

## Early Industry and Inventions

### BEFORE YOU READ

In the last chapter, you read about the effects of the War of 1812 on the United States.

In this section, you will learn how new machines and factories changed the way people in the United States lived in the late 1700s and early 1800s.

### AS YOU READ

Use this chart to take notes on the changes brought about by inventions and developments of the late 1700s and early 1800s.

Invention or Development	Changes
Textile mill	
Interchangeable parts	
Steam engine	
Telegraph	
Steel plow	
Mechanical reaper	

### The Industrial Revolution Begins; Factories Come to New England

(pages 341–342)

**What was the Industrial Revolution?**

The **Industrial Revolution** began in Britain during the late 1700s. In this revolution, factory machines replaced hand tools and large-scale *manufacturing* replaced farming as the main form of work. Before the revolution, women spun thread and wove cloth at home. However, the invention of machines such as the spinning jenny and the power loom made it possible for unskilled workers to make cloth.

The **factory system** brought many workers and machines together under one roof. Most factories were built near water to power the machines. People left farms and moved to where the factories were.

### TERMS & NAMES

**Industrial Revolution** A time when factory machines replaced hand tools and large-scale manufacturing replaced farming as the main work

**factory system** System that brought many workers and machines together under one roof

**Samuel Slater** Built first spinning mill in Rhode Island

**Lowell mills** Early factories in Massachusetts that made cloth

**interchangeable parts** Parts that are exactly alike

**Robert Fulton** Inventor of the steamboat

**Samuel F. B. Morse** Inventor of the telegraph

Many people did not want the United States to *industrialize*. However, during the War of 1812 the British blockade kept imported goods from reaching the United States. So Americans had to start manufacturing their own goods.

America began to build its own factories, starting in New England. This region was a good place for factories. It had many rivers to provide water power. It had ships and access to the ocean. In addition, it had many willing workers who were not able to make a living by farming. **Samuel Slater** built his first spinning mill in Rhode Island in 1790 and a larger mill later. There he hired whole families to work.

#### 1. Where were the first U.S. factories?

## The Lowell Mills Hire Women

(pages 342–343)

**What** did the Lowell mills manufacture?

In 1813, Francis Cabot Lowell built a factory in Waltham, Massachusetts. This factory spun cotton into yarn and wove it into cloth on power looms. The factory was so successful that Lowell and his partners built a new factory town, called Lowell, near the Merrimack and Concord rivers.

Instead of families, the **Lowell mills** employed farm girls who lived in company-owned boardinghouses. These girls worked long hours in deafening noise. At first the girls received high wages. However, by the 1830s, wages dropped and working conditions worsened.

The Lowell mills and other early factories ran on water power. Later factories were run by powerful steam engines.

### 2. Who worked in the Lowell mills?

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## A New Way to Manufacture

(pages 343–344)

**What** were interchangeable parts?

In 1798, the U.S. government hired the inventor Eli Whitney to make 10,000 *muskets* for the army. Before then, guns were made one at a time by gunsmiths, from start to finish. Whitney wanted to make them in a different way. In 1801, he went to Washington with a box containing musket parts. He took parts from different piles and put a musket together in seconds. He had demonstrated the use of **interchangeable parts**, parts that were exactly alike.

Interchangeable parts made production faster and made repairs easy. They also allowed the use of lower-paid and less-skilled workers.

### 3. How did using interchangeable parts change factory work?

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## Moving People, Goods, and Messages

(pages 344–345)

**How** did inventions change transportation and communication in the United States?

New inventions improved transportation and communication. **Robert Fulton** invented a steamboat that could move against the current or strong wind. In 1807, he launched the *Clermont* on the Hudson River.

In 1816, Henry Miller Shreve, a trader on the Mississippi River, designed a more powerful steam engine. It ran a double-decker boat with a paddle wheel in the back. Shreve sailed the boat up the Mississippi and started a new era of trade and transportation on the river.

In 1837, **Samuel F. B. Morse** demonstrated the telegraph. This invention allowed messages to travel between cities in seconds. By 1861, telegraph lines spanned the country.

### 4. How did the telegraph change communication in the United States?

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## Technology Improves Farming (page 345)

**What** inventions improved agriculture?

Several inventions increased farm production in the United States. In 1836, John Deere invented a light-weight plow with a steel cutting edge. His invention made it easier for farmers to prepare heavy Midwestern soil for planting. As a result, more farmers began moving west.

In 1834, Cyrus McCormick's reaper cut ripe grain. The threshing machine separated kernels of wheat from husks.

