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Introduction

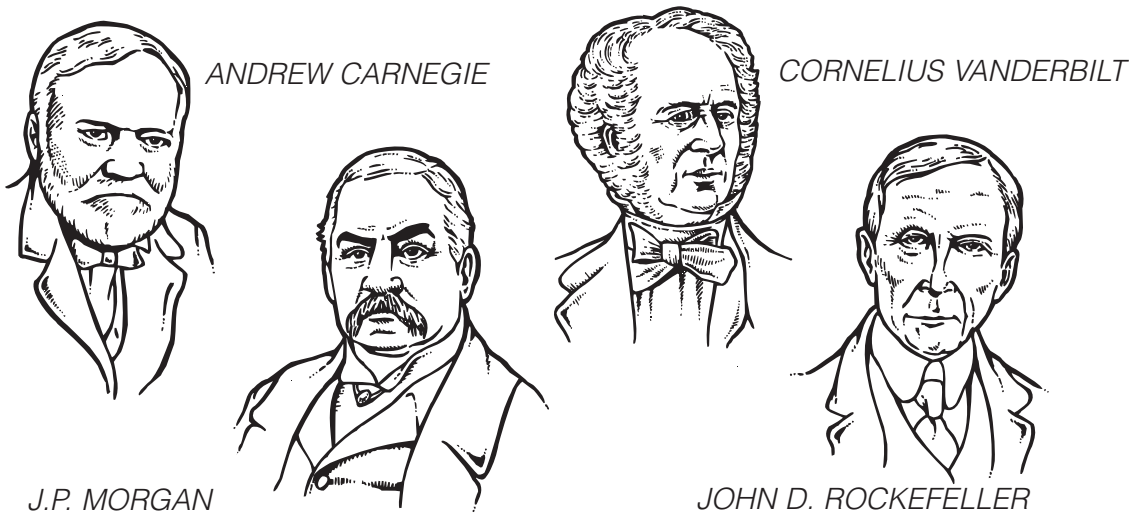
The *Spotlight on America* series is designed to introduce students to significant events in American history. Reading in the content area is enriched with a variety of activities in language arts, literature, written and oral expression, social studies, and science. The series is designed to make history literally come alive in your classroom and take root in the minds of your students.

The Industrial Revolution was a transforming event in human history. It began in the mid-1700s in England and spread across Europe and America in the 1800s. With the advent of the Industrial Revolution, transportation changed from the plodding feet of horse-drawn coaches to swifter travel by steam-driven trains and ships. Communication was revolutionized as well with the invention of the telegraph and the telephone which replaced the slow, haphazard mail system of earlier times. Innovations in the manufacture of textiles, steel, food production, and a million other products changed life forever. The pace of change was accelerated even more by the introduction of electric power.

Although the Industrial Revolution led to inexpensive consumer goods and the mass production of virtually all goods, it was also accompanied by social and economic problems such as overcrowded tenements, child labor, and hazardous working conditions. Workers met tremendous opposition as they organized unions to protect themselves against powerful, greedy industrialists and giant corporations.

The reading selections in this book introduce the Industrial Revolution and also set the stage for activities in other subject areas. The literature readings expose students to the lives of people who suffered through and survived the turmoil created during the Industrial Revolution. The language arts and literature activities help students understand and sympathize with the problems that ordinary people faced during the first century of industrialization. The social studies and science activities help students recognize the importance of inventions as a major component of industrialization, and the culminating activities acquaint students with the way people lived during the age of industrial expansion.

Enjoy using this book with your students. Look for other books in this series.



Reading Passages

Revolution in Transportation and Communication

National Roads

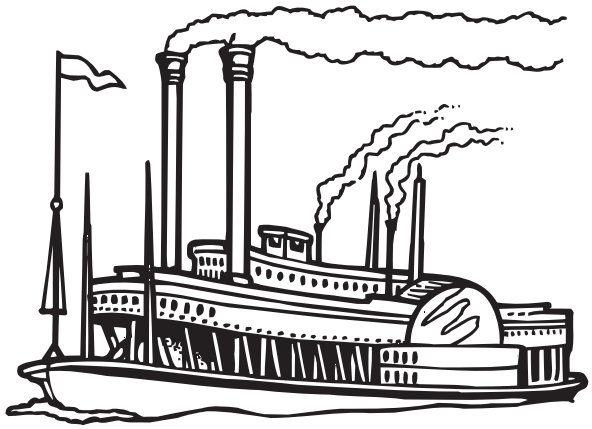
Factories produce goods, but the ability to transport these goods to buyers is essential to the growth of industry. In the early 1800s the only cheap and efficient means of travel was by water. It was far cheaper to send a ton of cotton from North Carolina to England than it was to ship it a few hundred miles to Pennsylvania. The U.S. government addressed this problem by funding a National Road from Cumberland, Maryland, through what is now Wheeling, West Virginia, and eventually all the way to Vandalia, Illinois. This wagon road helped owners transport goods west to buyers who would otherwise not have been able to purchase them.

Canals

The Erie Canal was dug across central New York State and helped manufacturers reach western buyers. Built between 1817 and 1825, the Erie Canal was a major engineering accomplishment of the era. Shipping goods on this man-made waterway cut the cost of shipping to a fraction of what it cost to transport freight by wagon along rugged trails and roads. Over 13,000 boats used the canal in its first year of operation. The success of the Erie Canal encouraged many other states to dig canals connecting natural waterways.

Steamboats

Flatboats were modified rafts which were very effective for moving products downriver. They allowed farmers to ship goods down the Ohio and Mississippi rivers to New Orleans, but there was no effective way to ship goods upstream until the invention of the steamboat. Early inventors of steamboats, such as John Fitch, actually lost money because so few people were willing to take a chance riding on such unusual looking boats and because they feared the engines would explode. The first steamboats were not big enough or strong enough to carry large loads.



