Chapter 11
North & South Take Different Paths
1800-1845

Essential Question: Why did Americans take different paths in the early 1800s?

Study the map and charts on pages 381-382 to find population clusters in the U.S. in the early 1800s.

Section 1: The Industrial Revolution
Focus Question: How did the new technology of the Industrial Revolution change the way Americans lived?

1. A Revolution of Technology
   - The Industrial Revolution: machines run by flowing water & then steam engines replaced many hand tools
   - Factory System brought workers and machines together in one place to produce goods
     o Large machines
     o Housed in large mills
     o Originally built near river with waterwheel produced water power to run machines
     o Started in Britain
   - Spinning Jenny
     o 1764
     o James Hargreaves
     o Spin many threads at once
   - Water Frame
     o 1764
     o Richard Arkwright
     o Spinning machine powered by running water rather than human power
   - Water powered loom
     o 1780's
     o Edmund Cartwright
     o Produce more cloth at a fast rate
   - Steam-powered textile plant
     o 1790
• Richard Arkwright
  • Reliable source of power
  • Could now move factories away from rivers into cities
    ▪ Women & child provided cheap source of labor
• Needed large amount of capital (money) investments
  • Capitalist, investor in a business in order to make a profit supplied the money
• Britain tried to keep its new technology a secret
  • Parliament passes laws forbidding anyone from taking plans of their new machinery out of the country
  • Skilled workers were forbidden to leave the country
  • Samuel Slater
    ▪ Mechanic in British textile mill memorize the design plans of Arkwright’s machines
    ▪ Brought plans to US
    ▪ 1793 with Moses Brown built first successful textile mill in Pawtucket, Rhode Island
• American Industry Grows
  • Blockades of U.S. ports during the War of 1812 forced Americans to supply their own goods
  • Model Factory Town, Lowell Massachusetts
    ▪ Francis Cabot Lowell thought to house the spinning and weaving machines in one location
    ▪ Raw cotton turned into finished cloth all in one mill
    ▪ Mill in Waltham, MA then created Lowell, MA as a factory town
      • Company built a boardinghouses for young girls
      • Created rules to protect the girls
      • Tedious and hard work
      • Gave education & economic freedom to women “Lowell girls”
• A Revolution Takes Hold
  • Mass production, or rapid manufacture of large numbers of identical objects
  • Interchangeable parts, identical pieces could be assembled quickly by unskilled workers
    ▪ Eli Whitney
    ▪ Instead of making one musket at a time, each with its own parts, Whitney made the gun parts by machine.
Each fit into any musket, so the workers could make the guns faster and if a part broke, it was easily replaced.

○ Factory Life
  ▪ Child labor
    • Boys & girls as young as seven
    • Worked hard on farms, so working in factories wasn’t looked at as different
    • Wages were needed to help support the family
    • No opportunity for education
    • Worked in textile mills, coal mines & steel foundries

○ Factory Conditions
  ▪ Long Hours: 12 hour days / 6 days a week
  ▪ Low pay
  ▪ Factories were poorly lighted with little fresh air
  ▪ Unsafe conditions
  ▪ Injured workers lost their income
  ▪ As competition increased, employers took less interest in the welfare of their workers

<table>
<thead>
<tr>
<th>Before (Early 1800’s)</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goods produced by hand</td>
<td>Goods produces by machine</td>
</tr>
<tr>
<td>Sources of power: human &amp; animals</td>
<td>Sources of power: steam</td>
</tr>
<tr>
<td>Most did farming for a living</td>
<td>May did manufacturing for a living</td>
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</tbody>
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Section 2: The North Transformed
Focus Question: How did urbanization, technology and social change affect the North?

1. Northern Cities
   • Urbanization: growth of cities due to the movement of people from rural areas to cities
     ○ More family members left home to earn a living
     ○ New waves of immigrant came for work
     ○ Growth of industry & need for cheap labor
     ○ Farmers replaced by machines looking for work
   • Cities grew around factories
• Urban Problems
  o Filthy streets
  o *Garbage thrown into the streets where hogs devoured it*
  o *Dirt & gravel streets turned into mud holes when it rained*
  o Absence of good sewage systems
  o Lack of clean drinking water
  o Diseases spread rapidly
  o Wood buildings close together lead to citywide fires
  o Volunteer firefighters were often poorly trained & ill equipped

2. Growth of Northern Industry
• Communication
  o Telegraph
    ▪ Device that uses electrical signs to send messages quickly over long distance
    ▪ Samuel F. B. Morse
    ▪ Morse Code system was a mixture of short (dot) & long (dash) representing letters
      ▪ 1844

