

LIVING DURING THE INDUSTRIAL REVOLUTION
from the *LIVING HISTORY* series

PRE-TEST

A. Directions: Answer each of the following either True or False.

1. The world's first major movement toward industrialization began in America. _____
2. Canned food was the first product of large-scale industrialization. _____
3. The need for clocks decreased after industrialization. _____
4. Industrialization brought about a decrease in the number of farmers. _____
5. The telephone, light bulb, automobile, and motion pictures were all 19th century inventions. _____

B. List as many changes in people's lives that have occurred since the Industrial Revolution.

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POST-TEST

Multiple Choice

Directions: Fill in the blank by choosing from the choices provided.

- | | |
|---|--|
| <p>1. The _____ was the first textile machines of the Industrial Revolution.</p> <p>a) cotton gin
b) water frame
c) internal combustion engine
d) power forge</p> <p>2. _____ brought English textile machinery designs to the U.S.A.</p> <p>a) Eli Whitney
b) Samuel Slater
c) John Adams
d) Thomas Jefferson</p> <p>3. An example of a cottage industry is _____.</p> <p>a) power looming
b) building steam engines
c) making interchangeable parts
d) hand weaving</p> <p>4. The approximate decade that the Industrial Revolution began was the _____.</p> <p>a) 1840s
b) 1830s
c) 1810s
d) 1760s</p> <p>5. _____ is the country where the Industrial Revolution began.</p> <p>a) Russia
b) England
c) Spain
d) Germany</p> | <p>6. The typical number of hours in a textile factory work-week in the U.S.A. in the 1870s was _____.</p> <p>a) 40
b) 50
c) 60
d) 70</p> <p>7. _____ was not improved by the use of steam engines in the 19th century.</p> <p>a) Transportation
b) Farming
c) Air quality
d) Manufacturing</p> <p>8. _____ was a source of linen fiber used before the Industrial Revolution.</p> <p>a) Cotton plants
b) Silk worms
c) Sheep
d) Flax plants</p> <p>9. _____ did not increase after the Industrial Revolution.</p> <p>a) Factories
b) Production of goods
c) Population of rural areas
d) Environmental pollution</p> <p>10. The region of _____, in the U.S.A., was where industrialization was first concentrated.</p> <p>a) the Southern States
b) the Pacific Northwest
c) New England
d) California</p> |
|---|--|

Essay Question

Compare and contrast life before and after the Industrial Revolution. Include at least five examples in your discussion. You may use the back of this sheet or a separate piece of paper to complete your answer.

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VIDEO QUIZ

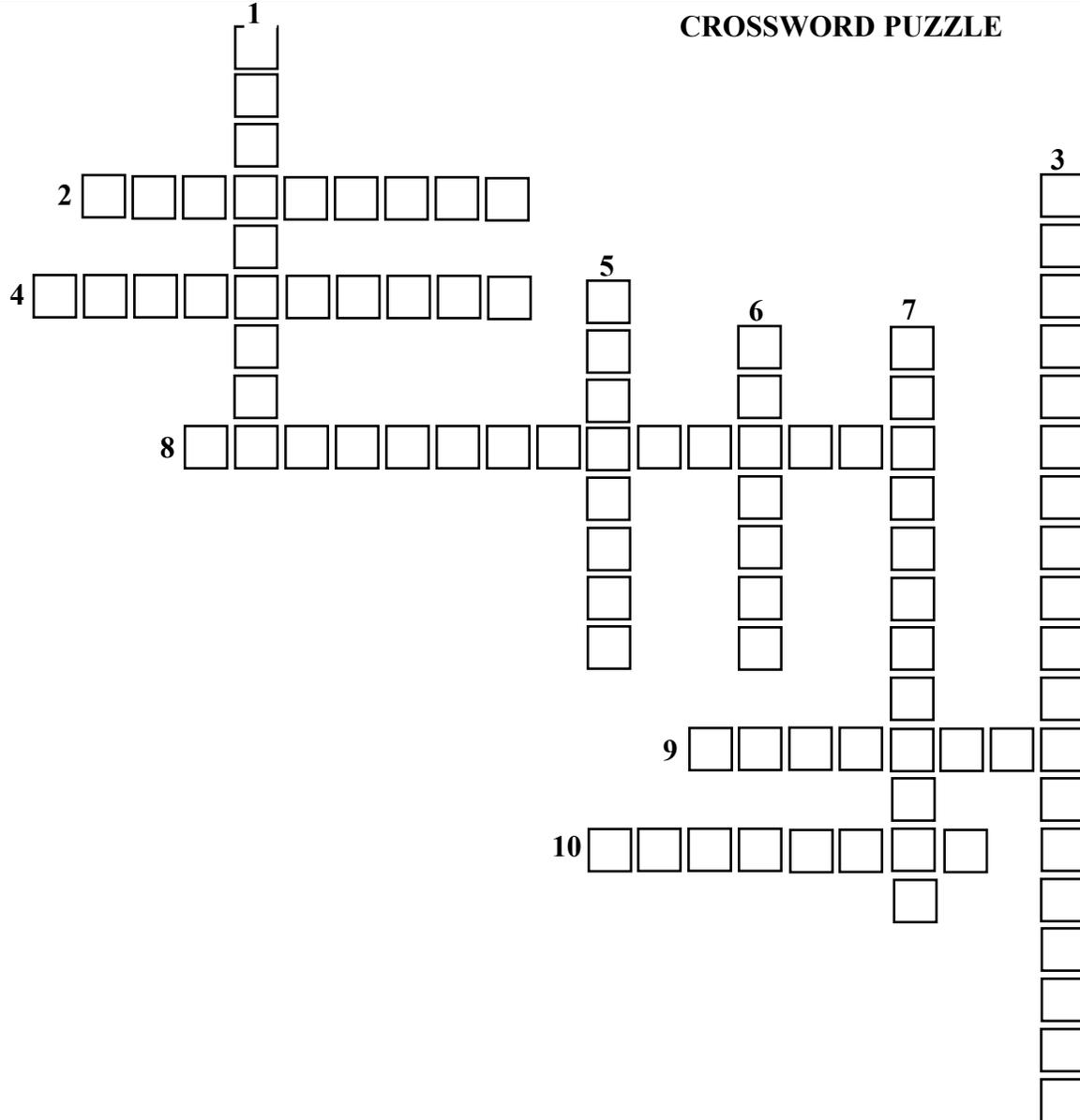
Directions: Answer the following true or false.

