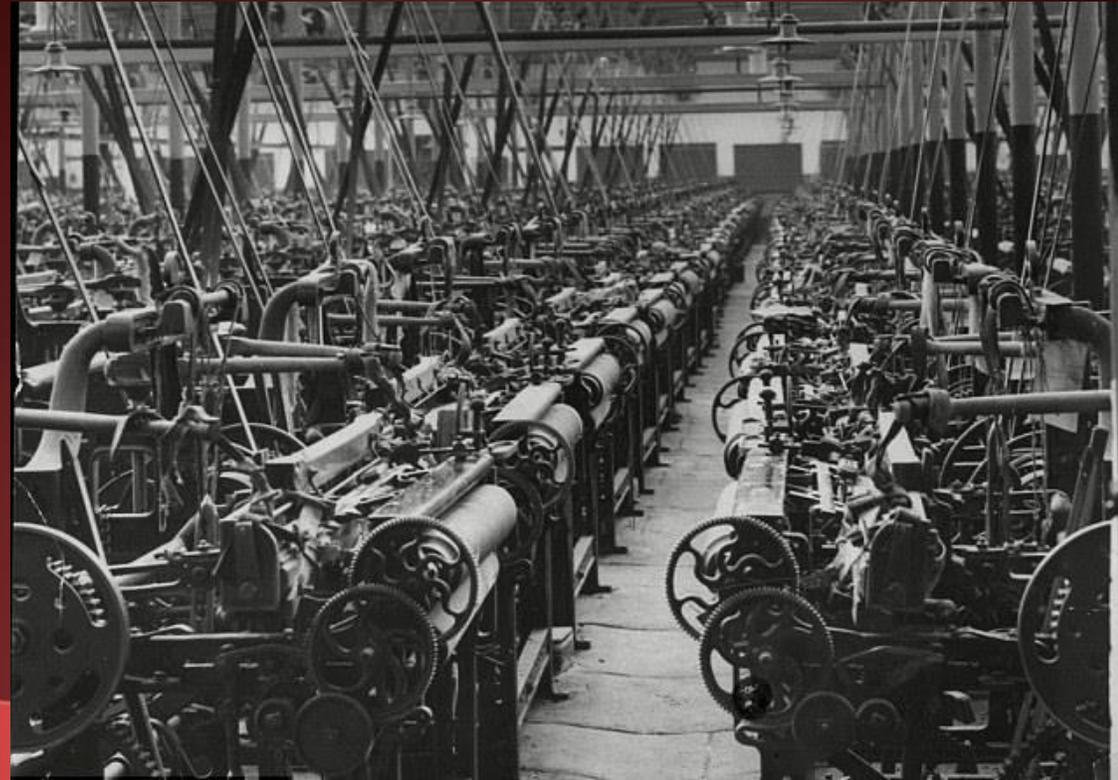


Chapter 10 Section 1

The Industrial Revolution

By: Jason Hauck



I. The Industrial Revolution in Great Britain

- A. The Industrial Revolution began in Great Britain in the 1780s. Several factors contributed to make Great Britain the starting place.
 - 1. First, an Agricultural Revolution beginning in the eighteenth century changed agricultural practices.
 - a. More people could be fed at lower prices with less labor.
 - 2. Second, with the increased food supply, the population grew.
 - a. Parliament passed enclosure movement laws- landowners fenced off common lands.
 - i. This forced many peasants to move to towns, creating laborers for factories.



3. Third, Britain had a ready supply of money, or capital, to invest in new machines and factories.
 - a. Entrepreneurs found new business opportunities and new ways to make profits.
4. Fourth, natural resources were plentiful in Britain.
 - a. Rivers provided water power and transporting products.
 - b. Britain also had abundant supplies of coal and iron ore.
5. Finally, a supply of markets gave British manufacturers a ready outlet for their goods.
 - a. A growing demand for cotton cloth led British manufacturers to look for ways to increase production.

