

Lesson 6.01 Guided Reading and Notes

Advances: Innovations

All students complete 6.01 reading and quiz

Advanced students only will also complete the written assignment.

Print and fill in the blanks. To type on this document **make a copy** and save it to your computer.

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1. What are the consequences of good ideas? Many inventions have a great _____ on society.
2. Unfortunately, some inventions have _____ along with the _____ that they give to society.

Interactive

Cotton gin:

3. Positive Impact: The cotton gin made harvesting _____ profitable.
4. Negative Impact: The cotton gin made _____ profitable and increased the _____ for slaves.

Automobile:

5. Positive Impact: The automobile allows Americans to _____ farther away from their workplaces.
6. Negative Impact: The automobile causes _____ and American dependence on _____.

Credit cards:

7. Positive Impact: Credit cards give Americans greater _____ and _____ in spending.
8. Negative Impact: 43 percent of Americans spend more than they earn. Americans have more than \$700 billion in _____.

Atomic bomb:

9. Positive Impact: The atomic bomb _____ World War II and avoided a long ground war that would have cost many American lives.
10. Negative Impact: The atomic bomb _____ almost 200,000 Japanese people and led to the _____.

Electronic records:

11. Positive Impact: Electronic records _____ paper and make searching easier.
12. Negative Impact: Electronic records have increased _____ complaints.

13. As you can see, even some of the greatest inventions can have negative consequences. During the Industrial Revolution, inventions in _____, _____, and _____ helped change America.
14. While many of these inventions helped America progress, some were _____ (harmful).

Word	Meaning (in your own words)
Detrimental	

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Industrial Revolution

15. Between _____ and _____, manufacturing in America changed the economy.
16. Americans expanded on developments in _____, _____, and _____ processes.
- 17.
18. This Industrial Revolution _____ the way goods were made. Families no longer just produced enough goods for their own use. Americans now traded their labor for _____ and _____.

Is Samuel Slater a criminal?

19. Is he also responsible for bringing the Industrial Revolution to _____? Samuel Slater did commit a crime. He _____ information out of Britain.
20. Before the Industrial Revolution, clothing was stitched by hand. British inventors created _____ that would perform some of the labor in making clothing.
21. These revolutionary changes began in Britain and eventually spread to the United States. This time in history is known as the _____ Revolution.
22. The British attempted to keep this new technology a secret. They even passed laws prohibiting their machines or important mechanics from leaving the country. Samuel Slater found a way out. As a factory worker, Slater _____ the design of the machines used in the factory for spinning cotton threads. He secretly left Britain in 1789 and came to the United States.
23. Because Slater smuggled the designs to build a _____ factory, the Industrial Revolution began to take root in America in the early 1800s.

New England Factories

24. Why did the Industrial Revolution in America begin in New England? The _____ states consist of Rhode Island, Connecticut, Vermont, New Hampshire, Maine, and Massachusetts.

The following explains the reasons why this region offered the best conditions to create factories:

25. Resource Proximity : New England is close to _____ like coal and iron, which are found in Pennsylvania. These resources are needed to _____ the factories.
26. Ports: New England has access to many ports. This allowed the region to _____ raw materials such as cotton from the South. Once manufactured, the ports allowed finished goods to be _____ throughout the United States.
27. Capital: Many wealthy merchants lived in the region. These _____ (a person who begins or finances new businesses) had the _____ (cash for investment) needed to fund such expensive projects of building industries, factories, and machinery.
28. Workers: Due to the poor soil in the New England area, farmers were willing to leave their farms in search for work in the factories. These workers created the _____ in the factories.
29. Waterways: New England has many rivers and streams. These bodies of water were used to _____ the machinery in the factories.

Word	Meaning (in your own words)
Entrepreneurs	
Capital	

Why did the Industrial Revolution begin in New England? Discuss the five main reasons below.

- 1.
- 2.
- 3.
- 4.
- 5.

