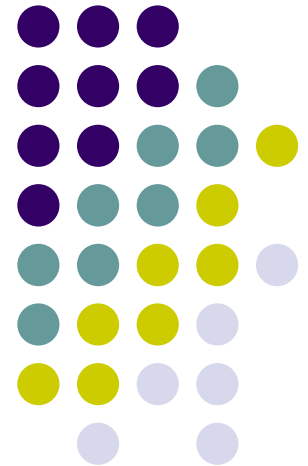


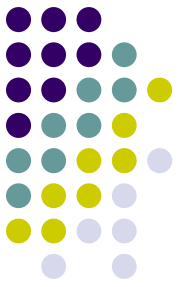
# Big Business and Innovation

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Standard 11  
Industrialization, Monopolies  
& Inventions

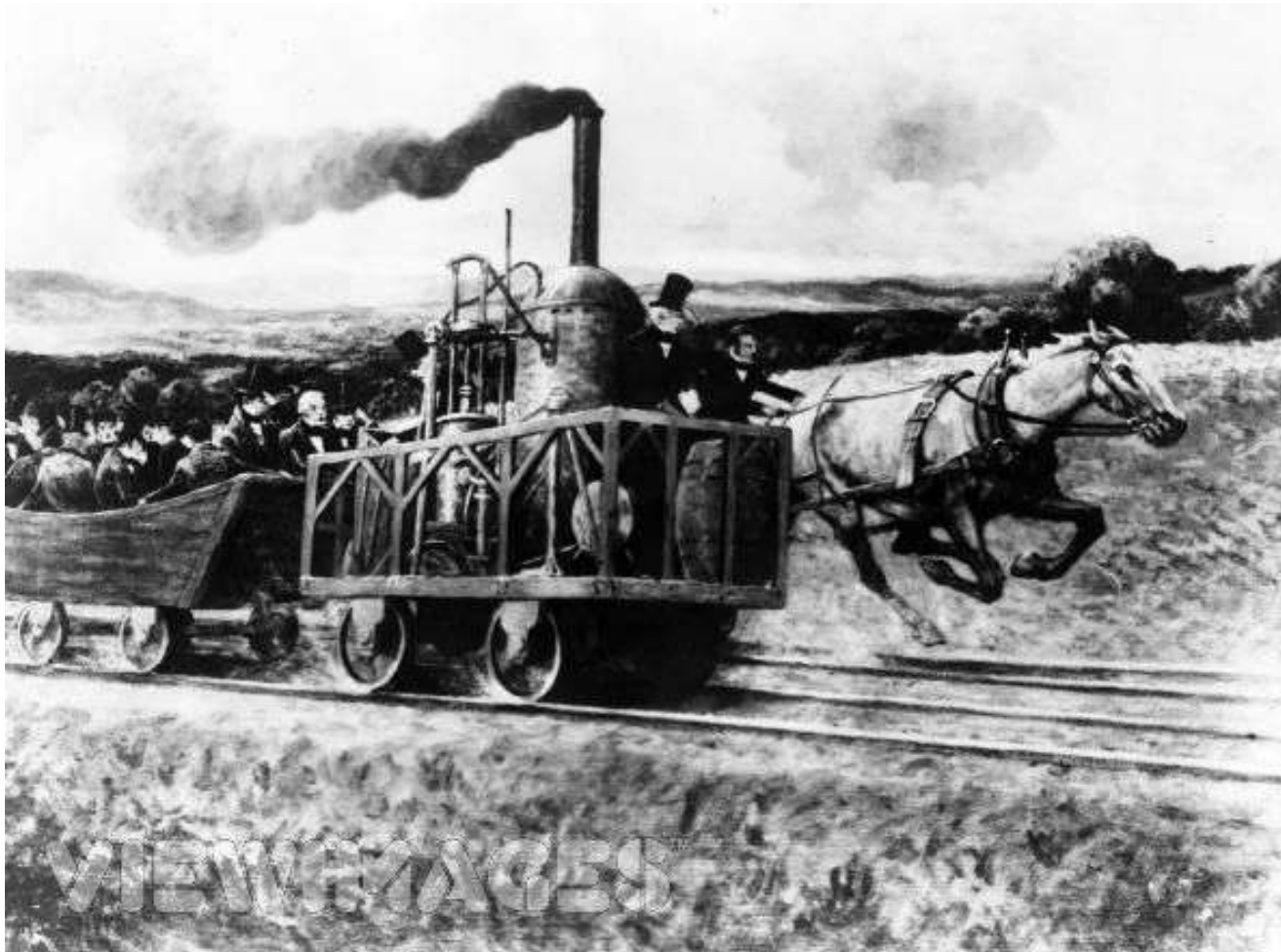
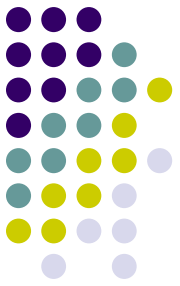


