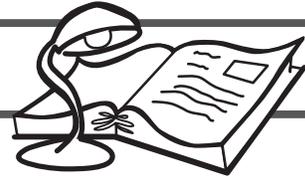


Study Guide



Chapter 13, Section 1

For use with textbook pages 386–390

THE NORTH'S ECONOMY

KEY TERMS

- clipper ship** Fast sailing ships with tall sails and sleek hulls (page 387)
- telegraph** An apparatus that used electric signals to transmit messages (page 389)
- Morse code** A series of dots and dashes representing the alphabet developed by Samuel Morse (page 389)

DRAWING FROM EXPERIENCE

When you need food or clothes, how do you get them? Do you grow your own food or sew your clothes? What inventions changed the way people produced food and clothing in the 1800s?

This section focuses on how advances in technology and transportation shaped the economy of the North.

ORGANIZING YOUR THOUGHTS

Use the chart below to help you take notes as you read the summaries that follow. Think about how the economy of the North was affected by advances in technology and transportation.

Segment of Economy	Inventions/Developments
Transportation	
Communication	
Farming	
Manufacturing	

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Study Guide

Chapter 13, Section 1 (continued)



READ TO LEARN

- **Technology and Industry** (pages 386–389)

In the early 1800s, machinery replaced much of the work previously done by hand. Industrialization, or the production and sale of goods as a business, and technology changed American life. There were three phases of development of industrialization in the North.

1. Tasks or jobs in the manufacturing process were divided among workers.
2. Factories were built to include all specialized workers under one roof.
3. Machinery performed some of the work.

The factory system made mass production, the process of making many identical items or products at one time, more efficient and the goods less expensive. In the early 1800s, cotton textiles were mass produced in New England. The invention of the sewing machine in 1846 by Elias Howe led to the mass production of clothing. At least two-thirds of the country’s manufactured goods were made in factories located in the Northeast.

People and industry benefited from improvements in transportation. Robert Fulton improved the steamboat in 1807. Goods and passengers could get from place to place much faster and less expensively. Canals were widened and deepened to so that steamboats could travel on them. Cities grew along canals, rivers, and lakes as a result of the steamboat. *Clipper ships*, with taller sails and sleek hulls, “clipped” travel time in half. They were as fast as most steamships. Steam locomotives replaced horse-drawn trains.

By 1860 the railroad system in the North and Midwest increased dramatically. In 1829 the first steam-powered passenger locomotive was operated in Britain. In 1830 the first American steam locomotive was designed by Peter Cooper. Within ten years these locomotives had improved and were pulling trains in the United States. At first, railroad tracks connected two cities. Builders connected these separate railroad lines, uniting the East and the Midwest by 1860.

The Erie Canal built in 1825 and the railroads of the 1830s allowed for direct movement of goods and passengers between the East and the Midwest. Before, goods and passengers had to be transported down the Mississippi River, through the port of New Orleans, and then to the East coast and other countries. Fast and affordable travel methods saved time and money. The savings resulted in lower priced goods and population growth in the Midwestern states of Ohio, Indiana, and Illinois.

Study Guide



Chapter 13, Section 1 (continued)

Faster communication was made possible by advances in technology. Samuel Morse invented the *Morse code*, a series of dots and dashes representing the alphabet. The code was tapped out on a *telegraph* machine, which used electric signals to instantly send messages across wires. About 23,000 miles of telegraph lines were constructed in the United States by 1852. Communication helped connect different regions of the United States.

1. What four advances in transportation and communication changed American life and the economy by the 1860s?

• Agriculture (page 390)

Advances in transportation and the invention of new machines helped expand agriculture in the early 1800s. Three new machines invented in the 1830s and faster and cheaper methods of transportation led to an increase in cash crops, crops grown and sold for profit.

1. John Deere invented the steel-tipped plow in 1837. This plow could cut through hard-packed sod on the prairies.
2. Cyrus McCormick invented the mechanical reaper, which harvested wheat grain much faster than a hand-operated sickle.
3. A new machine called a thresher quickly separated wheat grain from the stalk. These machines also led to settlement of new farmlands in the West. Wheat became the main cash crop in the Midwest. Fruits and vegetables were grown in the Northeast and Middle Atlantic regions. Industry was more common than agriculture in the North, however.

2. What inventions revolutionized or changed agriculture in the United States?