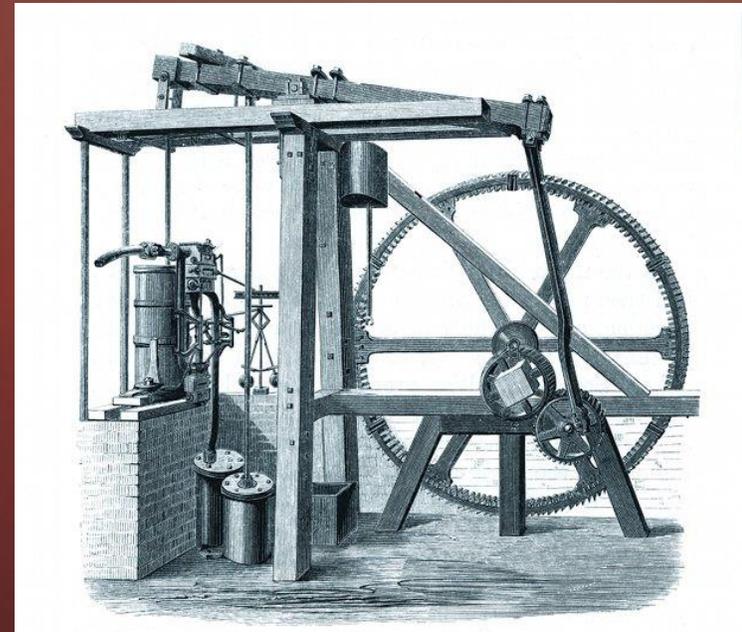
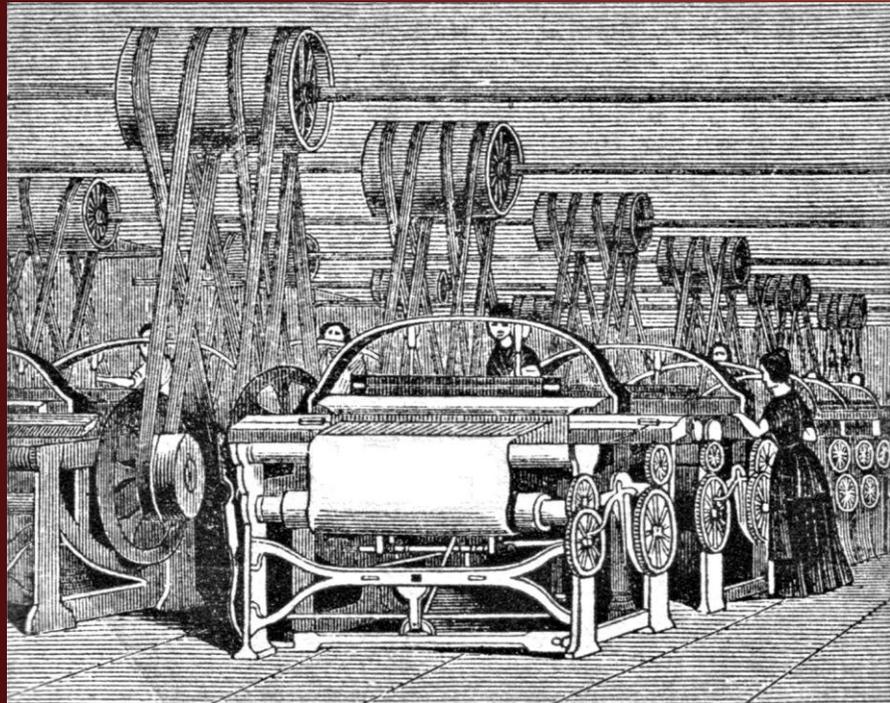
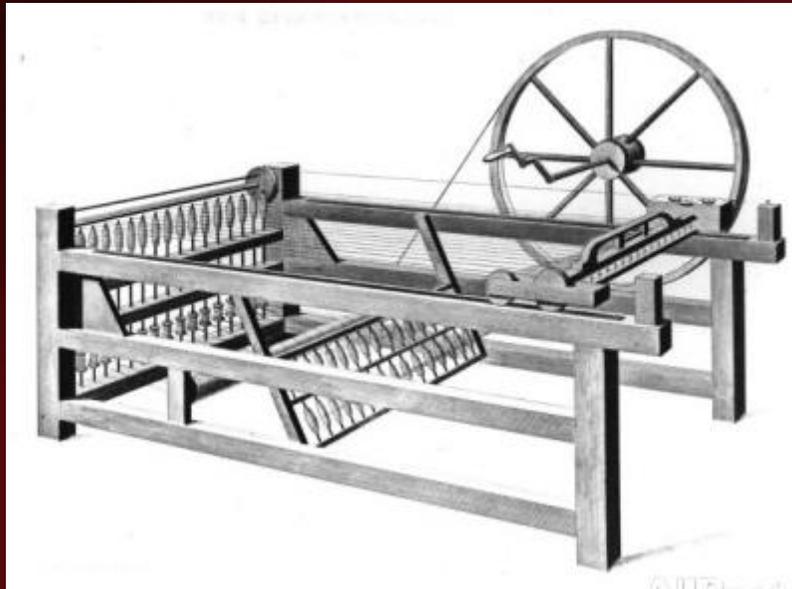
B. The manufacture of cotton cloth was a two-step process.

