

Study Guide



Chapter 10, Section 1

For use with textbook pages 306–311

ECONOMIC GROWTH

KEY TERMS

Industrial Revolution	A new way of working and producing goods (page 307)
capital	Money invested to start new businesses (page 308)
technology	Scientific discoveries that simplify work (page 308)
cotton gin	A machine that removes cotton seeds from the fiber (page 308)
patent	A law that gives an inventor the sole legal right to the invention and its profits for a certain period of time (page 308)
factory system	A system bringing manufacturing steps together in one place to increase efficiency (page 309)
interchangeable parts	Large amounts of uniform pieces that can replace any other identical pieces (page 309)

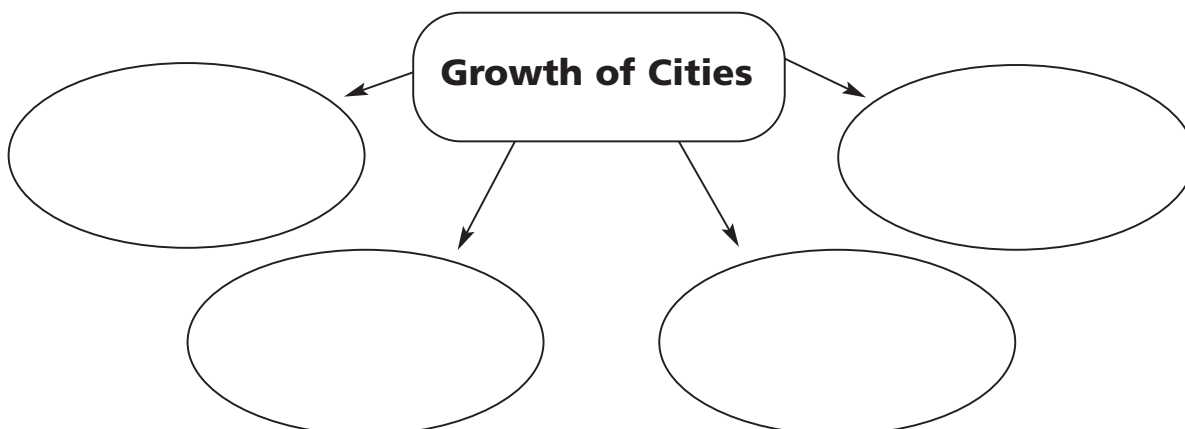
DRAWING FROM EXPERIENCE

Have you ever worked with a group of people to accomplish a task? Did the group divide the work up so that each worker had one or two simple jobs? How did this affect the outcome of the group's work.

This section focuses on the development of industries in the United States.

ORGANIZING YOUR THOUGHTS

Use the chart below to help you take notes as you read the summaries that follow. Think about how the rise of industry and trade led to the growth of cities.



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READ TO LEARN

- **The Growth of Industry** (pages 306–308)

Americans invented methods and tools that required fewer workers and made work easier and more efficient. British inventors created machinery that required fewer workers and produced more goods. Mills were built along rivers and streams because the machines were operated by water power. Many people left their farms and went to work in factories and mills to earn a living. The changes in the way people worked and how goods were produced is known as the *Industrial Revolution*.

The Industrial Revolution in the United States began in New England around 1800. New England was a good location for factories because the soil was not good for farming, there were many rivers and streams, it was close to other resources, and there was *capital*, or money, available to start new businesses. New England had many natural resources, such as coal and iron, nearby. It also had ports for shipping materials and goods.

Many new machines were invented. New *technology*, or scientific discoveries that simplify work, made the Industrial Revolution possible. Many steps in the production of goods were replaced by machines that saved time and money. The steam engine, which produced power for cotton mills, was invented in 1785. Oliver Evans improved the steam engine and a mechanical flour mill. Eli Whitney invented the *cotton gin* in 1793. The cotton gin removed the seeds from the fibers. It saved people a lot of time and energy. *Patent* laws protected the inventors' rights to their inventions and profits for a certain amount of time.

1. What inventions helped the growth of the textile industry?

- **New England Factories** (pages 308–309)

Britain wanted to keep British inventors from sharing their ideas with anyone else. Inventors and mechanics were not allowed to leave the country. A few escaped Britain and shared their knowledge with Americans. Some people such as Samuel Slater left Britain and reproduced the machinery in the United States. His mills were an important step in the Industrial Revolution.

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Francis Cabot Lowell's textile mill was the beginning of the *factory system*. His factory produced cloth from start to finish under one roof. Bringing the steps together saved time and money. He employed young women and girls to work in his factory. They worked long hours for low pay. Most workers repeated one task over and over, day after day. The noise from the machines was loud and the work was boring. The women lived in boardinghouses where they were supervised. The women attended church and had a curfew, a set time when they had to be in the boardinghouse each night. Most workers left the mill when they married. Others left and became teachers or maids. In the 1930s and 1940s, many factories employed immigrants. Immigrants faced more difficult working conditions than the young women and girls in the early factories.

In 1798 Eli Whitney invented a method of manufacturing large quantities of *interchangeable parts*, uniform pieces that could replace any other identical pieces. Rather than making each separate piece of a machine or object separately, Whitney's method could produce lots of parts at one time. He was able to manufacture many more products in a shorter amount of time. Since the process saved time and money, many more goods were manufactured and cost less.

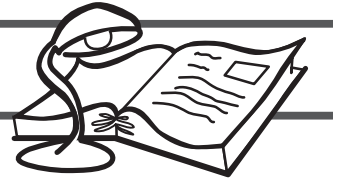
2. What were the working conditions like in early factories?

• Agriculture Expands (page 310)

Many factory jobs provided work in New England, but more than 65 percent of Americans continued to farm the land. In the Northeast, farms were small and crops were sold locally. With the development of textile mills came the increased need for cotton. Southern plantations grew more cotton than ever after Eli Whitney invented the *cotton gin*. The cotton gin cleaned the seeds from the cotton fibers more quickly and cheaply than had been done by hand. Farming increased in the West with additional settlers moving from the South to grow cotton. Farmers north of the Ohio River grew corn and wheat and raised pork, which they sold for profit.

3. How did the development of textile mills affect farming?

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- **Economic Independence** (*pages 310–311*)

The new mills and factories cost money to get started. People called investors invested money in small new businesses, hoping to make a profit. Businesses that needed larger amounts of money to start their businesses borrowed it from banks. Madison and Congress chartered the Second Bank of the United States in 1816, after the charter for the First Bank of the United States expired. The Bank was authorized to make large loans and establish a national currency. The United States became more independent economically.

Cities grew along with industries. Industrial towns and cities were located near sources of waterpower. Many cities such as New York, Baltimore, and Boston grew as a result of commerce and trade. Many towns along rivers in the West grew because of increased shipping. Cities and towns did not have paved sidewalks or streets. They did not have sewer systems, so disease spread quickly. Fires were dangerous because they spread quickly from one building to the next. Different kinds of jobs brought people into the cities. Eventually, people also traveled to cities for the libraries, museums, and shops.

4. What effects did the factory system have on the economy?