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New Technologies

30. Inventors revolutionized methods in the textile industry. This led to _____ and _____ savings and more _____ produced.
31. The inventions in this industry sparked other inventors to _____ in the areas of processes, transportation, and communication.

Eli Whitney's Cotton Gin

32. Prior to 1793, it would take up to an entire day for a skilled person to remove the seeds from a _____ of cotton. The problem of separating the seeds from the cotton was solved in 1793.
33. Eli Whitney invented the _____ (machine made for cleaning cotton fiber).

34. Instead of removing the seeds by hand, the cotton gin allowed an unskilled person to remove seeds from up to _____ pounds of cotton in one day!
35. In addition, a cotton gin was cheap and easy to make. Even though the cotton gin _____ the amount of labor needed to _____ seeds from cotton, it made _____ cotton very profitable for farmers.
36. The demand for labor to grow and harvest cotton _____ dramatically. This increased the demand for _____ labor.

Word	Meaning (in your own words)
Cotton gin	

Interchangeable Parts

37. In 1798, Eli Whitney began using the process of interchangeable parts. This process involves large quantities of uniform pieces. Interchangeable parts opened the way for producing many different goods through _____.
38. These advances helped promote the _____ production. In an assembly line, workers construct products more efficiently by dividing labor into specialized tasks. Each worker produces one part of the product.
39. These innovations in manufacturing spilled over into the development of other industries, including _____, _____, and _____.

The Factory System

40. Francis Cabot _____ helped launch the factory system in America. Lowell visited textile mills in Britain. While there, he learned about the machines and processes that made them successful. Back in his hotel room, he made drawings of the machinery and factories that he visited. When he returned to Massachusetts, Lowell borrowed \$400,000 and expanded on Samuel Slater's mill.
41. The new factory system put all _____ of making cloth under one roof.
42. This _____ on production time, cost, and increased efficiency.

Interactive

Samuel F.B.Morse

43. _____, 1836 Electrical signals are sent through wire connecting two telegraph stations. The operator taps a code on one machine which can then be heard through the other.
44. In 1866, Cyrus Field invented a _____ that could be placed in the Atlantic Ocean and _____ telegraphs in the U.S. to ones in Europe.
45. Instant _____ from across the states, territories, and countries was available. News became more current, and families could stay connected as they settled in new places.

Elijah McCoy

- 46. _____, 1872 A small container that could oil the moving parts of machines.
- 47. Machines did not need to be shut down to be oiled. Machines can run continuously, _____ more products.

Isaac Singer

- 48. _____, 1850 Singer perfected the sewing machine by adding a foot pedal. The pedal allowed a sewer to control the speed that fabric moved through the machine to be stitched
- 49. Clothing could be produced very _____. When hand stitching, a seamstress could produce _____ stitches a minute. Using a sewing machine, a seamstress can produce _____ stitches a minute.

Use the chart below to keep track of the important inventions during the Industrial Revolution. Analyze the positive and negative impacts that these changes had to American society.

Person	Contribution to the Industrial World	Impact to America
<i>Samuel Slater</i>	<i>Smuggling textile secrets used in British factories into America; set up a textile factory in America.</i>	<i>Families moved out of the house in search of factory jobs; not as much diversity in clothing; environmental impact</i>
	<i>Cotton gin—It was inexpensive to make and allowed an unskilled person to remove seeds from cotton quickly.</i>	
	<i>Interchangeable parts—</i>	
<i>Francis Cabot Lowell</i>		
<i>Samuel F.B. Morse</i>		
<i>Cyprus Field</i>		
	<i>Industrial lubricator—</i>	
	<i>Sewing machine—</i>	

All students - Assignment: quiz

Advanced students only

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Small Economy

1. At the start of the 19th century, most Americans lived on the _____ because of the proximity to the Atlantic Ocean.
2. The distribution of food and other goods was mostly _____ to short trips between neighboring towns. Confined to their small settlements, people had to live, build, and shop in the same areas for most of their lives.
3. If someone in a faraway town had a product you wanted to include in your dinner, you were unlikely to get it for a long time—or at all! As a result, the U.S. economy was _____ to grow. Money remained within small areas where people were spending most of their time.

