



# Regional Economies Create Differences

## MAIN IDEA

The North and the South developed different economic systems that led to political differences between the regions.

## WHY IT MATTERS NOW

Different regions of the country continue to have differing political and economic interests today.

## Terms & Names

- Eli Whitney
- interchangeable parts
- mass production
- Industrial Revolution
- cotton gin
- Henry Clay
- American System
- National Road
- Erie Canal
- Tariff of 1816

In a dramatic presentation in front of President John Adams in 1801, inventor **Eli Whitney** demonstrated the first musket made of **interchangeable parts**, parts that are exactly alike. He assembled a musket from pieces chosen at random from crates full of parts. Whitney had made his musket parts the old-fashioned way, by hand. Nonetheless, his efforts were the first steps toward developing tools with which unskilled workers could make uniform parts.

### ★ A PERSONAL VOICE ELI WHITNEY

“One of my primary objects is to form the tools so the tools themselves shall fashion the work and give to every part its just proportion—which when once accomplished will give expedition, uniformity, and exactness to the whole. . . . In short, the tools which I contemplate are similar to an engraving on copper plate from which may be taken a great number of impressions exactly alike.”

—quoted in *Eli Whitney and the Birth of American Technology*

Better tools sped up the manufacture of goods and improved their reliability. Inventions and ideas such as these would affect different regions of the young nation in different ways.



▲ In 1798, Eli Whitney manufactured 10,000 muskets in just two years. At that time, arms factories could produce only around 300 guns a year.

## Another Revolution Affects America

During the 19th century, new approaches to manufacturing, such as Whitney's interchangeable parts, took industry out of American households and artisans' workshops. Factories became the new centers of industry. The factory system (using power-driven machinery and laborers assigned to different tasks) made **mass production**—the production of goods in large quantities—possible. These changes in manufacturing brought about an **Industrial Revolution**—social and economic reorganization that took place as machines replaced hand tools and large-scale factory production developed.



**GREAT BRITAIN STARTS A REVOLUTION** The Industrial Revolution actually first began in Great Britain. It was in Britain, during the 18th century, that inventors came up with ways to generate power using swiftly flowing streams and bountiful supplies of coal. Inventors then developed power-driven machinery and ways to use this machinery to quickly mass-produce goods such as textiles. British merchants built the first factories. When these factories prospered, their owners had the money to build more factories, invent more labor-saving machines, and industrialize the nation.

**THE INDUSTRIAL REVOLUTION IN THE UNITED STATES** The primary source of income in America after the War of Independence was international trade, not manufacturing. Farms and plantations produced agricultural products such as grain and tobacco, which were shipped to Great Britain, southern Europe, and the West Indies. However, two events—the passage of President Thomas Jefferson’s Embargo Act of 1807 and the War of 1812—turned the attention of Americans toward the development of domestic industries. Jefferson’s embargo, which prohibited Americans from shipping goods to Europe, brought to a standstill the once-thriving foreign trade. In fact, by the time Congress repealed the act in 1809, many shipping centers—especially those in New England—had shut down.

Then, just as these seaports recovered, the War of 1812 broke out, and the British navy blockaded much of the coastline. With ships unable to get into or out of U.S. harbors, Americans had to invest their capital in ventures other than overseas shipping. **A**

**NEW ENGLAND INDUSTRIALIZES** Probably nowhere else in the nation was the push to invest in industry as great as in New England. There, citizens had depended heavily upon shipping and foreign trade for income. Agriculture in the region was not highly profitable.

In 1793, a British immigrant named Samuel Slater had established in Pawtucket, Rhode Island, the first successful mechanized textile factory in America. However, Slater’s factory and those modeled after it still only mass-produced one part of the textile, or finished cloth: thread.

Then, in 1813, three Bostonians revolutionized the American textile industry by mechanizing all the stages in the manufacture of cloth. Using plans from an English mill, Francis Cabot Lowell, Nathan Appleton, and Patrick Tracy Jackson built a weaving factory in Waltham, Massachusetts, and outfitted it with power machinery. By 1822 Appleton and Jackson had made enough money to build a larger operation. The changes that their factory triggered in the town of Lowell—named for their deceased partner, Francis Cabot Lowell—exemplify the changes wrought by the Industrial Revolution. By the late 1820s, quiet little Lowell had become a booming manufacturing center. Thousands of people—mostly young women who came to Lowell because their families’ farms were in decline—journeyed there in search of work. **B**

Samuel Slater’s cotton mill drew its power from the Blackstone River in Pawtucket, Rhode Island.



