
- The canal provided an economic boon to the state of New York, resulting in the state becoming the financial capital of the world. (Source C)
- The first great westward movement happened with the construction of the canal. (Source C)
- The economy along the canal flourished as it became a sought-after vacation/recreation destination for many people. (Source C)
- The National Road was another transportation innovation that allowed thousands of Americans to move west. (Source D)
- The roadway made the transportation of raw material and goods quicker and easier. (Source D)
- The population and economies along the roadway increased as new towns and businesses evolved on the route. (Source D)
- The factory system allowed for the mass production of goods under one roof. (Source E)
- Women found financial independence as they joined the workforce in factories. (Source E)
- The population of towns surrounding the factories increased as people migrated to the areas for work. (Source E)
- Many workers were injured or died in factories due to unsafe work conditions. (Source E)
- People began to specialize in skills, which increased the production yields of goods. (Source F)
- Applies the provided evidence as well as uses the evidence to make generalizations about the Industrial Revolution.
 - The Industrial Revolution itself refers to a change from hand and home production to machine and factory.
 - The first Industrial Revolution was important for the inventions of spinning and weaving machines operated by waterpower, which was eventually replaced by steam.
 - The Industrial Revolution helped increase America's growth.
 - The Industrial Revolution changed American society and economy into a modern urban-industrial state.
 - Prior to the Industrial Revolution, geographic obstacles made travel and transport of goods difficult. Innovation in travel and transportation made the movement of people and goods easier.