Robert Fulton

Robert Fulton improved the design of the steamboat. In addition, he used copper sheets to build the huge boiler which was needed to power such a large boat. Fulton demonstrated his invention by carrying a load up the Hudson River from New York City to Albany at five miles an hour, much faster than any flatboat or wagon could travel. He named his ship the *Clermont*. The success of Fulton's steamboat led to the rapid production of many of these boats.

Reading Passages

Revolution in Transportation and Communication *(cont.)*

Speedy Steamboats

Steamboats became synonymous with speedy water travel although they were very slow by today's standards. A trip from New Orleans, Louisiana, to Louisville, Kentucky, took three months by land but only about 10 days by steamboat. Investors were impressed with this invention, and many steamboats were made.

Travel on these boats remained popular even with frequent accidents, explosions, and drownings that killed hundreds of people during the age of steam. Steamboats were used on the ocean to travel from New York to London and especially on the waterways connecting the river cities of the American Midwest.

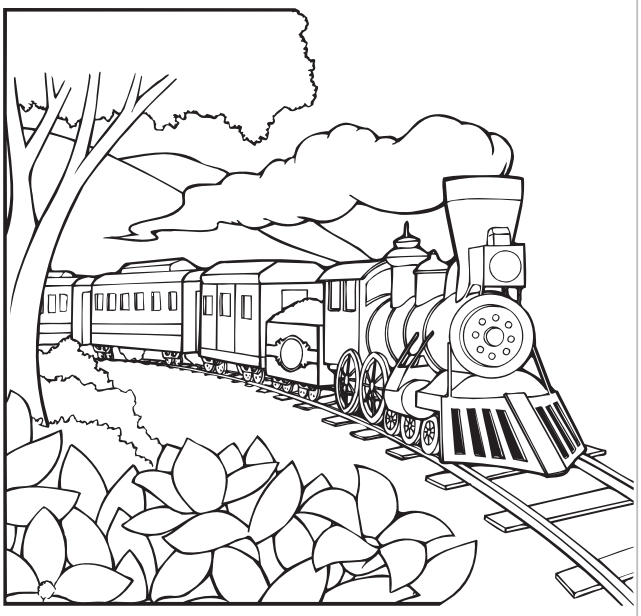
Railroads

Railroads changed forever the transportation of factory goods to local markets. The first railroads were cars pulled by horses along iron rails. The first steam locomotive was built by an English engineer named Richard Trevithick in 1804. A few other steam locomotives were built in England, but steam locomotives did not come into general use in England or America until the 1830s.

Some local rail lines had been built in New England with financing from local investors, but railroad lines needed more capital, or money, than private investors could raise.

In 1825 John Stevens built the first American-made railway steam engine. In 1831 an engine called the *DeWitt Clinton* traveled along New York rails at 15 miles per hour pulling cars that looked like converted horse carriages filled with factory goods. The locomotive was named after the New York governor who was chiefly responsible for the creation of the Erie Canal.

Businessmen convinced the U.S. Congress to provide funding, and by the 1850s railroad companies had been loaned millions of dollars and given over 130 million acres of land to use. These railroads made the transportation of factory products faster and much cheaper than any other form of land transportation. They also made possible the building of factories in more remote towns and cities.



Reading Passages

Revolution in Transportation and Communication *(cont.)*

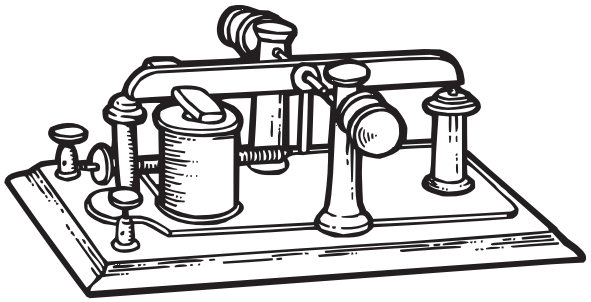
Transcontinental Railroads

By 1860 the United States had more than 30,000 miles of railroad, and it was decided to build a transcontinental railroad to link the cities of the east with the west. The first transcontinental railroad connecting the Union Pacific and Central Pacific lines was completed in 1869. In the years that followed, railroad builders used government loans and land grants to build several transcontinental lines. The Great Northern Railroad connected the Northern cities of the Midwest and the far West. Several rail lines connected Midwestern and Southern cities to the cities in the American Southwest and California.

The Telegraph

A revolution was also taking place in communication in the United States. Samuel Morse invented the concept of the telegraph in the 1830s and finally managed to secure government funding for a telegraph line between Washington, DC, and Baltimore, Maryland, so that he could demonstrate the device. On May 24, 1844, Morse sent the first message — "What hath God wrought!"— on the new line. The telegraph immediately became popular, and by 1861 the United States had over 76,000 miles of telegraph lines. Many of these lines ran parallel to railroads.

The telegraph brought about another revolution in American life. Letters often took weeks to reach their destinations, and answers required more time before action could be taken. The telegraph allowed immediate response. Businessmen were now able to communicate instantly with customers, suppliers, and shippers throughout the nation. The telegraph also changed lives of average citizens who needed to communicate with relatives far away, and it radically altered the speed of military communication and operations.



Telegraph Machine

The Telephone

In 1876 Alexander Graham Bell invented the telephone. He formed the Bell Telephone Company the next year and in 1884 opened the first long-distance telephone service. Despite the expense, many merchants and factory owners were glad to pay for the opportunity to talk directly with suppliers and buyers. Thomas Edison improved the phone and made it able to handle more calls and be heard more clearly. By 1890 more than 19,000 operators were employed to handle calls.