

The Industrial Revolution: 1750 to 1850

Directions: Fill in the outline below. Filling in the blanks will help you as you read and study Chapter 19.

I. Section 1: The Industrial Revolution Begins in England (pp. 482–484)

A. Industrial Revolution

1. Began in England in _____
2. Workers began to work in _____, and use _____
3. Means an important change in the way _____

B. England

1. Had the _____ resources of _____, _____, and _____
2. Had plenty of _____ because of increased population
3. Had the _____, or money, to start building factories and machines

C. Spread of the Industrial Revolution

1. _____ and _____ were industrialized by the 1870s

II. Section 2: The Growth of the First Modern Industries (pp. 485–489)

A. Inventions That Helped the Textile Industry

1. John Kay's _____ helped workers weave twice as much cloth
2. The _____ had eight _____ instead of one
3. Samuel Crompton's _____ produced longer thread

B. Problems For Cotton Growers

1. Getting cotton from _____ to _____ was hard work
2. Removing cotton _____ by hand took a lot of _____
3. Eli Whitney's _____ solved these problems

C. Mass Production

1. Developed by _____ at his gun factory
2. Cuts the _____ workers need, so they can produce _____

D. Iron and Steel

1. Darby made _____ with coke, and _____ became a valuable natural resource
2. Bessemer got rid of the _____ in iron, and created _____
3. Steel became important because it was _____ than iron

The Industrial Revolution: 1750 to 1850, continued**III. Section 3: Transportation and Communication Improve (pp. 490–493)**

A. Roads

1. Became muddy when _____
2. _____ built roads in two layers
3. _____ built roads of crushed stone

B. Canals

1. Allowed manufacturers to ship _____ like coal
2. Were expensive to build, and needed _____

C. Steam Engine

1. Was invented in _____ to pump water from coal mines
2. _____ made it more efficient by making it turn _____
3. _____ manufacturers could now build their factories anywhere

D. Railroads

1. Developed after Stephenson built a _____
2. Helped factory owners move _____ and _____

IV. Section 4: Industry Brings Change and Problems (pp. 494–498)

A. Industry Spreads

1. _____ passed laws to keep _____ from spreading
2. Industrialization began in the United States when _____ brought plans from Great Britain for building a _____

B. Cities

1. Grew quickly because of _____
2. Faced problems like bad _____ and _____

C. Factory Workers

1. Wanted safer _____, more _____, and _____
2. Could not form _____ to get these changes

D. New Power

1. People used _____ for the telegraph, telephone, and light bulb
2. People began to use _____ to provide heat and to _____
3. People used _____ to run Daimler's _____

The Growth of Industry

Directions: Write the answers to these questions using complete sentences.

1) What inventions helped the textile industry?

2) How did the factory system change the way people worked? Give three specific ways.

3) How did Eli Whitney have workers manufacture guns? What is this process called?

4) Why did coal become a valuable natural resource in the 1700s?

5) Henry Bessemer found a way to make steel in 1856. Why was this discovery important?

Transportation and Communication Puzzle

A. Directions: Write the correct word from the Word Bank to complete each sentence.

- 1) A force produced by pressing on something is _____.
- 2) In 1773, _____ developed a steam engine that turned wheels.
- 3) To drain water, _____ built roads in two layers.
- 4) _____ is the movement of people and things from one place to another.
- 5) After 1773, manufacturers could power textile _____ with steam engines.
- 6) A _____ is a tank that heats water.
- 7) James Watt wanted to make the steam engine more _____.
- 8) Raw _____ are used to make things.
- 9) A _____ is a self-propelled vehicle that runs on rails.
- 10) The problem with using _____ to transport goods is that they need water.

Word Bank

boiler
 canals
 efficient
 locomotive
 machines
 materials
 pressure
 Telford
 transportation
 Watt

B. Directions: Use the words from the sentences to fill in the words in this puzzle. The letters in the box reading down name the "founder of the railways."

1)	_____	_____	_____	_____	_____	_____	_____	_____	_____
2)	_____	_____	_____	_____	_____	_____	_____	_____	_____
3)	_____	_____	_____	_____	_____	_____	_____	_____	_____
4)	_____	_____	_____	_____	_____	_____	_____	_____	_____
5)	_____	_____	_____	_____	_____	_____	_____	_____	_____
6)	_____	_____	_____	_____	_____	_____	_____	_____	_____
7)	_____	_____	_____	_____	_____	_____	_____	_____	_____
8)	_____	_____	_____	_____	_____	_____	_____	_____	_____
9)	_____	_____	_____	_____	_____	_____	_____	_____	_____
10)	_____	_____	_____	_____	_____	_____	_____	_____	_____

Change and Problems Multiple Choice

Directions: Choose the answer that best completes each sentence. Write the letter of each answer on the line.

