Name _____ Date _____

REVIEW

CALIFORNIA CONTENT STANDARD 10.3.2

Inventions and Social Change

Specific Objective: Examine how scientific and technological changes and new forms of energy brought about massive social, economic, and cultural change.

Read the chart and summaries to answer the questions on the next page.

Machinery made the Industrial Revolution possible. Reliance on machinery defined the revolution from its earliest days, and technological innovation drove its development. Here are some of the best-known innovations.

Technological Innovations of the Industrial Revolution		
Inventor	**Invention**	**Significance**
James Watt	Improved steam engine (1769)	Provided an efficient source of industrial power
Eli Whitney	Cotton gin (1793)	Sped cotton production by separating fiber from seed
Henry Bessemer	Bessemer process (1850s)	Quickly and cheaply made steel out of iron
Louis Pasteur	Pasteurization (sterilization) of liquids (1860s)	Increased the shelf life of milk and other products
Thomas Edison	Improved electric light (1879)	Made possible long-lasting indoor electric light

Spread of Technology

- By the 1840s, England had become a nation connected by **railroads**. Around the same time, the United States, Russia, and European nations, such as France and Germany, developed rail systems too. Railroads transported goods and linked commercial centers.
- Major advances in **communications** had occurred by the 1870s. International mail service had been achieved; telegraph messages could be transmitted around the world in minutes; and, in 1876, the telephone was used for the first time (though it did not become widespread until the early 1900s).

Effects on Society

- In agricultural life, the forces of weather and nature rule. In the new industrial culture, work could take place in any weather and more quickly than ever before.
- Railroads replaced horses, increasing loads and decreasing shipping and travel times. With the telegraph, it now took minutes rather than months for a message to reach a faraway destination. The pace of life had changed forever.

Name _____ Date _____

PRACTICE

CALIFORNIA CONTENT STANDARD 10.3.2

Inventions and Social Change

Directions: Choose the letter of the *best* answer.

1 What impact did the steam engine have on the growth of industry?

A permitted merchants to reach new markets

B ended dependence on ocean transport

C reduced pollution compared with coal

D provided an efficient source of power

2 What technology did James Watt improve?

A the steam engine

B cotton processing

C electric light

D the Bessemer process

3 Which process would be an example of pasteurization?

A Milk is sterilized.

B Cotton fiber is separated.

C Coal is burned to make steam.

D Steel is made out of iron.

4 By the 1840s, England was connected by a network of

A craft guilds.

B telephone lines.

C railroads.

D electric lines.

5 Which 20th-century invention is *most* comparable to the telegraph in its impact?

A television

B e-mail and the Internet

C airplanes

D the telephone

6 Which increased as a result of the Industrial Revolution?

A prices for consumer goods

B dependence on the weather

C the speed of transactions

D isolation of commercial centers