

U.S. HISTORY

INVENTIONS AND TECHNOLOGY

SUMMARY:

IN THE LATE 1700'S INVENTORS CREATED MACHINES THAT PERFORMED WORK PREVIOUSLY DONE BY HAND. THIS PERIOD IS CALLED THE INDUSTRIAL REVOLUTION WHICH AROUND 1800 TOOK ROOT IN THE UNITED STATES. FACTORIES MADE AMERICANS LESS DEPENDENT ON IMPORTED GOODS AND STRENGTHENED THE NATION'S ECONOMY. IMPROVEMENTS IN TECHNOLOGY REVOLUTIONIZED TRANSPORTATION.

INDUSTRIALIZATION DRAMATICALLY CHANGED THE NORTH. STEAMBOATS TRANSFORMED TRAVEL ON INLAND WATERWAYS. STEAM POWERED TRAINS LINKED THE COUNTRY. THE TELEGRAPH ALLOWED PEOPLE TO COMMUNICATE INSTANTLY. THE STEEL PLOW, THE REAPER, AND THRESHER TURNED THE GREAT PLAINS INTO AN AGRICULTURAL EMPIRE. THOUSANDS OF NEW INVENTIONS CHANGED THE WAY THAT AMERICANS LIVED AND WORKED, AND MANY INVENTIONS MADE LIFE MORE PLEASANT.

AFTER 1865, RAILROADS CHANGED THE NATION DRAMATICALLY. AS AMERICA MOVED INTO THE 20TH CENTURY, IMPROVEMENTS IN AUTOMOBILES, AIR TRAFFIC, COMPUTERS, SPACE, AND OTHER FORMS OF TECHNOLOGY MOVED THE NATION AHEAD. TECHNOLOGY IS CHANGING THE WORLD TODAY AT A VERY RAPID PACE.

LESSON PLAN:

BLACK/GOLD

JAN. 3 GEO-BEE

JAN. 4-5 SLO EXAM

JAN. 8-9 GO OVER THE IMMIGRATION UNIT TEST. LESSON PLAN FOR INVENTIONS AND TECHNOLOGY UNIT. EXPLANATION OF PROJECTS. READ CHAPTER 11 SECTION 1 PAGES 296-301 (A GROWING ECONOMY).

JAN. 10-11 WORKSHEET UNDERSTANDING GRAPHICS.

JAN. 12-16 QUIZ 11-1. CONNECT ED. DISCUSS CHAPTER 11 SECTION 1 (A GROWING ECONOMY) PAGES 296-301. VIDEO "INVENTIONS AND INNOVATIONS" (26 MIN.) AND QUIZ. READ CHAPTER 14 SECTION 1 PAGES 376-381 (THE INDUSTRIAL NORTH). WORKSHEET MORSE CODE.

JAN. 15 NO SCHOOL. STAFF DEVELOPMENT

JAN. 17-18 QUIZ 14-1. VIDEO CLIP PH "NORTH AND SOUTH TAKE DIFFERENT PATHS". CONNECT ED. DISCUSS CHAPTER 14 SECTION 1 (THE INDUSTRIAL NORTH) PAGES 376-381. READ CHAPTER 14 SECTIONS 3 AND 4 PAGES 387-397 (SOUTHERN COTTON KINGDOM/PEOPLE OF SOUTH). WORKSHEET KING COTTON.

JAN. 19-22 QUIZ 14-3 @4. CONNECT ED. YOU TUBE (COTTON GIN). DISCUSS CHAPTER 14 SECTION 3 AND 4 (SOUTHERN COTTON KINGDOM/PEOPLE OF SOUTH). READ CHAPTER 20 SECTIONS 1 AND 2 PAGES 550-559 (RAILROADS LEAD THE WAY/INVENTIONS CHANGE SOCIETY). WORKSHEET N-S MAP.

JAN. 23-24 QUIZ 20-1 AND 2. VIDEO CLIP PH "INDUSTRY AND URBAN GROWTH". YOU TUBE (FORD, EDISON, BELL, WRIGHT BROTHERS). CONNECT ED. DISCUSS CHAPTER 20 SECTIONS 1 AND 2 (RAILROADS LEAD WAY/INVENTIONS CHANGE SOCIETY) PAGES 550-559. READ CHAPTER 20 SECTIONS 3 AND 4 PAGES 560-569 (AGE OF BIG BUSINESS/WORKERS IN INDUSTRIAL AGE). WORKSHEET COMMUNICATIONS TECHNOLOGY AND X-WD AGE OF SCIENCE.

