

The North**Section 1****MAIN IDEAS**

1. The invention of new machines in Great Britain led to the beginning of the Industrial Revolution.
2. The development of new machines and processes brought the Industrial Revolution to the United States.
3. Despite a slow start in manufacturing, the United States made rapid improvements during the War of 1812.

Key Terms and People

Industrial Revolution a period of rapid growth in the use of machines in manufacturing and production

textiles cloth items

Richard Arkwright an inventor who patented a large spinning machine, called the water frame, that ran on water power and created dozens of cotton threads at once

Samuel Slater a skilled British mechanic who could build the new textile machines

technology the tools used to produce items or to do work

Eli Whitney an inventor with an idea for mass-producing guns

interchangeable parts pieces that are exactly the same

mass production the efficient production of large numbers of identical goods

Academic Vocabulary

efficient productive and not wasteful

Section Summary**THE INDUSTRIAL REVOLUTION**

In the early 1700s, most people in the United States and Europe made a living by farming. Female family members often used hand tools to make cloth for families. The sale of extra cloth earned money. Skilled workers such as blacksmiths set up shops to earn money by manufacturing goods by hand.

The **Industrial Revolution** would completely change that way of life. By the mid-1700s, cities and populations had grown. Demand increased for **efficient** and faster ways to make items.

In what way were goods made in the early 1700s?

Section 1, continued

Textiles provided the first breakthrough. **Richard Arkwright** invented a machine that lowered the cost of cotton cloth and raised production speed. The machine was large and needed a power source. Most textile mills were built near streams to use running water for power.

In what way did Arkwright's machine make history?

NEW MACHINES AND PROCESSES

Samuel Slater knew how to build machines that were used in Britain to make cloth more efficiently. He emigrated to the United States, and with Moses Brown opened a mill in Pawtucket, Rhode Island. The mill made cotton thread by machine. It was a success. Most mills were in the northeast, the region with many rivers and streams for power.

What information did Slater bring with him to the United States?

A MANUFACTURING BREAKTHROUGH

In the 1790s U.S. gun makers could not produce muskets quickly enough to satisfy the government's demand. Better **technology** was needed. **Eli Whitney** had the idea of manufacturing using **interchangeable parts**. Whitney assembled muskets for President Adams. His idea worked. **Mass production** was soon used in factories making interchangeable parts.

What was Whitney's revolutionary idea?

MANUFACTURING GROWS SLOWLY

U.S. manufacturing spread slowly. People who could buy good farmland would not work for low factory wages. British goods were cheaper than American goods. However, during the War of 1812 many Americans learned that they had relied on foreign goods too much. In 1815 the war ended and free trade returned. Business people wanted to lead the nation into a time of industrial growth.

Why had Americans relied on foreign goods too much?

CHALLENGE ACTIVITY

Critical Thinking: Rating In comparing the three inventors in Section 1, rate them from 1 to 3. Defend your rating order in a brief essay.

Section 1, *continued*

Eli Whitney	Industrial Revolution	interchangeable parts
mass production	Richard Arkwright	Samuel Slater
technology	textiles	

DIRECTIONS Read each sentence and fill in the blank with the word in the word pair that best completes the sentence.

1. The _____ was a period of rapid growth in the use of machines in manufacturing and production.
(interchangeable parts/Industrial Revolution)
2. The efficient production of large numbers of identical goods is called _____.
(mass production/Industrial Revolution)
3. Products with _____ are made from pieces that are exactly the same. (interchangeable parts/textiles)
4. People began looking for ways to use machines to make items quickly and efficiently, thus leading to the _____.
(textiles/Industrial Revolution)
5. Englishman _____ invented a large spinning machine, called the water frame, that ran on water power. (Samuel Slater/Richard Arkwright)
6. _____ was a skilled British mechanic who knew how to build the new textile machines. (Samuel Slater/Richard Arkwright)
7. The tools used to produce items or to do work are called _____.
(textiles/technology)
8. Inventor _____ came up with the idea of using interchangeable parts. (Samuel Slater/Eli Whitney)
9. The first important breakthrough of the Industrial Revolution took place in how _____, or cloth items, were made. (textiles/technology)