New inventions helped to link regions of the United States. New farming equipment helped Midwestern farmers feed Northeastern factory workers. Midwestern farmers became a market for the goods manufactured in the Northeast. Northeastern textile mills increased the need for Southern cotton.

### 5. How did the steel plow improve agriculture?

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# Plantations and Slavery Spread

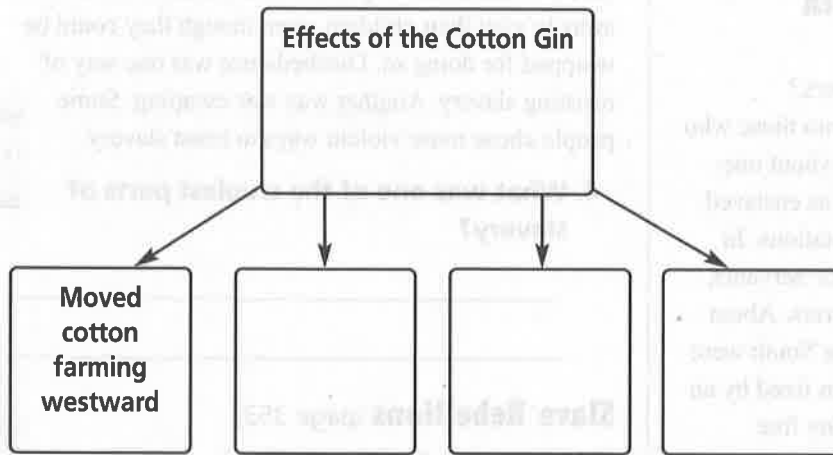
## BEFORE YOU READ

In the last section, you read about how new machines and factories changed the way people lived and worked.

In this section, you will learn how the demand for cotton caused slavery to spread in the South.

## AS YOU READ

Use this diagram to take notes on the ways that the cotton gin changed Southern life.



## TERMS & NAMES

**Eli Whitney** Inventor of the cotton gin

**cotton gin** Invention that made the cotton-cleaning process easier

**spirituals** Religious folk songs sung by enslaved people

**Nat Turner** Leader of a famous slave rebellion in 1831

## The Cotton Boom (pages 348–349)

*Who invented the cotton gin?*

**Eli Whitney** invented the **cotton gin** in 1793. This invention made the cotton-cleaning process much easier and quicker. It allowed one worker to clean as much as 50 pounds of cotton a day. The cotton gin changed Southern life in four ways:

1. Cotton farming moved westward beyond the Atlantic coastal states.
2. Because cotton was such a valuable crop, planters put most of their efforts into growing it.
3. More Native American groups were driven off Southern land as cotton *plantations* took over the land.
4. Slavery continued to be an important source of labor for growing cotton.

## 1. How did the cotton gin change the cotton-cleaning process?

## Slavery Expands; Slavery Divides the South (pages 349–350)

*How did cotton production affect slavery in the South?*

Cotton production rose greatly between 1790 and 1860. So did the number of enslaved people in the South. As earnings from cotton rose, so did the price of slaves.

Slavery divided white Southerners into those who held slaves and those who did not. Only about

one-third of white families in the South owned slaves in 1840. Of the slaveholding families, only about one-tenth had large plantations with 20 or more slaves. Although most white Southern farmers owned few or no slaves, many supported slavery anyway. They worked their small farms and hoped to buy slaves someday so that they could raise more cotton and make more money.

## 2. How did slavery divide white Southerners?

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### African Americans in the South

(pages 350–351)

#### How did slavery divide black Southerners?

Slavery also divided black Southerners into those who were enslaved and those who were free. About one-third of the South's population in 1840 was enslaved. About half of them worked on large plantations. In cities, enslaved people worked as *domestic* servants, craftsmen, factory workers, and day laborers. About eight percent of African Americans in the South were free. They had either been born free, been freed by an owner, or bought their own freedom. Many free African Americans lived in cities.

Free blacks, however, faced many problems. Some states forced them to leave once they gained freedom. Most states did not allow them to vote or go to school. Many employers would not hire them. Free blacks also had to worry about being captured and returned to slavery.

## 3. What problems did free blacks face?

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### Culture and Resistance; Families Under Slavery

(pages 351–352)

*Why did enslaved African Americans rely on their own culture?*

By the early 1800s, African Americans on plantations had developed their own *culture*. They relied on that culture to survive the hardships on plantations. They

especially relied on their religion. Enslaved people expressed their religious beliefs in **spirituals**, or religious folk songs. The songs often contained coded messages. Spirituals later influenced blues, jazz, and other forms of American music.