- _____ 1) In the 1800s, British factories made _____ of the world's cotton cloth.
a. all b. half c. more than half d. less than half
- _____ 2) _____ brought the plans for a spinning machine to the United States.
a. Moses Brown b. Samuel Slater c. Francis Lowell d. Gottlieb Daimler
- _____ 3) Oil and _____ were two new sources of power in the late 1800s.
a. coal b. steam c. electricity d. waterwheels
- _____ 4) A _____ is an organized group of workers who try to improve things.
a. labor union b. factory union c. labor group d. workers union
- _____ 5) The internal combustion engine made the _____ possible.
a. telegraph b. telephone c. spinning machine d. automobile
- _____ 6) Industrialization caused the population of cities to _____ .
a. decrease b. increase c. move d. stay the same
- _____ 7) Factory workers wanted safer factories, more pay, and _____ .
a. longer hours b. shorter hours c. lunch breaks d. more work
- _____ 8) In 1876, Alexander Graham Bell invented the _____ .
a. telegraph b. telephone c. light bulb d. internal combustion engine
- _____ 9) Great Britain did not want other countries to learn about _____ .
a. trade b. child labor c. industrialization d. farming
- _____ 10) _____ built a factory town in Massachusetts.
a. Samuel F. B. Morse b. Orville Wright c. Samuel Slater d. Francis Lowell

The Industrial Revolution Begins

Directions: Complete the paragraphs below. Choose the correct term from the Word Bank. Some terms may be used more than once.

Word Bank		
capital	government	population
coal	Industrial Revolution	potato
developing	industrialized	power
economists	iron ore	rivers
factories	machines	United States
Germany	natural resources	

The 1) _____ began in England when workers began to work in 2) _____ and use 3) _____ to produce goods. England was able to industrialize because it had 4) _____, enough workers, and 5) _____ to build factories and machines.

The three 6) _____ England had were 7) _____, 8) _____, and 9) _____. England had enough people to work in factories because its 10) _____ had increased by 50 percent because of the 11) _____. Also, farmers were forced off the land by the 12) _____. Factory owners used 13) _____, or money used to make more money, to start their factories.

The changes that occurred in England began to spread to other countries. 14) _____ was industrialized by 1860, and the 15) _____ soon followed. 16) _____, or people who study money, call countries like these 17) _____ nations. They call other countries 18) _____ nations. Industrialized nations need 19) _____, a 20) _____ source, and workers.

First Modern Industries True or False

Directions: Read each sentence. Write *T* if the statement is true or *F* if it is false.

- _____ 1) The textile industry produced cloth made of cotton, silk, or wool.
- _____ 2) The inventions of John Kay, James Hargreaves, and Richard Arkwright helped the textile industry.
- _____ 3) Samuel Crompton invented the “spinning jenny.”
- _____ 4) A manufacturer hires people to work with machines to make a product to sell.
- _____ 5) Cotton farmers in the United States exported most of their cotton to textile factories in Germany.
- _____ 6) Mass production means to put the parts of something together.
- _____ 7) Eli Whitney became wealthy as a cotton manufacturer.
- _____ 8) Steel was important because it was stronger than iron and did not easily break.
- _____ 9) Abraham Darby found a way to get rid of impurities in iron.
- _____ 10) Things that are identical are exactly alike.
- _____ 11) Coke is a thread of cotton, silk, wool, or other material.
- _____ 12) The factory system changed the way people worked.
- _____ 13) Removing seeds from cotton became easier because of the cotton gin.
- _____ 14) The Ruhr Valley in Germany became an important steel center.
- _____ 15) Mass production greatly increases the time workers need to make a product.

Do You Remember?

Directions: Write the answers to these questions using complete sentences.

1) Why does industry need good transportation?

2) How did canals help manufactures? What were some problems with canals?

3) How did James Watt's steam engine help textile manufacturers?

4) Why do historians call George Stephenson the "founder of the railways"?

5) What became the most important form of transportation in the nineteenth century? Why?

What Am I?

Directions: After each sentence, write the correct term from the Word Bank that the sentence describes.

Word Bank		
cotton cloth	industrialization	telegraph
Daimler	labor union	telephone
electricity	Lowell	
farmers	spinning machine	

- 1) I am what most people worked as before the 1750s. _____
- 2) British textile factories made more than half of the world's supply of me.

- 3) Samuel Slater brought plans for building me to the United States.

- 4) Great Britain passed laws to stop the spread of me. _____
- 5) I am the factory town Francis Lowell built in Massachusetts. _____
- 6) Factory owners did not allow workers to form me. _____
- 7) I was invented by Samuel F. B. Morse. _____
- 8) Alexander Graham Bell invented me. _____
- 9) I invented the internal combustion engine. _____
- 10) I was an important new source of power in the late 1800s. _____