• Agriculture
  o Mechanical reaper
    ▪ Quickly cut stalks of wheat
    ▪ Cyrus McCormick
  o Threshing machine
    ▪ Separate grains of wheat from their stalks
  o Combine
    ▪ Mechanical reaper & thresher in one machine
  o *Iron plow with replaceable parts*
    ▪ *Could break the hard ground more easily*
    ▪ Jethro Wood
    ▪ 1825
  o *Light Weight steel plow*
    ▪ *Steel was tougher than the iron*
    ▪ John Deere
  o *Mechanical drill*
    ▪ *Drill breaks hard ground to plant grain*
  o *Horse drawn hay rake*
  o Farm workers replaced by machines went to cities for work
• Manufacturing
  o Sewing Machine
    ▪ Could sew seams in fabric
    ▪ Elias Howe
    ▪ 1846
  o Sewing machine
    ▪ Improved Howe’s design
    ▪ Made it efficient to produce clothing in quantity
    ▪ Made clothing less expensive
    ▪ Isaac Singer
    ▪ 1850s
• Transportation
  o Steamboat
    ▪ Steam engine powered wooden paddles
    ▪ Flat-bottomed design could carry heavy loads without getting stuck on sandbars
    ▪ Ideal for river travel
    ▪ Robert Fulton
    ▪ 1807
    ▪ First steamboat Clermont
    ▪ Dangers
      • Sparks from smokestacks could cause fires
      • High-pressure boiler could explode
      • Boats could collide with others on the river
  o Clipper ship
    ▪ Ships with long, slender hull, tall masts & huge sails that moved swiftly
    ▪ Yankee clippers were world fastest ships
    ▪ Suited for ocean travel (cut time in half)
    ▪ John Griffiths
    ▪ 1845
  o Iron steamships
    ▪ Built by the British
    ▪ Replaced the clipper ships
    ▪ Faster & carried more cargo
    ▪ Later 1850s
  o Steam locomotives
    ▪ Early version of railroads had cars on rails drawn by horses
- Horses power replaced by steam powered engine
- Rails could be built almost anywhere
- Peter Cooper
- 1830

- First Railroads
  - Dangers
    - Soft roadbeds led to collapses
    - Weak bridges led to collapses
    - Locomotives often broke down
    - Smokestacks belched thick, black smoke
    - Hot embers could set nearby buildings on fire
    - One set of rails meant collisions
    - Unwelcome by those who invested in canals and those whose job was to move freight by wagons
  - Improvements
    - Engineers built sturdier bridges and solid roadbed
    - Wooden rails were replaced by iron rails
    - These made travel safer & faster

3. New Wave of Immigrants
   - Came from western Europe
     - Opportunity to buy cheap land
     - British came for higher wages
       - Skilled machinists, carpenters & miners
     - Problems in homeland
       - Irish: the Great Hunger 1845
         - Potato Famine: Fungus destroyed potato crop which was the populations stable food
         - Were farmers, but had no money to buy farms
           - Low paying factory work
           - Built canals & railroads
           - Servants in private homes
       - Germans
         - Escape harsh weather conditions from 1829-1830 which led to food shortage
         - Revolutions for democratic reforms failed
           - Escape violence & harsh rulers
         - Had money to buy farms in the west
         - Became merchants & artisans
Reactions Against Immigrant

- **Nativists** wanted to preserve the country for white, American-born Protestants
- “Know-Nothing” Party
  - Political party that was anti-Catholic and anti-immigrants
  - Meetings & rituals were kept secret
    - Wanted to delay voting rights from 5 to 21 years living in the country
    - Protested that the immigrants stole jobs from Americans because they worked for less pay and replaced striking factory workers
    - Mistrusted them due to different languages, customs & dress of the immigrants
    - Blamed them for the rise in crime in the over-crowded cities
    - Mistrusted the Irish because many were Catholics

4. African Americans in the North

- Faced **discrimination** - denial or equal treatment to a certain group of people equal rights
  - No voting rights
  - Denied employment in factories & in skilled trades
  - Denied use of public schools, facilities & churches
    - Had to form their own
- Often portrayed as inferior in newspapers
  - Started their own publications
  - *Freedom Journal 1827*
    - Publisher John B. Russwurm
Section 3: The Plantation South
Focus Question: How did cotton affect the social and economic life in the South?

1. Cotton Kingdom in the South
   - Cotton Gin
     - Cotton was swept between the rollers and the spiked cylinder separated the seeds from the fibers
     - Single worker could now do the work of fifty
     - Increased the profit tremendously
     - Eli Whitney
     - 1793
   - Slave Labor
     - Industrial Revolution caused boom in textile industry which created a huge demand for cotton
     - Increase demand for slave labor to grow more cotton
   - “Cotton Kingdom” society was dominated by owners of large plantations
     - Soil wore out if cotton was planted year after year, so there was a need for new land
     - After War of 1812, they moved west
     - South Carolina, through Alabama and Mississippi to Texas
   - An Agricultural Economy
     - Cash crops:
       - Cotton found mostly in the southernmost region
       - Rice: coast of South Carolina & Georgia
       - Sugar cane: Louisiana & Texas
       - Tobacco: Virginia, North Carolina & Kentucky
     - Livestock production
       - North Carolina: hogs, oxen, horses, mules and beef cattle
       - Kentucky: horses
     - Limited Industry
       - Agricultural tools: cotton gins, planters & plows
       - Tredegar Iron Works of Richmond, VA made railroad equipment, machinery, tools & cannons
       - Flour milling
       - Depended on the North & Europe for other goods
• Defending Slavery
  o Supporters said it was more human than the life of factory workers in the North
  o Some feared weakening controls might lead to violent uprisings
  o Critics argued factory workers could quit their jobs & slaves often suffered abuse