One of the cruelest parts of slavery was the selling of family members away from one another. When enslaved people ran away, they often did so to find other family members. Family members that did stay together took comfort in their family lives. They married, although their marriages were not legally recognized. Most slave children lived with their mothers, who tried to protect them from punishment. Parents who lived away from their children often stole away to visit their children, even though they could be whipped for doing so. Disobedience was one way of resisting slavery. Another way was escaping. Some people chose more violent ways to resist slavery.

## 4. What was one of the cruelest parts of slavery?

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### Slave Rebellions

(page 353)

#### What was Nat Turner's rebellion?

Several armed *rebellions* took place in the early 1800s. The most famous rebellion was led by **Nat Turner** in 1831. Turner and 70 followers killed 55 white men, women, and children. Most of Turner's followers were captured and 16 were killed. When Turner was caught, he was tried and hanged.

Turner's rebellion spread fear in the South. Whites killed more than 200 African Americans in revenge. States passed laws that kept free blacks and slaves from having weapons or buying liquor. They could not hold religious services unless whites were present. Tensions over slavery increased between the South and the North.

## 5. How did whites react to Nat Turner's rebellion?

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# Nationalism and Sectionalism

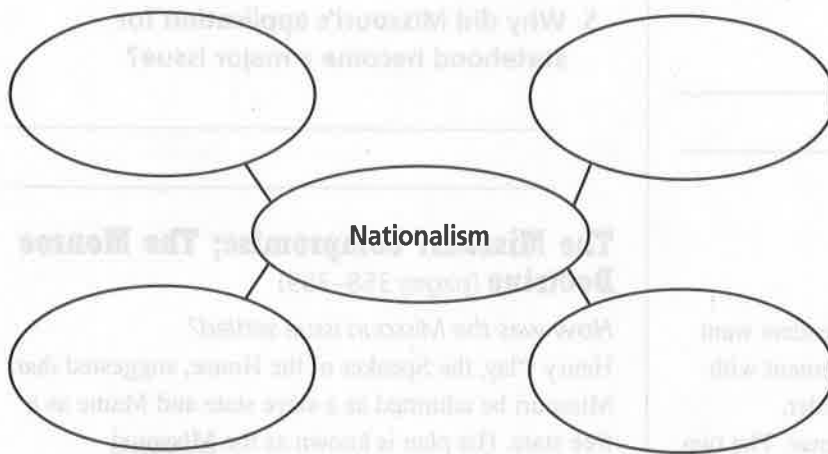
## BEFORE YOU READ

In the last section, you read about the spread of slavery in the South.

In this section, you will learn how nationalism united the country and how tensions continued between the North and the South.

## AS YOU READ

Use this diagram to take notes on the factors that contributed to feelings of nationalism in the United States in the early 1800s.



## TERMS & NAMES

**nationalism** The feeling of pride, loyalty, and protectiveness toward a country

**Henry Clay** Speaker of the House of Representatives and political leader from Kentucky

**American System** Clay's plan for economic development

**James Monroe** President elected in 1816

**sectionalism** Loyalty to the interests of one's own region rather than to the nation as a whole

**Missouri Compromise** Agreement that temporarily settled the issue of slavery in the territories

**Monroe Doctrine** Warning to European nations not to interfere in the Americas

## Nationalism Unites the Country

(pages 354–355)

**What was the American System?**

In the early 1800s, a sense of **nationalism** pulled people of different regions in the United States together. Nationalism is a feeling of pride, loyalty, and protectiveness toward a country. Congressman **Henry Clay**, a strong nationalist, called for strengthening the country and unifying its regions. His plan—the **American System**—included three parts.

1. Set up a protective tariff, a tax on foreign goods.
2. Set up a national bank with a single currency.
3. Improve the country's transportation systems.

**1. What were three parts of the American System?**

\_\_\_\_\_

\_\_\_\_\_

## Roads and Canals (pages 355–356)

**How was transportation improved in the 1800s?**

Transportation in the United States improved in the first half of the 1800s. In 1806, Congress funded a road that eventually stretched from Cumberland, Maryland, west to Vandalia, Illinois.

The building of canals improved water transportation. The Erie Canal opened the upper Ohio River valley and the Great Lakes region to settlement and trade. It increased nationalism by uniting the regions.

Around the 1830s, steam-powered trains began to be used for transportation. By 1850, there were more than 9,000 miles of track across the United States.