# Standard 11

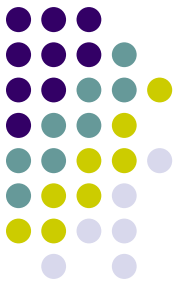


The student will describe  
the growth of big  
business & technological  
innovations after  
Reconstruction

# Iron Horse



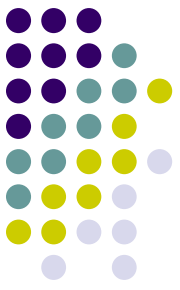
# Element A: Explain the impact of the railroads on other industries, such as steel, and on the organization of big business.



Railroads  
Fuel  
Industrial  
Economy



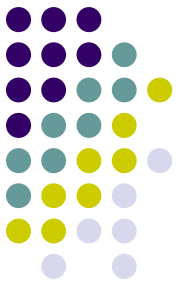
- First big business in United States
- A magnet for financial investment
- Key to opening the West
- Helped development of other industries



a. Explain the impact of the railroads on other industries, such as steel, and on the organization of big business.

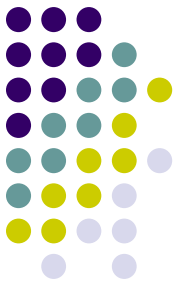
- The railroad companies contributed to the development of the West by selling low-cost parcels of their western land for farming.
- Settlers traveled west on the trains to farm on the fertile soil.
- Western farmers used the trains to ship their grain east, & western cattle ranchers shipped their steers to eastern butchers.
- Both farmers & ranchers sold their goods to people they could not easily reach without railroads.
- The railroads earned money by transporting the settlers west & the goods east.

a. Explain the impact of the railroads on other industries, such as steel, and on the organization of big business



- The growth of American railroads helped expand the industries that supplied the railroad companies' need for steel rails laid on wood ties, iron locomotives burning huge quantities of coal, wooden freight cars, & passenger cars with fabric-covered seats & glass windows.
- The railroads were the biggest customers for the **steel industry** because thousands of miles of steel track were laid.
- In turn, the railroads had a great impact on the steel industry.
- To supply their biggest customers, steel producers developed cheap, efficient methods for the mass production of steel rails.
- These low-cost methods enabled more industries to afford the steel companies' products.

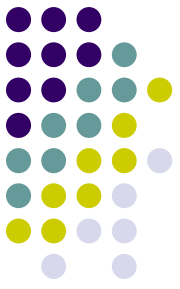
# Industrialization



b. Describe the impact of the railroads in the development of the West; include the transcontinental railroad and the use of Chinese labor.