1. First, make cotton thread from raw cotton.
2. Then, weave the cotton thread into cloth on looms.
3. This production method was called a cottage industry.



C. A series of technological advances during this time made the cottage industry inefficient.

1. James Hargreaves invented the spinning jenny.
2. Edmund Cartwright invention the water-powered loom.
3. James Watt improved the steam engine.



D. In 1760 Britain, had imported 2.5 million pounds of cotton.

1. By 1840, 366 million pounds of cotton were imported.
 - a. By this time, cotton cloth was Britain's most valuable product.

E. The factory was another important element in the Industrial Revolution.

1. Factory owners wanted to use their new machines constantly.
 - a. Workers were forced to work in shifts to keep the machines producing at a steady rate.

F. Early factory workers came from rural areas where they were used to periods of hectic work, such as harvest time, followed by periods of inactivity.

1. Early factory owners therefore disciplined workers to a system of regular hours and repetitive tasks.

G. The steam engine was crucial to Britain's Industrial Revolution.

1. The Steam Engine's fuel was coal.

2. The success of the steam engine led to an expansion in coal production. New processes using coal aided the transformation of another industry—the iron industry.

H. Britain's natural resources included large supplies of iron ore.

1. Iron was improved when Henry Cort developed a process called puddling.

a. Coke was used to burn away pig iron.

I. From 1740-1780 Britain's produced of iron increased from 17,000 to 70,000 tons of iron.

1. By 1852 Britain produced almost 3 million tons.

a. More iron than the rest of the world combined.

Industry in Great Britain 1850

THE USES OF GEOGRAPHY:
What geographical factors help explain why industrialization began in Great Britain?



J. In 1804 Richard Trevithick's locomotive ran on an industrial rail line in Britain.

1. It pulled 10 tons of ore and 70 people at 5 miles per hour.

K. The Rocket sped along at 16 miles per hour while pulling a 40-ton train.

1. Within 20 years, locomotives were able to reach 50 miles per hour.

2. From 1840-1850 Britain increased from 2,000 to 6,000 miles tracks.

L. Economic growth became a basic feature of the new industrial economy.

1. Building railroads created new jobs.

2. Less expensive transportation led to lower-priced goods.



Trevithick's Locomotive



The Rocket

II. The Spread of Industrialization

- A. Great Britain had become the world's first industrial nation.
 - 1. Great Britain produced one-half of the world's coal and manufactured goods.
- B. The Industrial Revolution spread to the rest of Europe at different times and at different speeds.
 - 1. It will spread to countries that actively encouraged development.
 - a. Build roads, canals, and railroads.