**2. What was the impact of the Erie Canal?**

\_\_\_\_\_

\_\_\_\_\_

## A Spirit of National Unity

(page 356)

### What was the Era of Good Feelings?

As nationalism increased, people became more loyal to the federal government. **James Monroe** won the presidential election in 1816 by a large majority of votes. The lack of political differences led one newspaper to call the times the Era of Good Feelings. During Monroe's term, several Supreme Court decisions strengthened the powers of the federal government.

### 3. What was the effect of several Supreme Court decisions?

## Settling National Boundaries

(pages 356–357)

### How did U.S. borders expand?

Feelings of nationalism also made U.S. leaders want to extend the country's borders. An agreement with Britain helped to set the U.S.-Canada border.

However, relations with Spain were tense. The two nations disagreed on the boundaries of the Louisiana Purchase and the ownership of West Florida.

Runaway slaves and pirates used Spanish-held East Florida as a *refuge*. Also, the Seminoles of East Florida, a Native American tribe, raided white settlements in Georgia to get back their land.

After U.S. general Andrew Jackson invaded Florida, Spain gave Florida to the United States in 1819.

### 4. What caused tensions with Spain?

## Sectional Tensions Increase

(pages 357–358)

### How did sectionalism help divide the country?

Although nationalism helped to unite the country, sectionalism was dividing it. **Sectionalism** is loyalty to the interests of your own region rather than to the nation as a whole. The interests of the North, South, and West were often in conflict.

Sectionalism became a major issue when Missouri applied for statehood in 1818. People in Missouri wanted slavery to be allowed there. But this would change the balance of 11 slave states and 11 free states.

### 5. Why did Missouri's application for statehood become a major issue?

## The Missouri Compromise; The Monroe Doctrine

(pages 358–359)

### How was the Missouri issue settled?

Henry Clay, the Speaker of the House, suggested that Missouri be admitted as a slave state and Maine as a free state. His plan is known as the **Missouri Compromise**. It kept the balance of power.

The nation felt threatened for other reasons. Some European countries planned to help Spain and Portugal take back American colonies that had broken away. Also, Russian settlements reached from Alaska almost to San Francisco. In 1823, President Monroe issued the **Monroe Doctrine**. This was a warning to European countries not to set up any more colonies in the Americas.

### 6. What was the Missouri Compromise?

**Glossary/After You Read****culture** Ways of living that belong to a group of people**domestic** Relating to a home or household**industrialize** To develop industries**manufacturing** Making things by machine**musket** A shoulder gun**plantation** A large farm or estate**rebellion** Open revolt**refuge** A place of protection or shelter**Terms & Names****A.** Write the letter of the term that best answers the question.

- |                  |                       |
|------------------|-----------------------|
| a. Robert Fulton | d. Samuel F. B. Morse |
| b. Samuel Slater | e. Nat Turner         |
| c. Eli Whitney   | f. Henry Clay         |

- \_\_\_\_\_ 1. Who suggested the Missouri Compromise?
- \_\_\_\_\_ 2. Who invented the telegraph?
- \_\_\_\_\_ 3. Who invented the cotton gin?
- \_\_\_\_\_ 4. Who led a slave rebellion in 1831?
- \_\_\_\_\_ 5. Who invented the steamboat?

**B.** Write the name or term that best completes each sentence.

- |                       |                 |
|-----------------------|-----------------|
| Industrial Revolution | American System |
| interchangeable parts | sectionalism    |
| nationalism           | spirituals      |

1. In the early 1800s, a feeling of \_\_\_\_\_ brought people of different regions in the United States together.
2. \_\_\_\_\_, or loyalty to the interests of one's own region rather than to the nation as a whole, helped to divide the United States.
3. In the \_\_\_\_\_, factory machines replaced hand tools and large-scale manufacturing replaced farming as the main form of work.
4. The \_\_\_\_\_ was a plan to strengthen the United States economically.
5. The use of \_\_\_\_\_ made production faster and repairs easier.

### Main Ideas

1. Why was New England a good place to set up factories?

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2. How did new technology link different regions of the United States in the early 1800s?

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3. How did enslaved people resist slavery?

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4. What did several Supreme Court decisions do in the early 1800s?

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5. What was the message of the Monroe Doctrine?

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### Thinking Critically

Answer the following questions on a separate sheet of paper.

1. How were the economies of the North and the South different? What problems did the differences cause?

2. Do you think the Missouri Compromise was a good decision? Give reasons for your opinion.