Roads and Waterways

4. America was ready to stretch its legs and realize its potential as a new nation. Not everyone in America was a farmer in the early 1800s, but everyone needed to eat! It soon became important for people to be able to _____.
5. This way they could deliver goods to one another. People wanted to _____ with others who were far away, and they wanted to share _____ and produce. This was one of the factors that led to America's changing economy.

Roads

6. Trails and often hazardous roads connected farmers to nearby produce markets. In a small but important way, this allowed money and goods to change hands between local environments. Now you could _____ to the nearest market to purchase your groceries and other necessities.

Waterways

7. For travel across longer distances, Americans looked to their waterways. Rivers and lakes divided the country into _____ routes. The next step was to create _____ that could carry people quickly from place to place over the water.
8. New York was already a hub of economic activity in 19th century America, and people wanted to find more efficient ways to move through its center. The _____, built in 1825, ran from the Great Lakes to the Hudson River in New York.
9. This canal dramatically _____ the exchange of money and goods across a larger region. It was great for the economy.
10. As a result of its success, Americans built over _____ more canals in the next 20 years!

Growing Economy

11. At this point, Americans were becoming more _____, and so was their money. The more people were able to move around, the more easily they could make and spend money in neighboring cities and states.
12. This caused an _____ in the economy.
13. _____ and _____ spread beyond local areas and into larger regions. But Americans didn't want to stop there! Once they had conquered the roads and waterways, people wanted to go longer distances—faster.

Trains

14. Not wanting to be _____ to natural trade routes along rivers and other waterways, people began to forge their own powerful routes throughout the nation.
15. The first _____ to run on railroad appeared in 1830. The train moved both goods and passengers a total of _____ miles from Baltimore to Ellicott's Mills, Maryland. Not long after more states established their own, small railways with steam-run trains.
16. Over years, more steam engines ran across railroads in America, bridging connections between states that had not been possible before. Now that there was _____ transportation, people could move _____ from rivers and the ocean.
17. They were free to explore the rest of the countryside and settle comfortably where they liked. Railroads _____ goods from one location to another, and delivery of food that would have been impossible before could be completed in a matter of days or weeks.
18. In addition, _____ messages spread on trains. Elected officials and others running for office were able to reach out to the nation by traveling long distances via rail.

West

19. It was not until well after the gold rush was underway in the 1860 that Congress and President Lincoln made a big decision. They approved the _____ - of railways to reach out west of the Mississippi River.
20. This expansion allowed Americans to move more easily _____ the country. Before they had needed to take dangerous trails through rough climates and terrain to reach far away destinations such as Oregon and California.
21. By the later 19th century, rail travel was so common that it had become a _____ mode of transportation. When President Lincoln was assassinated, his body was delivered to his home state by train.

Telegraph

22. Around the same time a man named Samuel Morse returned home to America from traveling abroad. He had developed an interest in electronic communications. Soon he developed what became known as the _____.
23. This code could be electronically _____ by tapping a telegraph wire to break a sound into distinct patterns. People found this quite useful. They could pay companies such as Western Union to deliver telegraph messages to loved ones, business partners, or political constituents who were many miles away.

24. Many telegraph companies put up telegraph _____ next to train tracks to follow their paths through the country.
25. At first this may have seemed like a nuisance or an eyesore to those who rode on trains. It was not long, though, before railway companies realized the benefit of using telegraph systems in their own work. Soon train stations around the country were communicating with other stations. They used telegraphs to _____ _____ about which trains were leaving when. This communication allowed for _____ travel across rails, as conductors knew where other locomotives would be and how to avoid them.

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Analyze the economic impacts, social impacts, and drawbacks that roads, waterways, railways, and the telegraph had on American society. You must use 2 or more good complete sentences in each box of the chart.