C. An Industrial Revolution also occurred in the United States.

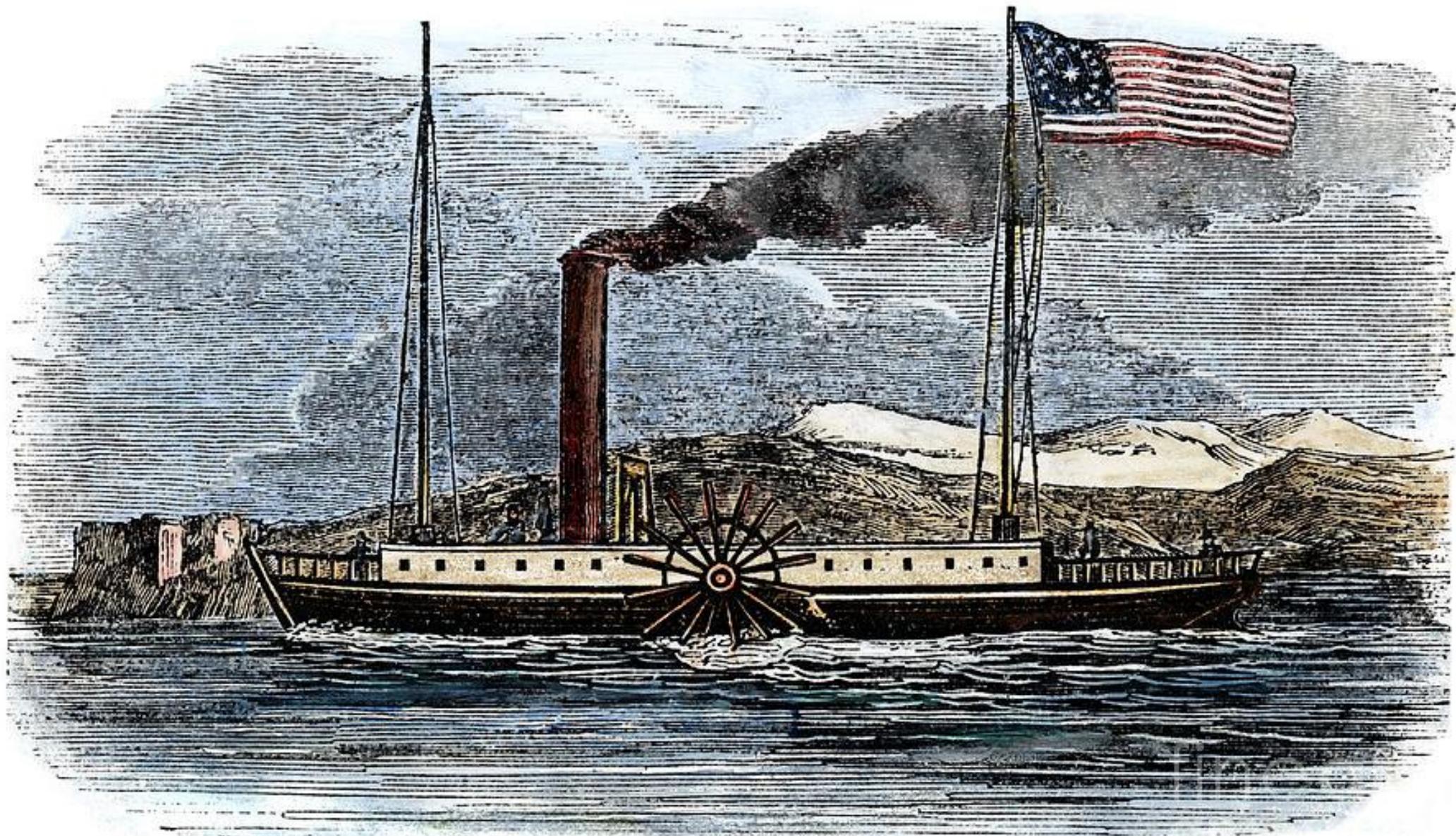
1. In 1800 nearly 6 out of every 7 American workers were farmers.
2. By 1860, only about 50 percent of American workers were farmers.

D. Robert Fulton built the first paddle-wheel steamboat, the *Clermont*, in 1807.

E. 1860, about 30,000 miles of railroad track covered the continental United States.

F. Labor for the growing number of factories in the Northeast came chiefly from the farm population.

1. Women and girls made up a large majority of the workers in large textile (cotton) factories.



“The Clermont,” Fulton’s first American Steamboat.

III. Social Impact of Industrialization

- A. European population increased from 140 million in 1750 to 266 m in 1850.
 - 1. Resulted from a decline in death rates, wars, and major epidemic diseases.
 - 2. People were better fed and more resistant to diseases.
- B. Famine and poverty were two factors that impacted urbanization.
 - 1. More than 1 million people died during the Irish potato famine.
 - 2. Large numbers of people migrated from the countryside to cities to work in factories.

C. In 1800 London had a population of 1 million.

1. By 1850, London's population had swelled to about 2.5 million.

D. The rapid growth of cities led to pitiful living conditions.

1. Urban reformers to call on local governments to clean up their cities.

E. Industrial capitalism, an economic system based on industrial production.

1. This system produced a new middle-class group—the industrial middle class.

Living Conditions of the Industrial Revolution



F. The new industrial middle class that emerged during the Industrial Revolution were the people who built the factories, bought the machines, and developed the markets.

G. The industrial working class faced wretched working conditions.

1. Work hours ranged from 12 to 16 hours each day, 6 days per week.
2. There was no security of employment, and no minimum wage.

H. In Britain, women and children made up two-thirds of the cotton industry's workforce by 1830.

1. Factory Act of 1833 set nine as the minimum age for employment and limited hours for older children.

2. Women will then make up 50 percent of textile workers.

- a. They were paid half of what men received.

3. Men now earned most of the family income by working outside the home.

- I. The pitiful conditions created by the Industrial Revolution gave rise to a movement known as socialism.
 1. In this economic system, the government owns and controls some means of production, such as factories and utilities.
 2. Karl Marx is one of the founders of the Socialist movement.