#### MAIN IDEA

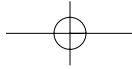
#### Analyzing Effects

**A** What effects did the Embargo Act of 1807 and the War of 1812 have on Americans involved in shipping and foreign trade?

#### MAIN IDEA

#### Summarizing

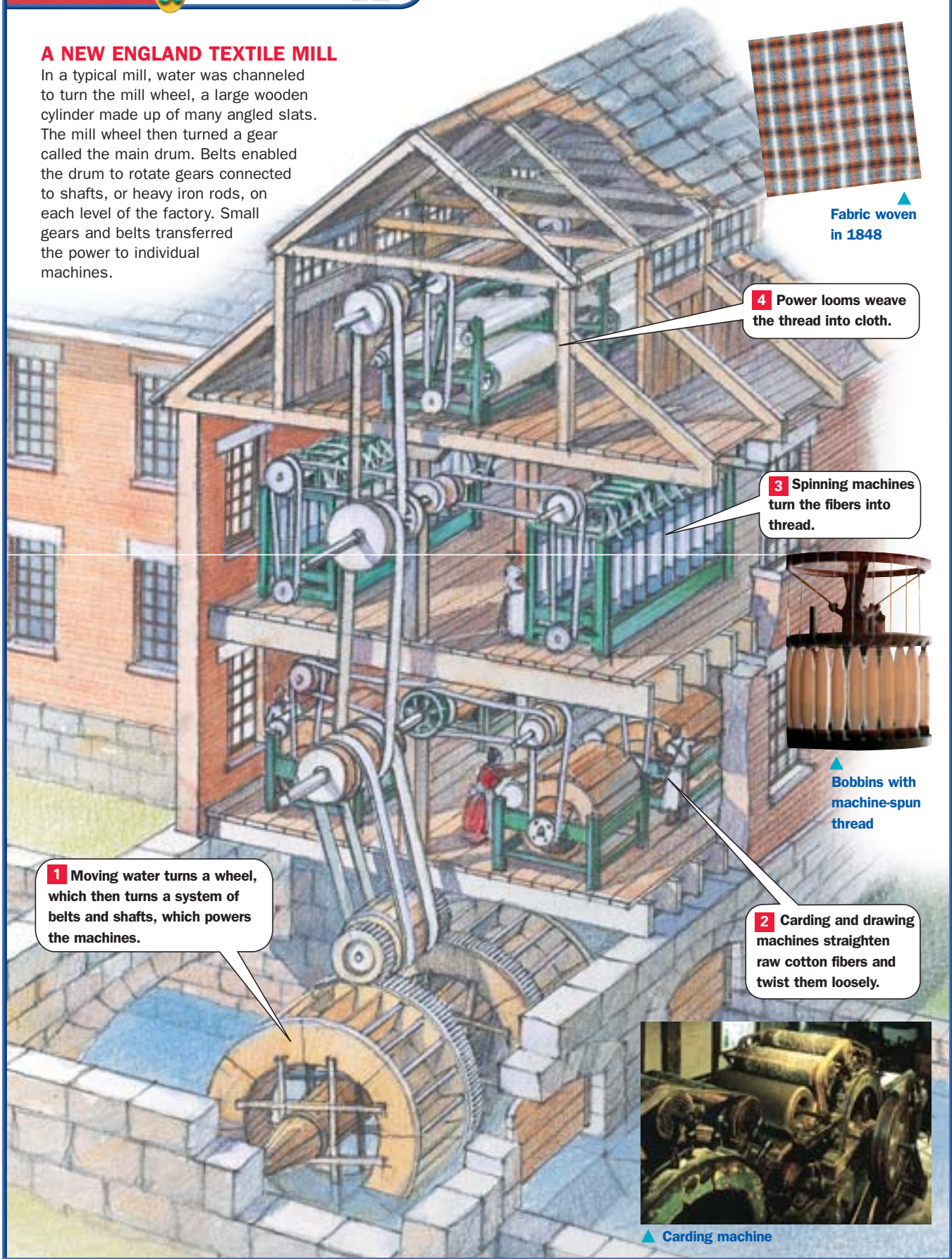
**B** How did manufacturing develop in New England?



