

## The Industrial Revolution

Changed How People  
Worked, Lived, Played  
1700 – 1900

Began in England

---

---

---

---

---

---

---

## Agriculture Revolution

- Enclosed Farms Developed
  - Fences & Barbed Wire Create Boundaries
  - Planting Methods Used
    - Attempt to Boost Crops
    - Different planting styles experimented
- Small Farmers Become Tenant Farmers
  - Work the Land in Exchange for Profit Shares

---

---

---

---

---

---

---



---

---

---

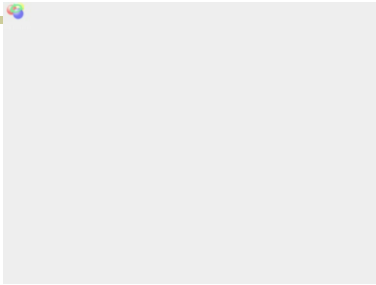
---

---

---

---

## CROP ROTATION



---

---

---

---

---

---

---

---

## Agriculture Revolution

- Crop Rotation
  - Keep Soil Filled with Nutrients
  - Expand Production
- Small Farmers Moved to Cities
  - Work in Factories
- England's Population Explodes
  - Better nutrition

---

---

---

---

---

---

---

---

## Industrialization

- England had Extensive Natural Resources
- Water Power & Coal Fuel Machines
- Iron Ore
  - Constructed Buildings, Machines, Tools
- Rivers for Transportation
- Harbors for Merchant Ships

---

---

---

---

---

---

---

---

## [ Vocab ]

- Industrial Revolution:
- Enclosures:
- Crop Rotation:
- Industrialization:
- Factors of Production:
- Factory:
- Entrepreneur:
- Urbanization:
- Middle Class:
- Corporation:

---

---

---

---

---

---

---

---

## [ Supporting Growth ]

- British Invest in New Inventions
- Banking System Makes Loans Accessible
- High Demand for Goods Over Seas
- Factors of Production
  - Land, Labor, Capital
  - All needed to expand business and make profits

---

---

---

---

---

---

---

---

## [ Inventors & Inventions ]

---

---

---

---

---

---

---

---

## [ Inventions & Advancements ]

- Shuttle Developed for Looms
- John Kay
- Doubled Production



---

---

---

---

---

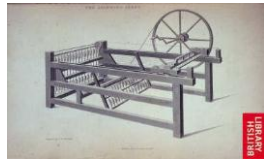
---

---

---

## [ Inventions ]

- Spinning Jenny
- John Hargreaves
- Produce Thread Faster
  - Kept Up with Weavers
  - Work 8 Threads at Once



---

---

---

---

---

---

---

---

## [ Inventions ]

- Power Loom
- Edmund Cartwright
- Used Strong Thread & Water Power to Create Stronger Garments
- Several Looms Created Factories



---

---

---

---

---

---

---

---

## Inventions

- Cotton Gin
- Eli Whitney
- Cleaned Seed Out of Cotton
- Increased Production
  - 1.5 Million Pounds 1790
  - 85 Million Pounds 1810



Copyright Microsoft

---

---

---

---

---

---

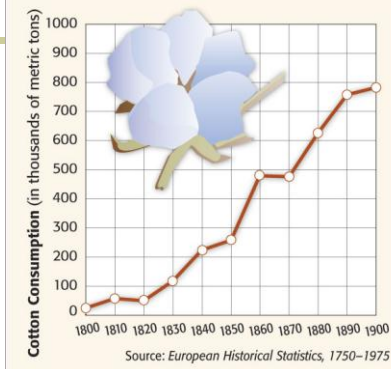
---

---

---

---

## British Cotton Consumption, 1800–1900




---

---

---

---

---

---

---

---

---

---

## BELLWORK

- On a half sheet of paper – write down ONE – the best – the bestest – the most BEAST invention of all time.
  - And write one sentence to explain why. (I don't want to hear: "Ummm Jellies, because – I doooooont know.... Duh huh huh, I'm hurt.")

---

---

---

---

---

---

---

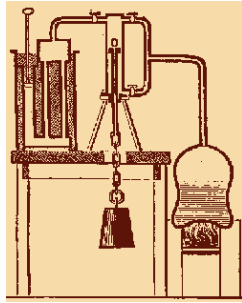
---

---

---

## Inventions

- Steam Engine
- James Watts
- Improved Engine
  - Burn Less Fuels & Work Faster



---

---

---

---

---

---

---

---

## Water Transportation

- Steamboat (Ferry)
- Robert Fulton
- The *Clermont*
  - Moved Passengers Up & Down the Hudson
- Use Boats to Create Water Canals



---

---

---

---

---

---

---

---

## Road Transportation

- McAdam Roads
- John McAdam
- Large Rocks Allowed for Drainage
- Smoothed Layer of Gravel on Top Kept Wagons from Sinking
- Tollgates Paid for Roads



---

---

---

---

---

---

---

---



---

---

---

---

---

---

---

---

## Railway Transportation

- Railway Locomotive
- George Stephenson
- Helped Develop Railroad Line (1825)
- Transport Materials Faster & Cheaper