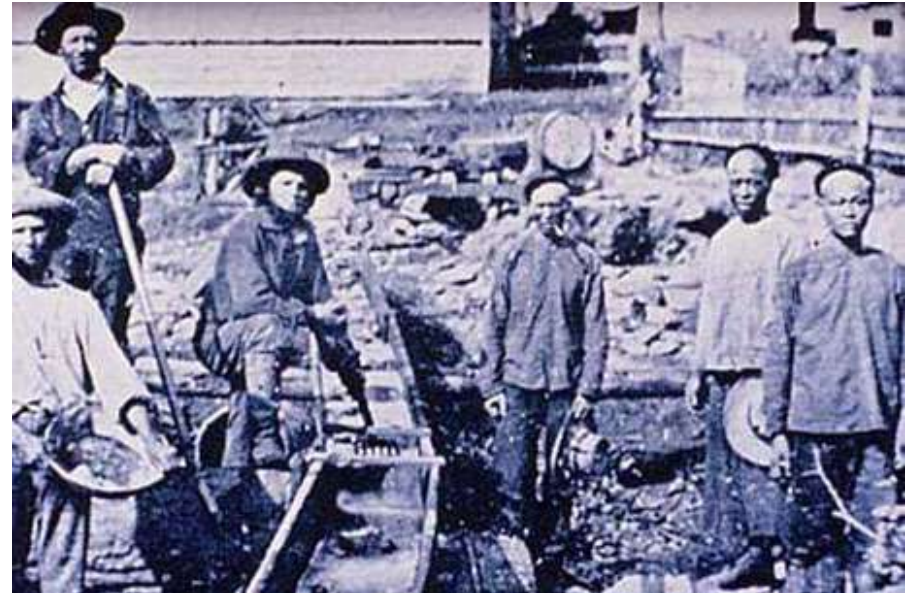
- Railroads paid for through federal grants
  - The Federal Government granted railroad companies land
    - Encouraged companies to lay track across harsh land conditions west of the Mississippi River to help connect the eastern & western states
    - In exchange, companies had to carry goods for the federal government across country at a discount
  - Companies then resold the land to settlers for a profit

# Industrialization



b. Describe the impact of the railroads in the development of the West; include the transcontinental railroad and the use of Chinese labor.

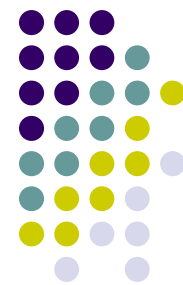
- To complete the heavy work of creating the railroads, the owners relied mainly on **Chinese labor**.
  - 15,000 Chinese workers were hired to help build the Central Pacific railroad
  - These Asian immigrants accepted lower pay than other laborers demanded.





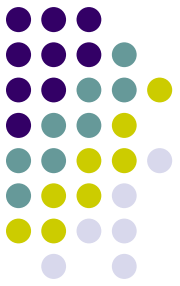
# Industrialization

## Chinese Labor continued...



- The work was dangerous - many lost their lives
- Many Chinese died in the explosive blasts they ignited to clear the path across the railroad companies' land.
- Many others died under rock slides & heavy snowfalls before the first **transcontinental railroad** was completed in 1869.
- After railroad was complete, Chinese workers were viewed as a threat to jobs in the west

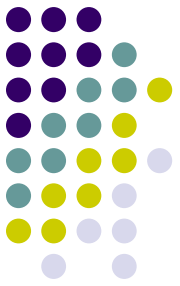
# Industrialization



- 1862: Pacific Railway Act
  - allowed Central Pacific railroad to lay track east from the Pacific Ocean and Union Pacific railroad to lay west from Omaha, Nebraska
- = *transcontinental railroad* completed at Promontory, Utah on May 10, 1869



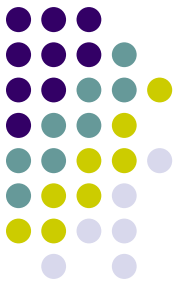
# Industrialization



## ⑩ Robber Barons:

- ⑩ *Definition:* Wealthy businessmen who tried to eliminate competition and create a monopoly
- ⑩ Monopoly: total control of an industry
- ⑩ *Jay Gould* purchased Union Pacific railway and began buying up smaller tracks west of the Mississippi
- ⑩ *Cornelius Vanderbilt* purchased all railroads leading into Chicago and New York City