JAN. 25-26 QUIZ 20-3 AND 4. VIDEO CLIP HOLT "AN INDUSTRIAL NATION". CONNECT ED. DISCUSS CHAPTER 20 SECTIONS 3 AND 4 (AGE OF BIG BUSINESS/WORKERS IN INDUSTRIAL AGE) PAGES 560-569. VIDEO AMERICA: THE STORY OF US, EPISODE 8: BOOM AND QUIZ. DEFINE RESEARCH TERMS. WORKSHEET INVENTIONS TIMELINE.

JAN. 29-30 QUIZ RESEARCH TERMS. VIDEO CLIP HOLT "IMPACT OF TV (COLD WAR)". VIDEO FROM CITIES EPISODE: TRIANGLE FIRE (7 MIN.) (35-42) DISCUSS RESEARCH TERMS. PROJECTS.

JAN. 31-FEB. 1 UNIT TEST OVER INVENTIONS AND TECHNOLOGY UNIT. NEW LESSON PLAN.

VOCABULARY WORDS:

CHAPTER 11 SECTION 1
PAGE 296-301
(GROWING ECONOMY)

INDUSTRIAL REVOLUTION
GREAT BRITAIN
FACTORY SYSTEM
MASS PRODUCTION
TECHNOLOGY
ELI WHITNEY
INTERCHANGEABLE PARTS
PATENT
SAMUEL SLATER
LOWELL MILLS/GIRLS
FREE ENTERPRISE
CAPITALISM
U.S. INDUSTRIAL REVOLUTION

(ELEMENT, CAPITAL)

CHAPTER 20 SECTIONS 1 @ 2
PAGE 550-559
RAILROADS/INVENTIONS

CONSOLIDATION
STANDARD GAUGE
GEORGE PULLMAN
TELEGRAPH
CYRUS FIELD
ALEXANDER GRAHAM BELL
CHRISTOPHER SHOLES
GEORGE EASTMAN
THOMAS EDISON
HENRY FORD
ASSEMBLY LINE PRODUCTION
MASS PRODUCTION
ORVILLE/WILBUR WRIGHT

(LABOR, INDIVIDUAL)

CHAPTER 14 SECTION 1
PAGE 376-381
(THE INDUSTRIAL NORTH)

ELIAS HOWE
ROBERT FULTON
CLIPPER SHIPS
STEAMSHIPS
PETER COOPER
TELEGRAPH
SAMUEL F. B. MORSE
MORSE CODE
"WHAT HATH GOD WROUGHT"
JOHN DEERE
CYRUS MCCORMICK
THRESHING MACHINE

(INNOVATION, TRANSFORM)

CHAPTER 20 SECTIONS 3 @ 4
PAGE 560-569
BIG BUSINESS/WORKERS

OIL 1859
FACTORS OF PRODUCTION
ENTREPRENEURS
CORPORATION
STOCK/SHEARHOLDERS/DIVIDENDS
JOHN D. ROCKEFELLER
TRUST
MONOPOLY
BESSEMER PROCESS
ANDREW CARNAGIE
PHILANTHROPISTS
SWEATSHOPS
LABOR UNIONS
KNIGHTS OF LABOR
AFL
COLLECTIVE BARGAINING
MARY HARRIS JONES
TRIANGLE FIRE 1911
STRIKE BREAKERS
HAYMARKET RIOT 1886
HOMESTEAD STRIKE 1894
INJUNCTION

(ENVIRONMENT, IDENTIFY, PARTNER)

CHAPTER 14 SECTION 3 @ 4
PAGE 387-397
(COTTON KINGDOM/PEOPLE)

"KING COTTON"
COTTON GIN
OVERSEERS
SPIRITUALS
SLAVE CODES
NAT TURNER
HARRIET TUBMAN
FREDERICK DOUGLASS
UNDERGROUND RAILROAD

(PROCESS, CONSEQUENCES,
LITERACY)

RESEARCH TERMS
USE IPAD

TRANSISTORS
BILL GATES
MICROSOFT
E-COMMERCE
HACKERS
CELL PHONES
LASERS
MRI
AIDS
CLONING
TECHNOLOGY
COMPUTERS

Lesson Quiz 11-1



Growth and Expansion

DIRECTIONS: True/False Indicate whether the statement is true or false.

