

I. Section 1: Industrialization: Industrial Revolution- big increase in output of machine-made goods.

- A. Agricultural Revolution- improvements made in farming.
 - 1. Wealthy landowners bought up land, creating enclosures.
 - 2. Enclosures: allowed farmers to experiment
 - 3. Jethro Tull- invented Seed Drill- planted seeds
- B. Crop rotation- best development for scientific farmers.
 - 1. Improved on three-field system.
 - 2. Livestock improvements- breeding.
- C. Industrialization: process of developing machine production of goods.
 - 1. England's advantages:
 - a. Water power and coal to fuel machines
 - b. Iron ore to build machines
 - c. Rivers for transportation
 - d. Harbors to export products
 - e. Political and economic stability

II. Inventions Force Change

- A. Spinners improve the ability to weave cotton.
 - 1. John Kay- invented the flying shuttle to weave cotton.
 - 2. Eli Whitney- invented the cotton gin to remove seeds.
- B. Steam engine- expensive to run (burned fuel)
 - 1. Robert Fulton- invented the steamboat in 1807
 - 2. Improved water transportation.
 - 3. Entrepreneur- person who organizes and manages a new business
- C. Road transportation- large stones covered with crushed stone
 - 1. Private investors built and operated roads for profit.
 - 2. Turnpikes- pay toll at a tollgate/turnstile
- D. Railway inventions- steam engine on wheels

1. George Stephenson- built the first railroad line- 1825.
2. The *Rocket*- engine that connected cities of Liverpool & Manchester

E. Impact of railroads

1. Helped economy by moving materials & products
2. Created many new jobs (iron & coal)
3. Boosted agriculture & fishing industries by moving products to distant cities
4. Easy travel allowed people to take jobs in distant cities

II. Section 2: Industrialization Continues- Industrialization's Effects on Life

A. Urbanization-

1. Movement of people to the cities
2. London- the major industrial center of Europe- 1800's

B. Living Conditions- poor housing, education, & protection

1. Unpaved streets with no drains & piles of garbage
2. Workers lived in crowded, dirty shelters.
3. Illness was widespread- average life span = 17 years

C. Working Conditions- 14 hours a day, 6 days a week

1. Work on same job with machines day after day
2. Dangerous work- poor lighting, dirty, fatigue
3. Coal mines- most dangerous conditions

D. New Social Classes

1. Middle class:
 - a. Skilled workers, professionals, business people & wealthy farmers
 - b. Some gained more money & power than the aristocrats & landowners

2. Upper middle class- gov't employee, doctors, lawyers, factory managers
3. Lower middle class:
 - a. Toolmakers, mechanics, printers
 - b. Enjoyed a comfortable standard of living

E. Positive Effects of Industrial Revolution

1. Created jobs for workers
2. Added wealth to the nation
3. Stimulated technological progress & invention
4. Increased the production of goods
5. Raised the standard of living
6. Healthier diets, better housing, cheaper clothes
7. Middle classes- higher wages, shorter hours & better working conditions

IV. Manchester, England- Case Study

A. Best & worst of the Industrial Revolution

1. Mill owners & middle class became wealthy
2. Dirty city to live & work in

B. Workers labored in terrible conditions

1. Child labor- six year olds
2. Children were beaten to keep them awake
3. Dangerous work, even for the children

C. Factory Act 1819- legislation restricted working age & hours

D. Factories polluted the air & water

V. Section 3, Industrialization Spreads: Development in the U.S.

- A. U.S. had the same resources as England: rivers, coal, iron ore, immigrant labor
- B. Francis Lowell- revolutionized the American textile industry
 - 1. Mechanized every part of cloth manufacturing
 - 2.. Established Lowell, MA as manufacturing center
- C. Young women worked in mills producing cloth
- D. U.S. industry grew in the late 1800's
 - 1. Wealth of natural resources & inventions- electric light bulb, telephone
 - 2. Urban growth of consumers
 - 3. Railroads- ran through Chicago & Minneapolis
 - 4. Entrepreneurs sold stock to raise money
 - a. Stockholders are part-owners of these businesses
 - b. Corporations- business owned by stockholders

VI. Development in Europe

- A. Belgium
 - 1. Had same resources as England & U.S.
 - 2. William Lockerrill- built industrial enterprise through spinning machinery
- B. Germany
 - 1. Scattered resources & struggling economy slowed industrialization
 - a. Pockets of growth emerged
 - b. Germany imported British engineers & equipment
 - 2. Built railroads to link manufacturing centers
 - 3. Economic & industrial strength led to later military strength
- C. Some countries did not industrialize
 - 1. Austria-Hungary- mountains hurt transportation
 - 2. Spain- poor roads & few waterways

VII. Worldwide Impact of Industrialization

A. Imperialism

1. Extending one's country's rule over many lands
2. Seized countries for economic & industrial resources

B. Widened the gap between the "haves" & "have not's"

1. Poor countries supplied raw material & received manufactured goods
2. Produced a trade imbalance
3. Poor countries became dependent on powerful countries

C. Europe & U.S.

1. Became world powers- economically, politically, & militarily
2. Asia & Africa- still based on agriculture & small production

VII. Industrialization Philosophy

A. Laissez faire

1. Economic policy of letting owners of industry & businesses set working conditions without government interference
2. "Let people do as they please."
3. Government regulations only hurt the production of wealth

B. Adam Smith

1. Father of modern economics
2. Economic liberty guaranteed economic progress

C. Capitalism- economic system where money is invested in business with goal of making a profit

D. Thomas Malthus- population increased faster than the food supply

E. David Ricardo- there will be winners & losers in capitalism

IX. Socialism

- A. Utilitarianism- government should do the greatest good for the greatest number of people.

1. Jeremy Bentham- individuals should be free to pursue their desires without interference from the state.
2. John Stuart Mill- wanted ordinary working people to have equal profits & rights.

B. Socialism

1. Government should actively control/plan the economy
2. No free market
3. Government control of factories, mines, railroad to abolish poverty & promote equality
4. Public ownership would help workers

C. Karl Marx- wrote Communist Manifesto

1. Marxism- proletariat revolt against bourgeoisie & seize factories.
 - a. Proletariat would then produce what was needed for society.
 - b. Workers sharing profits leads to economic equality for everyone.
 - c. Classless society would develop
2. Communism
 - a. A form of socialism where production is owned & controlled by the people.
 - b. No private property, all goods shared equally.
3. Marxist proletariat revolts occurred in 1900's, none in 1800's

X. Unions

- A. Unions- workers join together to make changes
- B. Collective bargaining- negotiations between workers & employees
- C. Bargained for better conditions & higher pay
- D. Strike- refuse to work if demands are not met
- E. Skilled workers had an advantage