CHAPTER 1

The Industrial Revolution

Have you ever thought about how your clothes are made? Who sewed the clothes? Who made the cloth? Most people today buy clothes that were made by machines. However, just 250 years ago, most people had to make their clothes by hand. Then about the year 1750, people began to invent new machines to help them make clothes. These new machines could do work that people had always done by hand. This change is known as the Industrial Revolution. The Industrial Revolution was not a war. It was a change in the way goods were made.

The Industrial Revolution began with another revolution. This revolution was an agricultural revolution. The agricultural revolution was a change in the way farmers grew food. You have learned about the agricultural revolution that happened thousands of years ago during the Stone Age. Stone
Age people learned to plant seeds to grow food. They no longer had to move from place to place to hunt animals. The first agricultural revolution changed the way of life for Stone Age people.

For thousands of years, farmers had done most work by hand. They had planted seeds by throwing them on top of the ground. The wind blew away most of the seeds. So most of the seeds never grew. It was hard for farmers to grow enough food.

Then in 1701 the seed drill was invented in Great Britain. The seed drill was a machine that pushed the seeds into the soil. More seeds grew into plants. The seed drill helped farmers grow much more food. The invention of the seed drill led to the invention of many other farm machines. The seed drill was the beginning of the agricultural revolution of the 1700s and 1800s. Before long, there were also other changes. People started to have larger farms. They learned better ways to grow crops. They also raised better farm animals.

The agricultural revolution helped the Industrial Revolution begin in Great Britain. The revolution began in Great Britain for five main reasons. One reason was that Great Britain had a large population. There were many British people who were interested in science and inventions. There were also many people who could work in new factories. Because one farmer could grow more food, fewer farmers were needed. People moved to cities to work.

A second reason was that Great Britain had many natural resources. Many resources were needed to start the Industrial Revolution. Great Britain had a lot of iron, coal, rivers, and streams. Iron was needed to make machines. Coal was needed to provide power to run machines. Rivers and streams were needed to provide water power to run machines. Great Britain also had a lot of sheep for wool cloth.

A third reason the Industrial Revolution began in Great Britain was that there were no wars on British
land. Years of peace in Great Britain gave people more time and money to invent new machines.

A fourth reason the Industrial Revolution began in Great Britain was that Great Britain had a good banking system. The banking system helped people have more money. Many people had money to buy goods. Rich merchants used their money to buy machines and build factories. They also bought ships. They used their ships to take goods to far-off places.

A fifth reason was Great Britain's good location. The British could move goods to and from many other lands easily by sea. Great Britain also has many harbors. British ships left the harbors to carry goods to other countries for trade.

The cloth industry was the first business to change because of the Industrial Revolution. People all over the world wanted to buy more wool and cotton cloth. Most cloth was made at home. Workers who made cloth at home could not make enough cloth. For a long time, the British had used spinning wheels at home to make thread. A spinning wheel could only spin one thread at a time. It took a long time to make thread on a spinning wheel at home.

About 1764 a machine called the spinning jenny was invented in Great Britain. This machine could
Many machines today are similar to those invented during the Industrial Revolution. These machines are weaving cloth.

spin up to eight threads at one time. A worker turned a wheel to make the jenny spin. The spinning jenny was much faster than the spinning wheel. Then in 1779 the **spinning mule** was invented. This new machine used water power to spin thread. The spinning mule was better than the jenny because it could spin much more thread more quickly.

People made cloth by weaving many threads together on a loom. For thousands of years, weaving had been done by hand. The British wanted a loom that could weave thread into cloth quickly. In 1785 a machine called the **power loom** was invented in Great Britain. The power loom used water power to weave cloth. People could now make a lot of cloth quickly. They began to need more natural resources, such as cotton. Many people used cotton to make cloth. Farmers could not grow enough cotton.

Large cotton crops were grown in the United States. Seeds had to be pulled out of the cotton plant. Then the cotton could be used to make cloth. Workers used to pick the cotton seeds out of the plant by hand. This was slow work. Then in 1793 an American named Eli Whitney invented a machine called the **cotton gin**. The cotton gin quickly pulled the seeds from the cotton. One cotton gin could do the work of fifty people. Farmers began to grow
larger cotton crops. Soon the United States had more cotton to sell to Great Britain.

The Industrial Revolution changed the ways that people lived and worked. For hundreds of years, most families had worked together at home. The new spinning and weaving machines were too big to be used at home. Merchants built factories for the new machines. The factory owners hired many people to work in the factories.

At first, water power was used to run the new spinning and weaving machines. Water power made the machines work. Factories that needed water power had to be built close to rivers and streams. It was not always easy to build factories near water.

People tried to find better ways to run machines so that factories could be built away from rivers and streams. People learned that they could burn coal to make hot water for steam power. In 1769 James Watt built a good steam engine in Great Britain. By 1800 this steam engine was being used to run machines in factories. Factories could be run by steam power instead of by water power. A steam engine could be used anywhere. Factories did not have to be built near streams or rivers.

People continued to invent other machines. For thousands of years, wheat has been used to make bread. Before the Industrial Revolution, farmers had cut wheat by hand. In 1831 an American invented the reaper. This new machine cut wheat quickly. Farmers began to grow a lot more wheat. People soon had more bread to eat.

As time passed, more and more people left farms to work in factories. Many factories were in cities. More people moved to the cities to find jobs in factories. Cities grew larger. As you read the next chapter, you will learn more about the Industrial Revolution. You will learn more about how it changed the ways people lived and worked.
Using Vocabulary

Finish the Paragraph Use the words in dark print to finish the paragraph below. Write on the correct blank lines the words you choose.

spinning mule  power loom  Industrial  spinning jenny  factories

The ________________ Revolution was a change from making goods by hand to making goods by machine. Some of the first new machines were made for the cloth industry. The ________________ was the first machine that could spin several threads at the same time. The ________________ was a machine that used water power to spin thread. The ________________ used water power to weave threads into cloth. These machines were very big. People began to use the machines in places called ________________.

Read and Remember

Find the Answer  Put a check (✓) next to each sentence that tells why the Industrial Revolution began in Great Britain. You should check four sentences.

_____ 1. Great Britain had a large population.

_____ 2. Great Britain had a lot of natural resources, such as iron and coal.

_____ 3. Great Britain had a very rainy climate.

_____ 4. Great Britain had a good banking system.

_____ 5. Great Britain was the largest island in Europe.

_____ 6. There were no wars on British land.

Journal Writing

Write a few sentences about an invention from this chapter that you feel was the most important invention during the Industrial Revolution.
Crossword Puzzle

Each sentence below has a word missing. Choose the missing word for each sentence from the words in dark print. Then write the words in the correct places on the puzzle.

ACROSS

steam Whitney agricultural coal

1. The Industrial Revolution actually began with an ____ revolution.
2. The cotton gin was invented by an American named Eli ____.
3. One of Great Britain’s most important natural resources was ____.
4. In 1769 James Watt invented a good ____ engine that provided power for machines in factories.

DOWN

industry drill reaper harbors

5. Great Britain shipped goods from its many ____ to other countries.
6. The seed ____ led to the invention of many other farm machines.
7. The cloth ____ was the first business to change because of the Industrial Revolution.
8. The ____ was invented in 1831 to help farmers cut wheat quickly.