- _____ 1. The period in history when many people left their homes and farms to work in mills was called the Industrial Revolution.
- _____ 2. New England offered ideal conditions for farming.
- _____ 3. A patent gives a person legal rights regarding an invention.
- _____ 4. Corporations developed rapidly in the 1830s when legal obstacles to their formation were removed.
- _____ 5. Libraries, museums, and a variety of shops were in plentiful supply in rural America in the 1800s.

DIRECTIONS: Multiple Choice Indicate the answer choice that best answers the question.

- _____ 6. What was at the heart of the Industrial Revolution?
- A. the cotton gin
 - B. new machines and new technology
 - C. farms, rivers, and streams
 - D. the steam generator
- _____ 7. What was a significant development in the way goods were made?
- A. development of mills
 - B. economic factors
 - C. factory system
 - D. wealthy merchant association
- _____ 8. What helped increase cotton production?
- A. cotton gin
 - B. cotton mill
 - C. factory system
 - D. steam generator
- _____ 9. In what area did many new industrial towns develop?
- A. along mountain ranges
 - B. near oceans and bays
 - C. near other large towns
 - D. along rivers and streams

Lesson Quiz 14-1

North and South

DIRECTIONS: True/False Indicate whether the statement is true or false.

- _____ 1. The steamboat, the steam-powered locomotive, the sewing machine, the telegraph, and the steel-tipped plow were some of the major innovations of the 1800s.
- _____ 2. The sewing machine increased the rate at which clothing was produced.
- _____ 3. Wider and deeper canals allowed steamboats to travel on major rivers.
- _____ 4. Clipper ships could sail at speeds of up to 300 miles per hour.
- _____ 5. After the invention of revolutionary farming methods, settlers left the Great Plains area.

DIRECTIONS: Multiple Choice Indicate the answer choice that best completes the statement or answers the question.

- _____ 6. By 1860 where were most of the country's goods manufactured?
- | | |
|--------------|--------------|
| A. Northeast | C. Southeast |
| B. Northwest | D. Southwest |
- _____ 7. By 1860 the United States had almost 31,000
- | | |
|-------------------|------------------------------|
| A. canals. | C. miles of railroad tracks. |
| B. clipper ships. | D. miles of telegraph lines. |
- _____ 8. Which invention filled the need for a method of communication that kept up with industrial growth and fast-paced travel?
- | | |
|----------------------|-----------------|
| A. mechanical reaper | C. steam engine |
| B. railroads | D. telegraph |
- _____ 9. What did John Deere invent in 1837?
- | | |
|-----------------|----------------------|
| A. Morse code | C. steel-tipped plow |
| B. clipper ship | D. telegraph |
- _____ 10. Which invention ensured that raising wheat would remain the main economic activity in the Midwestern prairies?
- | |
|----------------------|
| A. mechanical horse |
| B. mechanical reaper |
| C. steel thresher |
| D. steel-tipped plow |

Lesson Quiz 14-3**North and South****DIRECTIONS: Completion** Enter the appropriate word(s) to complete the statement.

1. By 1850 the institution of _____ was growing stronger than ever in the South.
2. Many in the South preferred an agricultural economy and did not want _____.
3. The cotton gin could clean cotton _____ faster than a worker.
4. Most Southerners had their money invested in enslaved African Americans and _____.
5. In 1860 the economy of the _____ was dependent on cotton.

DIRECTIONS: Multiple Choice Indicate the answer choice that best completes the statement or answers the question.

- _____ 6. Which of the following kept the price of cotton high in the years before 1860?
- | | |
|---------------------|----------------------|
| A. cotton gin | C. large plantations |
| B. demand in Europe | D. slavery |
- _____ 7. Which area became a center for the sale and transport of enslaved people throughout the South?
- | | |
|---------------|----------------|
| A. Deep South | C. Upper South |
| B. Northeast | D. West |
- _____ 8. What was the main crop of the Deep South?
- | | |
|-----------|--------------|
| A. cotton | C. sugarcane |
| B. rice | D. tobacco |
- _____ 9. In general, what did farmers and factory owners in the South use to transport their goods?
- | |
|----------------------|
| A. canals |
| B. horse-drawn carts |
| C. natural waterways |
| D. railroads |
- _____ 10. Which South Carolina merchant opened a textile factory?
- | |
|-------------------------|
| A. Eyre Crowe |
| B. Eli Whitney |
| C. Joseph Reid Anderson |
| D. William Gregg |

Lesson Quiz 14-4**networks****North and South****DIRECTIONS: Matching** Match each item with its definition.