# Science & Technology

## A NEW ENGLAND TEXTILE MILL

In a typical mill, water was channeled to turn the mill wheel, a large wooden cylinder made up of many angled slats. The mill wheel then turned a gear called the main drum. Belts enabled the drum to rotate gears connected to shafts, or heavy iron rods, on each level of the factory. Small gears and belts transferred the power to individual machines.



**1** Moving water turns a wheel, which then turns a system of belts and shafts, which powers the machines.

**4** Power looms weave the thread into cloth.

**3** Spinning machines turn the fibers into thread.

**2** Carding and drawing machines straighten raw cotton fibers and twist them loosely.



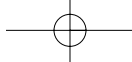
▲ Bobbins with machine-spun thread



▲ Fabric woven in 1848



▲ Carding machine



## Two Economic Systems Develop

Northeasters, prompted by changing economic conditions, invested their capital in factories and manufacturing operations. Cash crops did not grow well in the Northern soil and climate. Southerners, on the other hand, had begun to reap huge profits from cotton by the mid-1790s. The South had little incentive to industrialize. As a result, the North and the South continued to develop two distinct economies, including very different agricultural systems.

**AGRICULTURE IN THE NORTH** The North had not eliminated agriculture. However, the type of land and the growth of cities in the North encouraged farmers to cultivate smaller farms than Southerners did, and to grow crops that did not require much labor to flourish.

Farmers in the North usually started out growing only what their families needed. Then farming practices in the Old Northwest—the area north of the Ohio River, encompassing what is now the states of Ohio, Indiana, Illinois, Wisconsin, and Michigan—diverged from farming practices in the Northeast. As cities grew, farmers in the Old Northwest discovered that they could raise one or two types of crops or livestock (corn and cattle, for example), and sell what they produced at city markets. They could then purchase from stores whatever else they needed. Such grain crops as corn did not require much labor to grow, nor were they hugely profitable, so there was little demand for slaves. In the Northeast, farms were even smaller than those in the Northwest, so here too there was little demand for slavery.

By the late 1700s, slavery in the North was dying out. Farmers had little economic motivation to use slaves, and an increasing number of Northerners began to voice their religious and political opposition to slavery. Consequently, by 1804 almost all of the Northern states had voluntarily abolished slavery. **C**

**COTTON IS KING IN THE SOUTH** Eli Whitney's invention of a **cotton gin** (short for "cotton engine") in 1793 had helped to set the South on a different course of development from the North. Short-staple (or short-fiber) cotton was easier to grow but harder to clean than long-staple cotton. Whitney's gin made it possible for Southern farmers to grow short-staple cotton for a profit. Since cotton was in great demand in Britain and, increasingly, in the North, an efficient machine for cleaning the seeds from short-staple cotton proved a major breakthrough. Armed with the cotton gin, poor, nonslaveholding farmers quickly claimed land in the area between the Appalachians and the Mississippi south of the Ohio to begin cultivating this cash-producing crop. Wealthier planters followed, bought up huge areas of land, and then put an enormous slave labor force to work cultivating it. By 1820, this plantation system of farming had transformed Louisiana, Mississippi, and Alabama into a booming Cotton Kingdom. In this way, the cotton gin accelerated the expansion of slavery. **D**

**SLAVERY BECOMES ENTRENCHED** Although slave importation had declined during the American Revolution, by the 1820s the demand for slaves had begun



### AGRICULTURE AND MIGRATION

Changes in agricultural technology often cause large population movements. Today's agricultural technology enables farmers to plant and grow crops with fewer workers than in the past, but many hands are still needed at harvest time. The United States has about half a million migrant agricultural workers. Whole families may move seasonally following the harvest. Children of migrant workers, like this 11-year-old boy in Plainview, Texas, often help in the fields at peak harvest times.

In the early 1800s, the cotton gin led to a mass movement of planters and slaves into Alabama, Mississippi, and Louisiana. Mechanical cotton pickers replaced huge communities of field hands in the 1930s. Many laborers were African Americans, who then migrated from rural to urban areas in search of work.