1. True or False? Cottage industries replaced textile factories after the Industrial Revolution. _____
2. True or False? Interchangeable parts were developed by Eli Whitney. _____
3. True or False? Most of the new textile machines of the 18th century were invented in the U.S.A. _____
4. True or False? Cotton gins were used to remove seeds from cotton fibers. _____
5. True or False? In the 19th century, steam engines were mainly used to remove pollutants from the air. _____

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CROSSWORD PUZZLE



Across

2. These buildings are where workers come to use machines.
4. This region of the U.S.A was the center of the American Industrial Revolution.
8. The production and repair of mechanical devices of all sorts was much more efficient when they were made from these kind of parts.
9. In the late 1700s, new machines for efficiently making these products started the Industrial Revolution.
10. This group of unemployed cottage workers attacked the machines that put them out of business.

Down

1. Eli Whitney invented this machine for cleaning cotton fibers.
3. Samuel Slater committed this illegal act in order to open his factory in Rhode Island.
5. This process produces yarn and thread.
6. Thread is made into cloth by this process.
7. The use of coal increased due to use of these devices.

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TIMELINE

- 1698** The first commercial steam engine is produced.
- 1733** The flying shuttle for handlooms is invented.
- 1738** The first spinning machine is patented in England.
- 1740s** The first textile mills were built in England.
- 1760s** The spinning jenny and water frame are invented for spinning fibers.
- 1764** James Watt invents a condenser for a steam engine.
- 1769** The first steam-powered carriage is invented.
- 1773** The first cast iron bridge is built in England.
- 1774** A boring machine is invented for making cylinders for steam engines.
- 1775** James Watt perfects the steam engine. The outbreak of the American War for Independence.
- 1779** The spinning mule is perfected.
- 1784** The threshing machine is invented.
- 1785** The first steam engine is used to power a loom.
- 1787** A steamboat is launched on the Delaware River.
- 1789** Samuel Slater installs copied spinning machines at his mill in Rhode Island. George Washington is elected president of the U.S.A.
- 1793** Eli Whitney invents the cotton gin.
- 1794** The first telegraph is invented in Paris.
- 1796** The first vaccination against smallpox, by Edward Jenner in England.
- 1801** The first submarine is built by Robert Fulton in America.
- 1802** John Dalton introduces atomic theory to chemistry.
- 1811** Luddites (unemployed cottage textile workers in England) riot against new textile machines.
- 1814** Francis Lowell opens his modern textile factory in Massachusetts, using designs for machines copied from British factories.
- 1819** Electromagnetism is discovered.
- 1825** The Stockton-to-Darlington passenger railroad line is opened in England.
- 1827** The first photographs are produced.
- 1830** Charles Babbage invents a mechanical computing machine, the world's first computer. The first American steam train is in operation in Maryland.
- 1831** Michael Faraday demonstrates the phenomenon of electromagnetic induction that is essential in making electric motors.
- 1833** A telegraph is invented that carries messages nearly two miles.
- 1835** The first efforts to propel railroad vehicles using electric batteries is attempted. Great Britain has more than 120,000 power looms in operation.
- 1837** Samuel Morse demonstrates the electric telegraph.
- 1839** The first electric clock is designed.
- 1844** Telegraph messages are sent between Baltimore and Washington, D.C.
- 1846** Electric arc lighting is used at the Paris opera.
- 1859** The first practical battery for storing electricity is used.
- 1860** The first practical internal combustion engine is used in automobiles.
- 1865** The completion of the first transatlantic telegraph cable.
- 1876** Alexander Graham Bell patents the telephone.
- 1877** Thomas Edison invents the photograph.
- 1879** Thomas Edison perfects the electric light bulb. A company in San Francisco, California builds the first centralized power plant for generating electricity.