- | | |
|--|----------------------|
| _____ 1. ability to read and write | A. credit |
| _____ 2. farmed landlords' estates | B. legal |
| _____ 3. brief | C. literacy |
| _____ 4. to purchase goods with loaned money | D. short in duration |
| _____ 5. permitted by law | E. tenant farmers |

DIRECTIONS: Multiple Choice Indicate the answer choice that best completes the statement or answers the question.

- _____ 6. The largest group of whites in the South was made up of
- | | |
|-----------------------|--------------------|
| A. plantation owners. | C. tenant farmers. |
| B. rural poor. | D. yeomen. |
- _____ 7. The main goal of large plantation owners was to
- | |
|-------------------------------|
| A. build factories. |
| B. produce more cotton. |
| C. earn a profit. |
| D. build a larger plantation. |
- _____ 8. Who was the religious leader who led a slave revolt in 1831?
- | | |
|-----------------------|-------------------|
| A. Eli Whitney | C. Harriet Tubman |
| B. Frederick Douglass | D. Nat Turner |
- _____ 9. African American folk songs that expressed the passionate beliefs of the South's enslaved people were called
- | |
|-----------------|
| A. overseers. |
| B. slave codes. |
| C. spirituals. |
| D. yeomen. |
- _____ 10. The network of safe houses that assisted runaway enslaved people was known as
- | |
|------------------------------|
| A. the runaway homes. |
| B. the secret passage. |
| C. the slave code. |
| D. the Underground Railroad. |

Lesson Quiz 20-1

The Industrial Age

DIRECTIONS: True/False Indicate whether the statement is true or false.

- _____ 1. Few laws limited the business practices of railroad barons in the early days of the railroads.
- _____ 2. The expansion of railroads took money away from the iron and lumber industries.
- _____ 3. The standard gauge caused confusion and created gaps in train service.
- _____ 4. George M. Pullman developed the Pullman sleeping car for overnight journeys.
- _____ 5. The growing railroad network redistributed the American population.

DIRECTIONS: Multiple Choice Indicate the answer choice that best completes the statement or answers the question.

- _____ 6. After consolidation of the railroads, who controlled the nation's rail traffic?
- A. railroad commissioners C. railroad unions
B. railroad barons D. government officials
- _____ 7. Early railroad tracks were made of
- A. copper. C. steel.
B. iron. D. zinc.
- _____ 8. What did large railroad companies offer as incentives for their biggest customers?
- A. company stocks C. rebates
B. coupons D. volume discounts
- _____ 9. What did railroad barons form based on secret agreements to divide up business amongst themselves?
- A. consolidations C. pools
B. monopolies D. rebates
- _____ 10. The growing railroad network helped American industry expand into
- A. the East. C. rural areas.
B. the West. D. overseas markets.

Lesson Quiz 20-2

networks

The Industrial Age

DIRECTIONS: Matching Match each item with the correct statement below.

- | | |
|------------------------------------|---|
| _____ 1. Wilbur and Orville Wright | A. built a steam-powered model airplane |
| _____ 2. telephone | B. invented the gasoline-powered airplane |
| _____ 3. Samuel Langley | C. introduced the Model T |
| _____ 4. Henry Ford | D. built transformers |
| _____ 5. George Westinghouse | E. transmitted speech |

DIRECTIONS: Multiple Choice Indicate the answer choice that best completes the statement or answers the question.

- _____ 6. Who was responsible for laying a telegraph cable across the Atlantic Ocean in 1866?
- A. Cyrus Field
 - B. George Pullman
 - C. George Westinghouse
 - D. John Thurman
- _____ 7. Who invented the typewriter?
- A. Alexander Graham Bell
 - B. Thomas Edison
 - C. William Burroughs
 - D. Christopher Sholes
- _____ 8. Which of the following was Thomas Edison's most important invention?
- A. electric lightbulb
 - B. vacuum cleaner
 - C. instant camera
 - D. circuit breaker
- _____ 9. Who was responsible for creating the assembly line?
- | | |
|------------------------|---------------------|
| A. George Westinghouse | C. Henry Ford |
| B. Granville Woods | D. Charles Sorensen |
- _____ 10. Lewis Latimer did not invent, but he did vastly improve the
- | | |
|-----------------------|---------------|
| A. automobile engine. | C. telegraph. |
| B. lightbulb. | D. telephone. |

Lesson Quiz 20-3**networks****The Industrial Age****DIRECTIONS: Completion** Enter the appropriate word(s) to complete the statement.