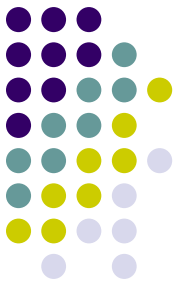
# Industrialization



- Big business leaders wanted to follow the model of **Laissez-Faire**: philosophy of Industrial Age  
= “hands off”
  - ⑩ Allow events to take their own course – little government intervention

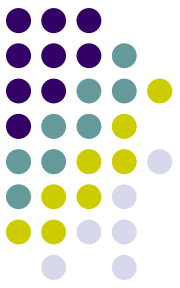


# Corporation



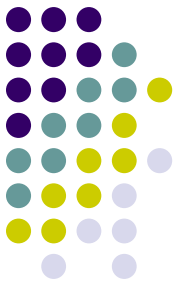
- *Corporation*: a business structure where individuals invest in a business by purchasing shares
- By 1880s, railroad industry dominated by corporations

## c. Identify John D. Rockefeller and the Standard Oil Company and the rise of trusts and monopolies

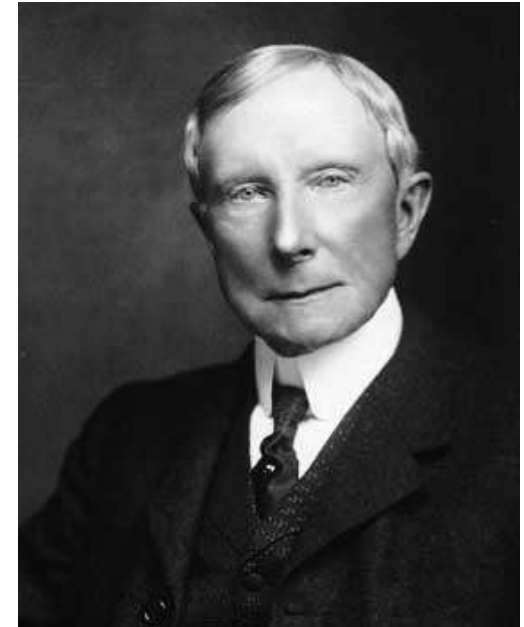


- **John D. Rockefeller/Standard Oil Company**
  - Oil first discovered in Pennsylvania
  - Valuable because it could lubricate machinery
  - 1870: **Rockefeller** bought small oil companies and formed one large corporation: the **Standard Oil Company**
  - Standard Oil was the most famous big business of the era.

## c. Identify John D. Rockefeller and the Standard Oil Company and the rise of trusts and monopolies

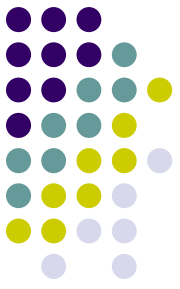


- Rockefeller also gained control of most other oil companies & created what is called a **trust** in 1882.
  - Definition: a legal concept that allows one person to manage another person's property.
- By means of a trust, Rockefeller came to own more than 90% of America's oil industry.
- Standard Oil thus became a **monopoly**--a single company that controlled virtually all the U.S. oil production & distribution.

