The Industrial Revolution In Europe

Importance of the Industrial Revolution

- The Industrial Revolution
  - made the European working-class
  - made the European middle-class
  - “Time is money”
  - Man had physical means to subdue nature
  - Max Weber’s “Protestant work ethic”
  - Carlyle’s “cash nexus”
  - Marx’s "commodification" of man

Why Does It Start in Britain?

- Agricultural revolution
  - New methods and inventions in agriculture
  - Enclosure
  - Rise in population
  - Rise in food production
- Britain’s cottage industry
- The Bank of England (Capital)
- Entrepreneurs and progressives
- Mineral resources within small transportation network
- Unlike much of Europe the British were consumers
- Markets

Enclosure

- British Parliament enacts series of Enclosure Acts (ca. 1760 and 1830)
  - Divided up the "common land " traditionally been shared by the community
  - Redistributed plots of land to combine them into larger areas
  - Revoked the poor peasant farmer's gleaning rights
  - Required all farmers to build an expensive gate around their lands.

Industrial Britain

1733 - John Kay invents flying shuttle
1768 - James Hargreaves invents spinning jenny
1768 - Richard Arkwright develops water frame spinning machine
1769 - James Watt develops efficient steam engine
1782 - James Watt develops rotary steam engine
1787 - Edmund Cartwright invents power loom (mechanical loom)
1804 - Richard Trevithick pioneers first industrial rail
1830 - George Stephenson’s Rocket transports people

Railroads

- 1550 Wagonways used in German mines
- 1776 Tramways used in many parts of Europe
- 1804 Richard Trevithick first road locomotive
- 1821 Julius Griffiths patented passenger road locomotive
- 1825 George Stephenson’s Rocket
• 1807 Robert Fulton Clermont steamboat

The Factory System
• Factory system becomes the chief way of organizing labor
• Demands discipline
• Work is repetitive and boring
• Wasteful habits are sinful
• And of course there are the other negative affects…

Working Conditions
• A twelve to sixteen hour workday was normal (no weekends) (no over-time)
• Whole families tended to work in the industry
• No workers compensation
• Women dominated workforce (in early factories)
• No Child Protection laws
• Overproduction and depressions

The Workers
• Factory work quickly became a male occupation
• Factory’s produced a new line of skilled workers
• Standards of living generally rose as prices declined
• Housing and transportation became cheaper
• Industrialization was “boom or bust”

Reform in the Early 19th Century
• Attempts at social reform and unionization
• Chartism’s (1838-1848) demand for suffrage
• Britain’s Factory Acts (1802 & 1819)
• The call for public health measures and city improvements
  – Edward Chadwick (Britain’s Upton Sinclair)
  – Studies squalor of city and pushes for reform

European Society in Early 19th Century
• The rising pace of urbanization
• The city changes in its plan
• The Irish Potato Famine (the great hunger)
• The industrial bourgeoisie middle class and Proletariat

The “West” Industrializes
• United States 1850’s onward
• Europe lags behind
• Tariff protections
• Government supported industries
• Large role of Joint Stock Company
• Continent built upon the iron and coal industry