

# Industrial Revolution, Part 2

World History

A stylized silhouette of a mountain range in shades of teal, located in the bottom right corner of the slide.


# Industrial Revolution

- ◆ Focus → improve & repair tools & machinery
- ◆ After 1850 → focus on using science to create new products
- ◆ Advances in communication spread news of new technology

# Countries / Products

- ◆ Belgium → lacemaking
- ◆ France → improved railroads & textiles → Jacquard invented loom to create complex patterns → his textiles brought highest prices in Europe

# Countries / Products

- ◆ USA → industrialized since had so many natural resources
  - ◆ 1869 – 1<sup>st</sup> railroad spanned US
  - ◆ Increased production of iron & steel
- 

# Improvements

- ◆ Europe discovered new dyes cheaper than natural ones → added speed to textile revolution
- ◆ Chemical fertilizers boosted crop production
- ◆ Volta creates batteries → Farady creates electric generator → replaces steam engine

# Batteries & Cells

- ◆ Daniel creates primary cell with 2 liquid electrolytes → produces steadier current
- ◆ Plante creates secondary battery (lead acid storage battery)
- ◆ 1860 – Leclanche develops primary cell related to today's dry cell

# Communication

- ◆ Bell creates telephone 10 years after cable laid under English Channel
- ◆ Marconi creates wireless way to send messages
  - England calls it wireless
  - USA calls it radio

# Edison the Inventor

- ◆ Phonograph
- ◆ Incandescent light bulb
- ◆ Storage batteries
- ◆ Sound synchronized motion pictures
- ◆ Mimeograph machine
- ◆ 1<sup>st</sup> modern research lab



# Automobiles

- ◆ Edison advised Ford to apply gasoline engine to cars
- ◆ Daimler invents internal combustion engine fueled by gasoline → used to make cars

# Automobiles

- ◆ Automobile revolutionized life in US
- ◆ 1920 → cars common on US roads
- ◆ automobile related industries (petroleum, steel & rubber) grew

# Ford's Assembly Line

- ◆ Assembly line = work stations placed along a moving line so when product passes the part can be added
- ◆ Assemble lines useful for building large objects like cars
- ◆ Increased efficiency → lowered prices → increased demand

# Mass Production

- ◆ Mass production turns out large quantities of identical products
- ◆ Production = expensive so large corporations formed
- ◆ Corporations = businesses owned by many investors
- ◆ Large corporations formed monopolies

# Economy

- ◆ Banks = important financial institute
- ◆ People deposited money in bank → banks invested in business

# The Airplane

- ◆ 12/17/1903 → Wright brothers took their plane to Kitty Hawk, NC
- ◆ 3 flights
  - 1<sup>st</sup> - 12 seconds
  - Longest - 59 seconds