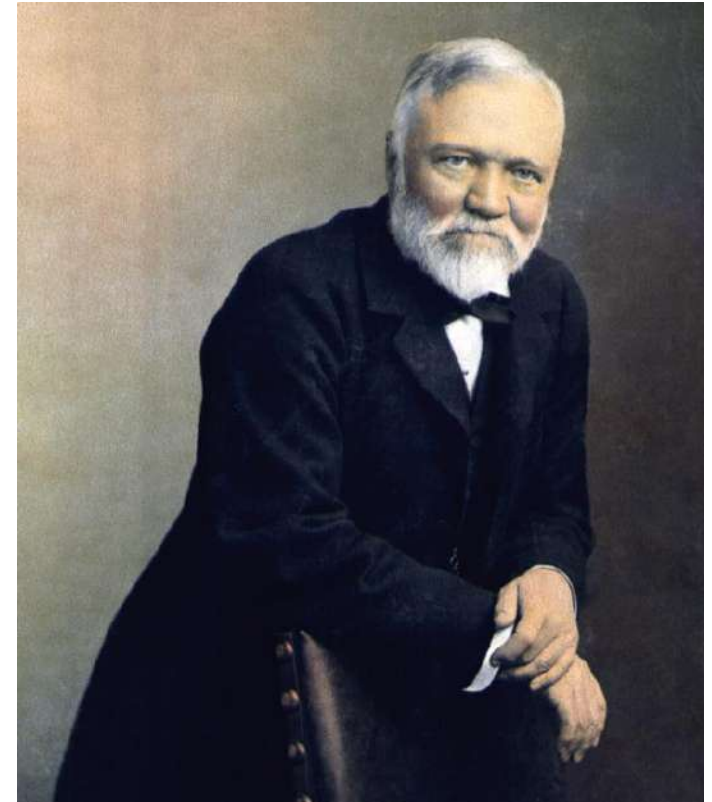


Controlled all aspects of industry: from forests used to produce wood for oil barrels to pipelines through which the oil flowed

# Monopolies

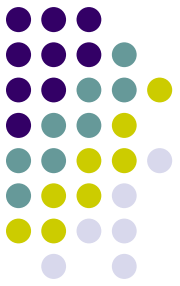


- ⑩ **Andrew Carnegie** gained total control over the **steel industry**
- ⑩ Steel used for huge machines for industry and for railroad tracks
- ⑩ By 1900, about 30% of all industry was controlled by a handful of wealthy big business leaders, or “robber barons”



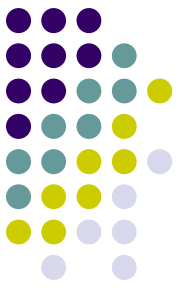


# Legislation & Monopolies

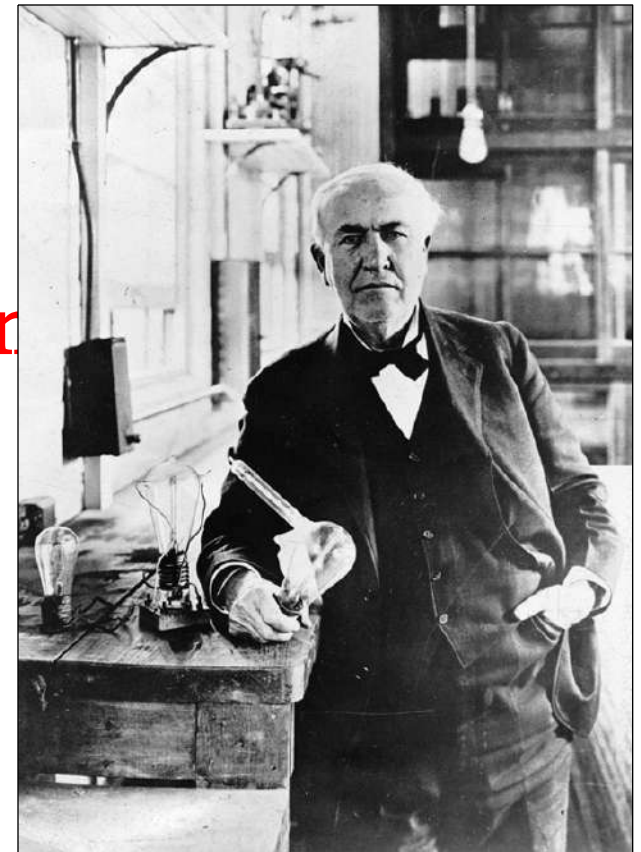


- 1887: Interstate Commerce Act
  - Called for “reasonable and just” shipping rates
- 1890: Sherman Anti-Trust Act
  - “protect trade and commerce against unlawful restraint and monopoly”
- Legislation = ineffective
  - DID establish the federal government’s desire to limit the growth of monopolies and trusts

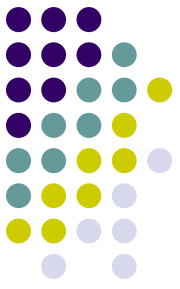
d. Describe the inventions of Thomas Edison; include the electric light bulb, motion pictures, and the phonograph, and their impact on American life.