---

---

---

---

---

---

---

---



---

---

---

---

---

---

---

---




---

---

---

---

---

---

---

---

---

---

## Changes in Ways of Life

Development of Industrialized Cities

Pros & Cons

---

---

---

---

---

---

---

---

---

---

## Vocab

- Laissez Faire:
- Adam Smith:
- Capitalism:
- Utilitarianism:
- Socialism:
- Karl Marx:
- Communism:
- Union:
- Collective Bargaining:
- Strike:

---

---

---

---

---

---

---

---

---

---



## Growth of Cities

- People Move to Cities for Jobs
- Creates Urbanization
  - Cities Tripled & Quadrupled
- Factories Developed in Clusters

---

---

---

---

---

---

---

---



---

---

---

---

---

---

---

---

## Living Conditions

- No Plans
- No Sanitary Codes
- No Building Codes
- Lacked Adequate Housing
- Lacked Adequate Education
- Lacked Police Protection
- No Drains in Streets
- Garbage Crowded Streets

---

---

---

---

---

---

---

---

[ Living Conditions ]

- Widespread Sickness
- Cholera Epidemics
- Life Span Average
  - 17 Years in Some Cities
  - 38 Years in Rural Areas

---

---

---

---

---

---

---

---

[ Working Conditions ]

- Factories Pushed Increased Production
  - Work as Long as Possible During Daylight
- 14 Hour Work Days
- 6 Day Working Weeks
- Poorly Lit
- Dirty

---

---

---

---

---

---

---

---

[ Working Conditions ]

- Workers Injured by Machines
  - Boilers Explode
  - Exposed Belts Grab Fingers, Arms, Legs, Hair
- No Government Oversight
- No Workers Compensation
- Coal Miner's Life 10 Years Shorter
- Child Labor Utilized

---

---

---

---

---

---

---

---

# Impact of City Growth

---

---

---

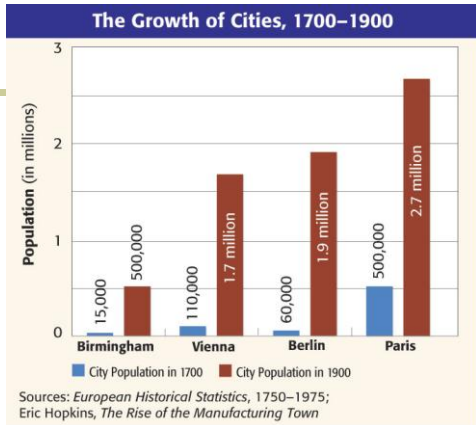
---

---

---

---

---



---

---

---

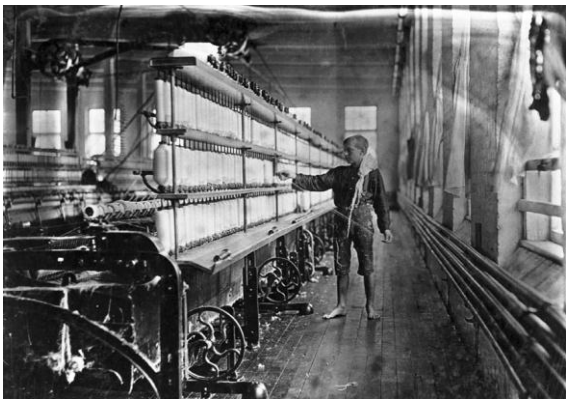
---

---

---

---

---



---

---

---

---

---

---

---

---

## [ Class Tensions ]

- Growing Middle Class
  - Factory Owners, Shippers, Merchants
- Upper Class Resentful of Rich Middle Class
- Middle Class
  - Upper Middle Class
    - Government Employees, Doctors, Lawyers, Managers of Factories
  - Lower Middle Class
    - Factory Workers, Toolmakers, Mechanical Drafters, Printers

---

---

---

---

---

---

---

---

---

---

## [ Positive Effects ]

- Created Jobs for Workers
- Created Wealth for Nation
- Created Progress
- Increased Production of Goods
- Raised the Standard of Living
- Gave Hope to Improve Lives

---

---

---

---

---

---

---

---

---

---

## [ Benefits ]

- Healthier Diets
- Better Housing
- Cheaper, Mass Production of Clothing
- Expanded Educational Opportunities
- Laborers
  - Won Higher Wages, Shorter Hours, Better Working Conditions

---

---

---

---

---

---

---

---

---

---

## Industrialization Spreads

Coming to America

---

---

---

---

---

---

---

---

## United States Industrialization

- Favorable Conditions
  - Rivers
  - Coal Deposits
  - Iron Ore Deposits
  - Immigrant Workers
- Industries developed before revolution reached the U.S.

