The Industrial Revolution changed how goods were made. It brought great changes in the ways that many Americans lived. But developments in technology led to major changes in other areas of life, too. New forms of transportation would bring remote parts of American closer together.

Trade and Daily Life

During the 1800s the United States was transformed by the Transportation Revolution – a period of rapid growth in the speed and convenience of travel because of new methods of transportation.

- The Transportation Revolution created a boom in business across the country, particularly by reducing shipping time and costs.

- These improvements were made possible largely by the invention of two new forms of transportation: the steamboat and steam-powered trains.

- They enabled goods, people, and information to travel rapidly and efficiently across the United States.

Steamboats and the Steamboat Era

American and European inventors had developed steam-powered boats in the late 1700s. However, they were not in wide use until the early 1800s.

- In 1803 American Robert Fulton tested his first steamboat design in France. Several years later, he tested the first full-sized commercial steamboat, called the Clermont, in the United States.
• On August 9, 1807, the Clermont traveled against the current up the Hudson River without trouble. Demand for steamboat ferry service soon arose.

• The steamboat was well suited for river travel. It could move upriver and did not depend on wind power.

• Steamboats increased trade and profits because goods could be moved quickly and thus more cheaply.

• More than 500 steamboats were in use in the United States by 1840. By the 1850s, steamboats were also being used to carry people and goods across the Atlantic Ocean.
Increase steamboat shipping led to conflict over waterway rights.

- In 1819 Aaron Ogden sued Thomas Gibbons for operating steamboats in New York waters that Ogden said he owned.
- Gibbons did not have a license to operate in New York, but argues that his federal license gave him the right to use New York waterways.
- In the case of *Gibbons v. Ogden*, which reached the Supreme Court in 1824, the Court reinforced the federal government’s authority to regulate trade between the states by ending monopolistic control over waterways in the several states. The ruling freed up waters to even greater trade and shipping.

**American Railroads**

What the steamboat did for water travel, he train did for overland travel.

- Steam-powered trains had first been developed in Great Britain in the early 1800s. However they did not become popular in the United States until the 1830s.
- In 1830 Peter Cooper built a small but powerful locomotive called the *Tom Thumb*. He raced the locomotive against a horse-drawn railcar.
The race ended with the defeat of the locomotive as a result of the *Tom Thumb* breaking down. Despite the defeat, the contest showed the power and speed of even a small locomotive.

Railroad fever soon spread.

- By 1840 railroad companies had laid about 2,800 miles of track – more than existed in all of Europe.

- As railroads were built, engineers and mechanics overcame many tough challenges. Most British railroads, for example, ran on straight tracks across flat ground. In the United States, however, many railroads had to run up and down steep mountains, around tight curves, and over swift rivers.

- Railroad companies also built the tracks quickly and often with the least expensive materials available. As time went on, engineers and mechanics built heavier, faster, and more powerful steam locomotives.

- By 1860 about 30,000 miles of railroads linked almost every major city in the eastern United States. As a result, the economy surged forward.

- The railroad companies quickly became some of the powerful businesses in the nation. As the railroad system grew, manufacturers, and farmers could send their goods to distant markets.

Riding on the early trains was often an adventure, but it could also be quite dangerous.

- Engineers trying to stay on time sometimes traveled too fast.

- Passengers accepted such risks because the railroads reduced travel time dramatically.
Transportation Revolution Brings Changes

The Transportation Revolution brought many changes to America.

- Steamboats and railroads made getting good to distant markets much easier and less costly.

- People in all areas of the nation now had access to products made and grown far away.

- More than ever before, there was a national economy. The wealth, however, was centered in the North.

- Railroads contributed to the expansion of the borders of the nation and guided population growth.
  
  - Towns sprang up at railroad junctions.
  
  - Cities grew as trains brought new residents and raw materials for industry and construction.

A New Fuel

The Transportation Revolution also increased the use of certain natural resources that had not been important until then.

- Throughout the early Transportation Revolution, wood was the primary source of fuel for trains and steamboats, as well as for cooking, light, and heat.

- As faster locomotives were built, coal replaced wood but at half the cost.
  
  - Coal also became popular for heating homes.
  
  - Railroads transported the coal from mines to town and cities.

- As the demand for coal increased, a coal-mining industry developed in many states, including Pennsylvania, western Virginia, and Illinois.

- Coal mining changed the landscape in a number of ways.
  
  - New towns, such as Coal City and Carbondale in Illinois, sprang up in places where coal deposits could be mined.
Later, in the 1870s, the demand for coal increased as the demand for steel grew.

Steel, which is much stronger than iron, was increasingly used to build factories and the machines they produced. Steel was also used to make the rails that the trains traveled on.

The growing marker for steel helped fuel the need for more railroads. Railroad’s transported steel to places where new factories were being built.

Railroads also brought new steel farming tools and machines to farmers in the Midwest. Using new equipment, farmers produced more crops. Railroads then transported their harvests to market.
Effects of Railroads

The railroad also played a role in the growth of other businesses.

- The logging industry expanded as people in the growing towns and cities needed wood for houses and furniture.
  - As newspaper publishing increased, demand for paper grew.
  - Lumber items became the primary product of New England.
  - Settlers spreading out across the Midwest cut down trees and plowed up prairies to make farmland.
  - Deforestation, or cutting down and removing trees, took place on a large scale.
- Railroads also caused cities to grow.
  - Some cities became transportation hubs. Chicago was one such city. Its location on Lake Michigan made it an ideal transportation hub, linking the Midwest to the East and South.