#### MAIN IDEA

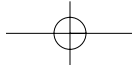
#### Analyzing Causes

**C** Why was slavery abolished in the North?

#### MAIN IDEA

#### Comparing

**D** How were the agricultural systems of the North and South different?

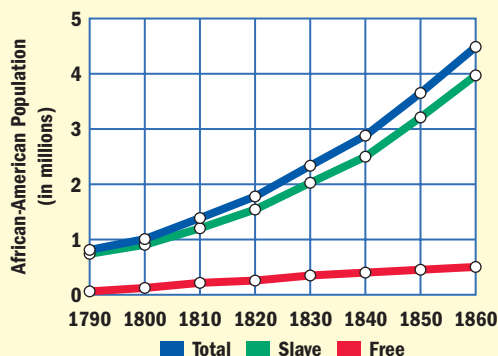


## Science & Technology

### THE COTTON GIN

In 1794, Eli Whitney was granted a patent for a “new and useful improvement in the mode of Ginning [cleaning] Cotton.” Workers who previously could clean only one pound of cotton per day could now, using the gin, clean as much as fifty pounds per day. Cotton production increased from three thousand bales in 1790 to more than two million bales in 1850. Increased cotton production meant an increase in the number of slaves needed on plantations.

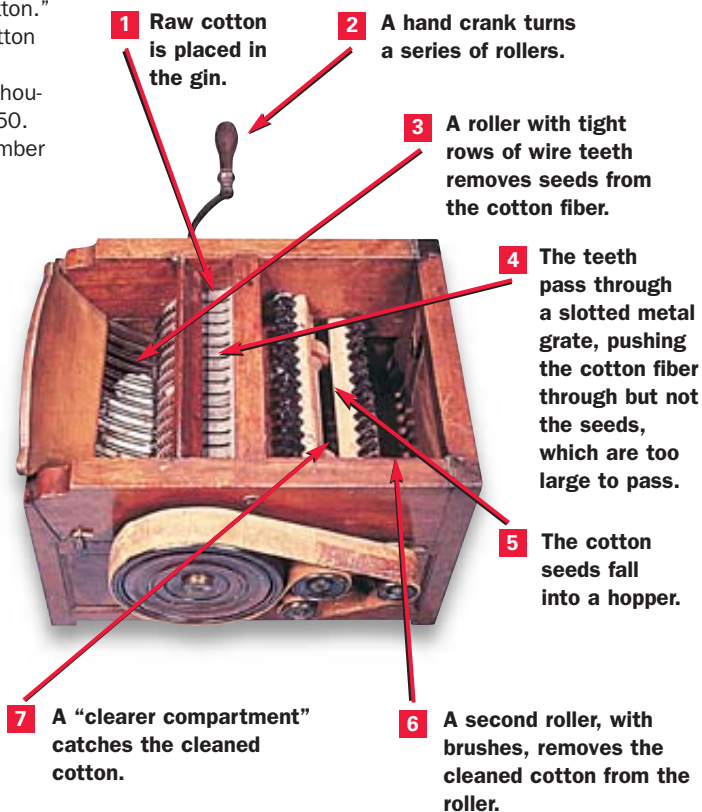
**African-American Population in the United States, 1790–1860**



Source: U.S. Department of Commerce, U.S. Bureau of the Census, *Negro Population: 1790–1915*.

#### SKILLBUILDER Interpreting Graphs

1. About how many African-American slaves were in the United States in 1860?
2. How do the number of free African Americans and the number of slaves compare from 1790 to 1860?



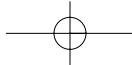
to grow. Increases in cotton production and increases in the number of slaves owned paralleled each other. From 1790 to 1810, cotton production surged from 3,000 bales a year to 178,000 bales, while the number of slaves in the South leapt from 700,000 to 1,200,000. By 1808 slave traders had brought 250,000 additional Africans to the United States—as many as had been brought to the mainland American colonies between 1619 and 1776.

## Clay Proposes the American System

As the North and South developed different economies, the creation of a plan to unify the nation became increasingly important. In 1815, President Madison presented such a plan to Congress. He hoped his agenda would both unite the different regions of the country and create a strong, stable economy that would make the nation self-sufficient. His plan included three major points:

- developing transportation systems and other internal improvements
- establishing a protective tariff
- resurrecting the national bank (established during Washington’s administration under Hamilton’s guidance, and then much reduced in influence under Jefferson)

The plan held promise. Recognizing this, even former critics of the president—Henry Clay and John C. Calhoun—rallied behind it. House Speaker **Henry Clay** began to promote it as the **American System**.