---

---

---

---

---

---

---

---

## United States Industrialization

- Began in textile industry
  - Factories in major eastern cities
  - Samuel Slater provided machines
- Women began working in textile mills
  - Watched inside & outside of work for behavior
  - 12 Hour work day
  - 6 Days per week

---

---

---

---

---

---

---

---

## United States Industrialization Modernizes

- Telephone
  - "What hath God wrought?"
- Light Bulb
  - Work longer days
- Kodak Camera
  - Create accurate records and memories
- Railroads
  - Transport resources and people
    - Expands the area where people can reasonably live
- Used Natural Resources
  - Oil
  - Steel
  - Cotton

---

---

---

---

---

---

---

---

---

---

### The Growth of Railroads in the United States




---

---

---

---

---

---

---

---

---

---

## Development of Corporations

- John D. Rockefeller
  - Standard Oil
  - Horizontal Integration
- Andrew Carnegie
  - Carnegie Steel Company
  - Vertical Integration
- People invest in companies

---

---

---

---

---

---

---

---

---

---

## Age of Reforms

Economic, Social, & Political

---

---

---

---

---

---

---

---

## Philosophers

- Adam Smith
  - Laissez Faire Economics
    - Hands-Off
  - Free Economy Grows (*The Wealth of Nations*)
  - People decide what goods are successful
- Thomas Malthus & David Ricardo
  - Capitalism
  - Investing Money with the Goal of Making Money
  - Poor Class Will Always Exist

---

---

---

---

---

---

---

---

## Rise of Socialism

- Jeremy Bentham
  - Utilitarianism
  - People Judge Ideas on the Basis of Usefulness
  - Government Should Promote Greatest Good for Greatest Number of People
- John Stuart Mills
  - Called for Government to Distribute Wealth Among People

---

---

---

---

---

---

---

---

## Socialism (Cont)

- Socialism
  - Owned by the People
  - People Share Profits
    - Workers give money from paychecks to the government
      - Large amounts of income given
  - Developed out of Optimistic View of Human Nature
  - Government helps run the economy

---

---

---

---

---

---

---

---

## Communism

- Karl Marx
  - Father of Communism
  - Worked with Fredrich Engels
- Wrote: *Communist Manifesto*
  - Introduced Marxism
  - Warring Classes
    - Haves: Employers (Bourgeoisie) Middle Class
    - Have-nots: Workers (Proletariate)

---

---

---

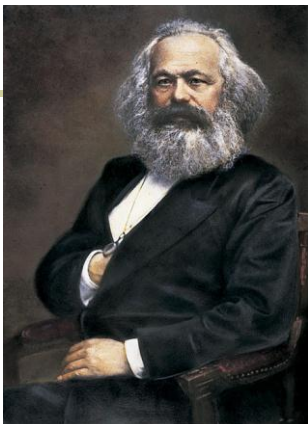
---

---

---

---

---



---

---

---

---

---

---

---

---



## Communism

- Belief that Capitalism Would Destroy Itself
  - Factories Would Drive Out Small Business
    - Only Large Factories Left
  - Proletariate Would Rise Up & Control Factories
  - Classes Would No Longer Exist
    - Private property does not exist
- Communism: Complete socialism & production owned by the people

---

---

---

---

---

---

---

---

## Communism

- Communist Leaders
  - Vladimir Lenin (Russia)
  - Mao Zedong (China)
  - Ho Chi Minh (Vietnam)
  - Fidel Castro (Cuba)

---

---

---

---

---

---

---

---

## Reforms

---

---

---

---

---

---

---

---

## Unions

- Voluntary association of workers
- Collective Bargaining
  - Used by union leaders to negotiate worker benefits
    - Better Working Conditions
    - Higher Wages
- Power of the Strike
  - Management would struggle to replace skilled workers

---

---

---

---

---

---

---

---

---

---

## Reform Laws

- United States & Britain look to end child labor
  - Factory Act 1833 (Britain)
    - Illegal to hire a child under 9 years of age
    - 9 – 12 Could not work more than 8 hours per day
    - 13 – 17 Could not work more than 12 hours per day
  - 1842 Mine Act
    - No women or children working in mines

---

---

---

---

---

---

---

---

---

---

## Other Reform

- Abolition of Slavery
  - Civil War of 1865
    - Emancipation Proclamation
      - Freed slaves in seceding states
      - Issued by President Lincoln
    - 13<sup>th</sup> Amendment
      - Freed slaves in all states
    - 14<sup>th</sup> Amendment
      - Gave African Americans citizenship
- Women Fight for Equality
  - Want the right to vote

---

---

---

---

---

---

---

---

---

---



SELF ASSESSMENT – Will be completed by each student after presenting...

<b>A</b>	Student shows creativity and thought in developing his/her invention or product improvement. The 1 – 2 page paper is complete and explains in full detail the effects their invention will have on society.
<b>B</b>	Student shows creativity and thought in developing his/her invention or product improvement. The 1 – 2 page paper lacks detailed reasoning on how the invention will impact society.
<b>C</b>	Student completes the development of the invention but shows little thought or creativity. The paper is brief and does not fully explore the impact of the invention.
<b>D</b>	Student completed either the invention or the paper and showed minimal effort on the assignment.
<b>U</b>	Student did not develop an invention or write the 1 – 2 page paper.

---



---



---



---



---



---



---