1. Businesses needed _____ to buy raw materials and equipment, pay workers, and to cover shipping and advertising costs.
2. _____ was the ideal material for railroad tracks and bridges because it is stronger than iron.
3. The three factors of production are _____.
4. A _____ occurs when two or more businesses combine into one.

DIRECTIONS: Multiple Choice Indicate the answer choice that best completes the statement or answers the question.

- _____ 5. What are people called who invest in corporations by buying stock?
- A. bondholders
 - B. corporation bosses
 - C. shareholders
 - D. stock traders
- _____ 6. What are people called who start businesses?
- A. entrepreneurs
 - B. investors
 - C. shareholders
 - D. trusts
- _____ 7. Gaining almost total control of an industry is called
- A. a monopoly.
 - B. vertical integration.
 - C. horizontal integration.
 - D. a dividend.
- _____ 8. Who was the steel industrialist who donated hundreds of millions of dollars as a philanthropist?
- | | |
|----------------------|------------------------|
| A. Andrew Carnegie | C. John D. Rockefeller |
| B. J. Edgar Thompson | D. J. Pierpont Morgan |
- _____ 9. Which legislation was a response to the public's growing concern over trusts and monopolies?
- | | |
|--------------------------|-----------------------------|
| A. Monopolies Act | C. Trust Act |
| B. Sherman Antitrust Act | D. Trust and Monopolies Act |

Lesson Quiz 20-4

**networks**

The Industrial Age

DIRECTIONS: Completion Enter the appropriate word(s) to complete the statement.

1. Child labor laws said that children working in factories had to be at least _____ years old.
2. Unhappy workers formed groups called _____ to demand better pay and working conditions.
3. Companies hired _____ to replace striking workers.

DIRECTIONS: Multiple Choice Indicate the answer choice that best completes the statement or answers the question.

- _____ 4. What is it called when unions represent workers in talking to management?
- A. collective bargaining
 - B. injunctions
 - C. strikebreaking
 - D. strikes
- _____ 5. Demands for a safer working environment grew after the
- A. fire at the Triangle Shirtwaist Company.
 - B. Haymarket Affair.
 - C. Great Railway Strike.
 - D. election of Grover Cleveland as president.
- _____ 6. In 1886 a group of national trade unions formed the AFL, or
- A. American Founders League.
 - B. American Federation of Labor.
 - C. Association of Federal Law.
 - D. Association of Factory Laborers.
- _____ 7. When did the steelworkers' union lose members?
- A. after the Haymarket Riot
 - B. after the Homestead Strike
 - C. as the result of the Pullman Strike
 - D. as the result of collective bargaining
- _____ 8. What union leader led the Pullman Strike?
- | | |
|--------------------|------------------------|
| A. Andrew Carnegie | C. John D. Rockefeller |
| B. Eugene V. Debs | D. J. Pierpont Morgan |

Inventions & Technology Study Guide

Instructions: Use this completed study guide along with your notes, worksheets, and textbook from class to help you prepare for your chapter test.

1. Wilbur & Orville Wright-
2. George Westinghouse-
3. Samuel Langley-
4. Telephone-
5. Henry Ford-
6. Goal of Plantation Owners-
7. Legal-
8. Collective Bargaining-
9. Literacy-
10. Sherman Antitrust Act-
11. Brief-
12. Credit-
13. Tenant Farmers-
14. Population Redistribution-
15. Railroad Expansion-
16. New England Farming-
17. Rural America-
18. Revolutionary Farming Methods-
19. Industrial Revolution-
20. George M. Pullman-
21. Patent-
22. Deeper Canals-
23. Major Innovation of 1800s-
24. Northeast-
25. Cotton Gin-

26. Factory System-
27. Heart of Industrial Revolution-
28. Eli Whitney-
29. Rivers & Streams-
30. Nat Turner-
31. Cotton-
32. Mechanical Reaper-
33. Telegraph-
34. John Deere-
35. Natural Waterways-
36. Upper South-
37. Early Railroad Tracks-
38. Electric Lightbulb-
39. Underground Railroad-
40. Henry Ford-
41. Spirituals-
42. Railroad Growth-
43. Cyrus Field-
44. Cotton Prices-
45. Entrepreneurs-
46. Miles of Railroad-
47. Andrew Carnegie-
48. Triangle Shirtwaist Company-
49. Monopoly-
50. Shareholders-