- 1882** Thomas Edison designs the first hydroelectric plant in Appleton, Wisconsin, and builds a steam powered electric generating plant in New York City.
- 1888** Nikola Tesla constructs an electric motor (manufactured by George Westinghouse), George Eastman perfects the "Kodak" box camera.
- 1893** Henry Ford builds his first automobile.
- 1895** A camera is developed for motion pictures. Guglielmo Marconi sends telegraph signals by radio.
- 1896** A hydroelectric plant opens at Niagara Falls, N.Y.
- 1900** Over 3600 electric utilities exist in the U.S.
- 1901** Guglielmo Marconi sends the first transatlantic radio signal.
- 1903** The Wright brothers fly the first motor-driven airplane.
- 1914** Henry Ford mass-produces Model T-Ford automobiles on an assembly line.
- 1918** Free and compulsory public education exists in every U.S. state.

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TIMELINE ACTIVITY

Directions: From the Timeline, fill the dates in the blanks.

1. The invention of photography or the phonograph _____
2. The invention of the light bulb or the motion picture camera _____
3. The invention of the telegraph or the power loom _____
4. The invention of the cotton gin or the steam engine _____
5. The invention of the telephone or the first motor-driven airplane _____

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VOCABULARY LIST

The following are important words and names pertaining to the Industrial Revolution. Try to listen for these terms while viewing the program: pay close attention so you can include them in your writing assignments.

assembly-line - A manufacturing system in which a product is completed step-by-step by different workers.

Bell, Alexander Graham - The inventor of the telephone.

capital - Money or wealth used in trade, manufacturing, or business.

capitalism - An economic system in which factories and utilities are privately owned and operated for a profit.

cottage industry - Home based manufacturing, same as domestic industries.

cotton gin - A machine that removes seeds from cotton.

Edison, Thomas Alva - American inventor of hundreds of products including the light bulb and phonograph.

factory - A place where workers use machines to make products.

Ford, Henry - Founder of the Ford Motor Company, the man who created an assembly-line of workers to produce inexpensive cars.

industrial espionage - Industrial spying to obtain secrets about manufacturing methods.

interchangeable parts - Machine parts that are mass produced and identical as opposed to being hand-made and "one of a kind."

internal combustion engine - Engines that consume fuel that burns and explodes inside the engine to drive a piston. Automobile engines are internal combustion engines.

loom - A machine for weaving thread into cloth.

Lowell, Francis - Important New England industrialist and industrial spy.

Luddites - Unemployed cottage textile workers that rioted against new textile machines in the early part of the 19th century.

mass production - Making products on a large scale usually by machine.

middle class - The part of a population of people between the wealthy upper class and poor lower class.

Marconi, Guglielmo - Inventor of the radio.

putting-out system - The manufacturing system whereby yarn was distributed or "put out" to cottage workers to be woven into thread.

Slater, Samuel - The man who first brought English spinning technology to America in 1789.

spinning - The process of twisting fibers into thread or yarn for weaving.

spinning jenny - A machine for spinning that did the work of 16 hand operated spinning wheels.

spinning mule - A machine for spinning that did the work of 3000 hand-operated spinning wheels.

steam engine - An external combustion engine in which fuel is burned to heat water and convert it into steam. The steam is used to push a piston.

water frame - A spinning machine of the 1760s.

weaving - The process of turning thread or yarn into cloth that is done on a loom.

Whitney, Eli - Inventor of the cotton gin.

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VOCABULARY ACTIVITY

Directions: From the vocabulary list select the correct word to fill in the blank.

1. The radio was invented by _____.
2. Cars are powered by _____ engines.
3. The process of thread making is called _____.
4. The _____ rioted against new textile machines in the early 1800s.
5. _____ refers to manufacturing that is done in the home.