2. African Americans in the South
  • Only 6% were free
    o Descendants of slaves freed during or after the Revolution or had bought their freedom
    o Lived mostly in Delaware & Maryland
    o Faced discrimination
      ▪ Unfair laws & restrictions (work, voting & travel)
      ▪ Couldn’t be on a jury or hold political office
      ▪ Couldn’t serve in the army
    o Norbert Rillieux invented machine that refined sugar
    o Henry Blair patented a seed planter
  • Life of Enslaved African Americans
    o Mostly field hands on cotton plantation
      ▪ Worked in the household
      ▪ Worked as skilled laborers
      ▪ Overseers administered punishments
    o Only protection: owners looked at them as valuable property
    o Some were skilled workers in the cities, but their wages went to their owners
    o Conditions varied depending on the owners
      o Slave Codes, laws that controlled every aspect of their lives
        ▪ Forbidden to gather in groups of more than three
        ▪ Not allowed to leave their owner’s land without written permission
        ▪ Not allowed to own guns
        ▪ Made it a crime to learn how to read or write because skill could help them if they escaped
        ▪ Couldn’t testify in a court of law, so not able to bring charges against those who abused them
Slave marriages and slave families were not recognized, owners could sell husband, wife and children to different buyer

When fortunate enough to stay together, extended family passed on traditions, African stories, folk tales and songs

Many became Christians
  - Religion helped them cope with harshness of slave life
  - Religious folk songs called *spirituals* blended bible themes with the realities of slavery

- Resistance to Slavery
  - Fought by breaking tools, destroying crops & taking food
  - Worked slowly or pretended not to understand
  - Tried to escape to the North
  - Revolted/ violence
    - Nat Turner, African American preacher led major revolt in Southampton County, Virginia (1831)
    - Led followers through VA killing 57 whites
    - After 2 months of hunting him and the killing of many innocent African Americans, he was captured and he was hanged

Section 4: The Challenges of Growth

Focus Question: How did the Americans move west, and how did this intensify the debate over slavery?

1. Moving West
   - The Wilderness Road
     - Daniel Boone & a party of 30 cleared route
     - 1775
     - Crossed Appalachian Mountains in western PA through Cumberland Gap into KY
   - Western population creating need for better roads
     - Roads: unpaved, dotted with tree stumps & washed out by rain
     - New States
       - Kentucky 1792
       - Tennessee 1796
       - Ohio 1803
       - Louisiana 1812
2. Roads & Turnpikes
   o Turnpikes
     ▪ Private companies built gravel & stone roads
     ▪ Charged tolls
     ▪ Pike or pole blocked the road and after the driver paid the toll, the pike keeper turned the pole aside to let the wagon pass (These roads were called **turnpikes**.)
     ▪ Lancaster Turnpike linked Philadelphia to Lancaster, PA
       ▪ Road set on a bed of gravel and topped with flat stone; water drained off quickly
       ▪ Smoother ride
       ▪ Cheap, reliable transportation to isolated areas
   • **Corduroy Road**
     o Logs were set over swampy areas to keep wagons from sinking into the mud
     o Noisy & bumpy
     o Dangerous for horses
   • **National Road** was built 1811-1818
     o Congress approved funds in 1806
     o War of 1812 slowed the building progress
     o From Cumberland, MD to Wheeling, VA
     o Later extended into Illinois in 1850
     o Bridges over rivers & streams

3. Canals
   • Road travel: slow & isolated
   • Fastest, cheapest way to move goods was by water
     o Most rivers ran north & south
     o Solution: build canals from east to west
   • **Canal** is a channel that is dug across land & filled with water
     o Chambers called locks are large enough to hold boats & water is let in or out to raise & lower them
• Building the **Erie Canal**
  o Linked the Great Lakes to the Mohawk & Hudson Rivers
    - Let western farmers ship goods to port of NY
    - NY Governor DeWitt Clinton persuaded state lawmakers to provide money to build the canal “Clinton's Ditch”
    • Work began in 1817
    • *First dug by hand*
    • *Inventors developed new equipment to speed up progress*
      o *Stump-puller could pull out nearly 40 tree stumps a day*
    • *Workers built stone bridges to carry the canal over two rivers*
      o Paid for itself in two years
      o Help make NYC a center of commerce
      o Many new canals were followed

4. The Extension of Slavery
• Western expansion created new states
• 1819, nation had 11 slave & 11 free states
  o New state would disrupt the balance of power in the Senate
• Missouri Compromise
  o Henry Clay 1820
  o Missouri admitted as a slave state
  o Maine admitted as a free state
  o Louisiana Territory would be free north of the southern border of Missouri
  o Gave slave owners a clear right to pursue fugitives into free regions & return them to slavery
• Sectionalism Issues
  o South angry: Congress had given itself the power to make laws concerning slavery
  o North angry: Congress allowed slavery to expand into another state