- The effects of technological advances made after Reconstruction forever changed how people lived.
- The most famous inventor of the period is Thomas Edison (known as the “Wizard of Menlo Park”)
- He invented:
  - electric light bulb,
  - the phonograph,
  - motion picture

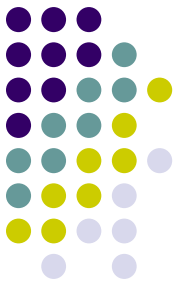


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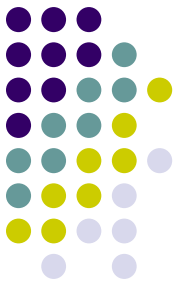
- Edison's technological achievements were used by other inventors, as evidenced by the development of long-distance electricity transmission, which enabled Edison's electric light to illuminate buildings, streets, & neighborhoods across the United States.
- Electricity soon replaced steam as the source of power for factories.
- It replaced horses as the means to power streetcars.
- Of greatest impact, perhaps, was electricity's replacing humans as the source of power for household appliances.
- Edison's inventions eliminated much manual labor that had been associated with everyday household activities & improved Americans' quality of life.

# Inventions



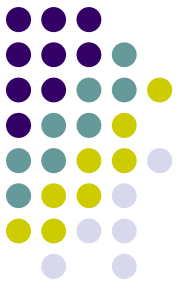
- Other inventions:
    - Telegraph (1844)
    - Telephone (1876)
    - Alternating Current (1886): a system for distributing electrical power, & many other technologies powered by electricity.
      - this made it easier for factories to move away from waterfalls and into cities where industry had a ready labor supply
- = a new migration into cities as individuals wanted work in America's growing industries

# Practice Questions



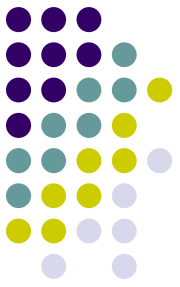
- In what way did railroads and advances in communication affect geographic patterns in the United States?
  - A. they stalled the need for new inventions
  - B. they assisted in maintaining cultural traditions in an area.
  - C. they changed the physical characteristics of a region.
  - D. they stalled migration.

# Practice Questions



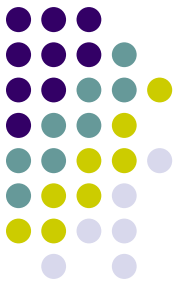
- What was the effect of the growth of monopolies?
  - A. they increased competition among similar businesses.
  - B. they reduced the need for government intervention.
  - C. they spread equal wealth among the entire population.
  - D. they reduced the number of small businesses within an industry.

# Practice Questions



- What was the purpose of the Sherman Antitrust Act of 1890?
  - A. to assist robber barons
  - B. to eliminate government intervention in business
  - C. to protect trade and the growth of monopolies
  - D. to eliminate big business monopolies

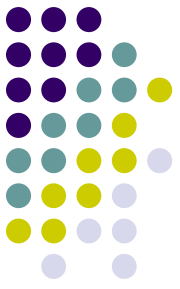
# Practice Questions



- Who invented the electric light bulb?
  - A. Jay Gould
  - B. Thomas Edison
  - C. John D. Rockefeller
  - D. Andrew Carnegie

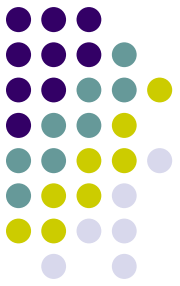


# Practice Questions



- In 1862, Congress passed the Pacific Railway Act to allow for construction of the transcontinental railroad. What was the impact of this legislation?
  - A. regulation of the railroad industry
  - B. rapid western expansion
  - C. an end to Chinese immigration
  - D. a decline in big city growth

# Practice Questions



- What effect did Thomas Edison's work have on the 19<sup>th</sup> century?
  - A. it expanded the growth of government
  - B. it encouraged the growth of industry and cities.
  - C. it stalled westward movement into California
  - D. it encouraged the growth of mining towns.