As Clay explained it, the American System would unite the nation's economic interests. An increasingly industrial North would produce the manufactured goods that farmers in the South and West would buy. Meanwhile, a predominantly agricultural South and West would produce most of the grain, meat, and cotton needed in the North. A nationally accepted currency and improved transportation network would facilitate the exchange of goods. With each part of the country sustaining the other, Americans would finally be economically independent of Britain and other European nations. **E**

**MAIN IDEA**  
**Summarizing**  
**E** What was the intention of the American System?

**ERIE CANAL AND OTHER INTERNAL IMPROVEMENTS** For people in different regions to do business with one another and for the economy to grow, they had to communicate, travel, and transport goods. The first steam locomotive in the United States was built in 1825. Railroads offered several advantages over existing modes of transport; they were fast, able to cross almost any terrain, and possible to operate in severe weather. Most transportation at this time, however, was still accomplished using roads and canals. Eventually, better roads and canals would lower costs. But in the short run, they would cost money.

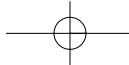
Many states built turnpikes, which paid for themselves through the collection of tolls paid by users who, literally, turned a pike (or spiked pole) to continue their journey along the road. At the same time the federal government experimented with funding highways, which would connect different regions by land. Construction of the **National Road** began in 1811. By 1838 the new road extended from Cumberland, Maryland, to Vandalia, Illinois.

One of the most impressive projects, the **Erie Canal**, stretched 363 miles. The "Big Ditch," as it was called, took eight years to dig, and by 1825 had linked the Hudson River to Lake Erie—or, in effect, the Atlantic Ocean to the Great Lakes. Just 12 years after it had opened, canal tolls had completely paid for its construction. New York City had become the dominant port in the country. In their rush to make similar profits, other states built over 3,000 miles of canals by 1837.



**GEOGRAPHY SKILLBUILDER**

- 1. Movement** Were roads or canals a more powerful factor in unifying the United States in the first half of the 1800s?
- 2. Region** Which region had the heaviest concentration of roads, canals, and railroads? Why?



**TARIFFS AND THE NATIONAL BANK** Why were the tariffs on imports proposed by Madison and promoted by Clay necessary? Ever since the end of the War of 1812, British goods such as iron and textiles—stockpiled during the war—were sold far below the cost of American-made merchandise. Consequently, few bought the more expensive American products. Placing a tariff on imports would increase the cost of foreign goods and thereby eliminate their price advantage. Moreover, tariff revenues would help pay for internal improvements, such as roads, canals, and lighthouses. For these reasons, President James Madison proposed the **Tariff of 1816**.

Most Northeasterners welcomed protective tariffs with relief. However, people in the South and West, whose livelihoods did not depend on manufacturing, were not as eager to tax European imports. They resented any government intervention that would make goods more expensive. Nevertheless, Clay, who was from the West (Kentucky), and Calhoun, a Southerner from South Carolina, managed to sway congressmen from their regions to approve the Tariff of 1816 in the national interest.

Attitudes toward the proposed Second Bank of the United States (BUS) were less divided. Most leaders agreed that a national bank would benefit all. The Second Bank would make available a currency guaranteed to be accepted nationwide, thus making it easier for people in different regions to do business with one another. In 1816, Congress chartered the Second Bank of the United States for a 20-year period.

People were pleased with the way the country was developing. In 1816, they elected James Monroe of Virginia as president. Soon after his inauguration in 1817, Monroe took a goodwill tour of New England, receiving a warm welcome in Boston. The idea of a Republican from Virginia being welcomed in this northern Federalist stronghold impressed the nation. The Boston *Columbian Centinel* declared that Americans had entered an “Era of Good Feelings.”



**ASSESSMENT**

**1. TERMS & NAMES** For each term or name, write a sentence explaining its significance.

- **Eli Whitney**
- **Industrial Revolution**
- **American System**
- **Tariff of 1816**
- **interchangeable parts**
- **cotton gin**
- **National Road**
- **mass production**
- **Henry Clay**
- **Erie Canal**

**MAIN IDEA**

**2. TAKING NOTES**

In a two-column chart like the one shown, describe the economic systems of the North and the South with regard to both agriculture and manufacturing.

Economies	
North	South
Agriculture	Agriculture
Manufacturing	Manufacturing

**CRITICAL THINKING**

**3. ANALYZING EFFECTS**

What shifts in population might be attributed to advances in technology and changes in regional economies during America’s Industrial Revolution? Support your answer with examples from the text.

**Think About:**

- the industrialization of New England
- agricultural changes in the South
- improvements in internal transportation systems

**4. SYNTHESIZING**

How was the American System expected to unite the nation’s economic interests? Provide several examples.

**5. PREDICTING EFFECTS**

Do you think the invention of the railroad would hasten or slow the construction of new roads and canals? Why?