

# Chapter Eleven Structured Notes

Please study your Powerpoint slides!

- 🌐 The **Industrial Revolution** changed the way products were made in this country. Machines replaced hand tools and new sources of power (steam and electricity) replaced human power.
  - New Technology
    - *Spinning Jenny*: machine that allowed a worker to spin several threads at once rather than just one thread at a time (James Hargreaves).
    - *Cotton Gin*: machine that sped up the process of cleaning cotton fibers (Eli Whitney).
    - *Water Frame*: machine that could hold 100 spindles of thread and required water power to turn its wheels (Richard Arkwright).
      - Samuel Slater and Moses Brown: Created first American spinning mill using Arkwright's water frame
  - Birth of the Factory
    - Many new machines needed water power to run and needed to be housed in large buildings. The factory was born! Workers in factories had to work a certain amount of hours per day and were paid daily or weekly wages.
    - Capitalist: people with money to invest in business to make a profit.
    - Factory system: brought workers and machines together to produce goods in one place.

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- 🌐 The War of 1812 boosted American industries. Being cut off from foreign goods required Americans to produce more goods for themselves.
  - 🌐 Francis Cabot Lowell came up with the idea of creating a community around a factory. The towns had banks, schools, stores, a library and a church with the factory as the center of the community.
    - In Lowell, Massachusetts, young women ("Lowell Girls") worked at the factory and lived at boarding houses. Women and children were hired because factory owners could pay them half of what they would pay men.
      - Child labor wasn't seen as cruel then. It was seen as a necessity for families to survive.
      - Working hours were twelve hour days, six days a week. As industry grew, conditions worsened and wages fell.
  - 🌐 Eli Whitney and Interchangeable Parts: Whitney sped up the making of guns by having machines manufacture each part; the idea spread quickly and helped small workshops grow into factories.
    - *Interchangeable parts*: identical parts of a tool or instrument that are made by machine.

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- 🌐 Routes to the West
    - Great Wagon Road across Pennsylvania
    - Wilderness Road through the Cumberland Gap into Kentucky
    - Ohio River into Indiana, Kentucky and Illinois

- 🌐 New States in the West!

Kentucky	1792	Tennessee	1796
Ohio	1803	Louisiana	1812

Indiana	1816	Mississippi	1817
Illinois	1818	Alabama	1819

### 🌐 Better Roads!

- *Lancaster Turnpike*: Road built in the 1790's that linked Philadelphia to Lancaster, PA; It was important because it was set on a bed of gravel and water was able to drain off quickly.
  - To pay for the roads, companies collected tolls. At points on the road a pike (pole) blocked the road. When you paid, the pike was lifted. Alas! The **turnpike** is born!
- *National Road*: Road to run from Cumberland, MD to Wheeling, WV; it was later extended across Ohio, Indiana and Illinois.

### 🌐 John Fitch and Robert Fulton invented the **steam engine**.

- Fitch opened a ferry service but nobody used it and he went out of business. ☹️
- Fulton launched the ***Clermont*** on the Hudson River. It carried passengers from Albany to New York. Fulton's success increased the popularity of steamboats and revolutionized travel in the West.

### 🌐 Steamboats couldn't ship western goods directly to the east so Americans began building canals. A **canal** is a channel dug by people, then filled with water to allow boats to cross a stretch of land.

- *The Erie Canal*: Linked the Great Lakes with the Mohawk and Hudson Rivers.
  - New York Governor *De Witt Clinton* convinced state lawmakers to allocate money for the canal.
  - This canal would allow western farmers to ship goods into the port of New York!
  - It took eight years to complete!
  - Benefits:
    - Reduced travel time.
    - Lowered the cost of shipping goods.
    - Helped make NYC a center of commerce.

## Causes

- ✓ British ideas of a spinning mill and power loom reach the United States.
- ✓ Eli Whitney invents the cotton gin.
- ✓ War of 1812 prompts Americans to make their own goods.
- ✓ Eli Whitney introduces the idea of interchangeable parts.

## The Industrial Revolution

## Effects

- ✓ Factory system spreads.
- ✓ Young women and children from nearby farms work in mills.
- ✓ Growing cities face problems of fire, sewage, garbage and disease.