# Inventions of the Industrial Revolution

# **Early Factory Production**

Concentrated production in one place [materials, labor] Located near sources of power [rather than labor or markets]. Required a lot of capital investment [factory, machines, etc.] more than skilled labor. Only 10% of English industry in 1850

# The Factory System

Rigid schedule.

12-14 hour day.

Dangerous conditions.

Mind-numbing monotony.





#### James Watt- Steam Engine



- Fully produced in 1776
- Heated water to produce steam and power machines.
- Alternative energy to running water that allowed for factories to spread out away from rivers.

# Richard Arkwright- Water frame Developed in 1768 Used water to power a spinning wheel for cotton thread.

 Allowed for quicker making of thread, which reduced prices of textiles.

# Edmund Cartwright- Power loom

- Designed in 1784
- Mechanized the process of weaving cloth.
- Helped lower the prices of textiles but also lowered the need for skilled workers.





# re Robert Fulton- Steamship



- First build in 1807
- Used steam engines to power it
- Made transportation over water much quicker and more efficient, helping the economy

## Karl Benz- Automobile

- First built in 1885
- Used a gasoline powered engine to run
- Increased how far people could travel and slowly changed the way people lived.



## James Hargreaves- Spinning Jenny



- Invented in 1764
- Multi-spindle spinning frame
- Reduced the amount of work needed to produce yarn

### Thomas Edison – Light Bulb



In 1879 Thomas Edison produced the first commercially viable light bulb

This invention changed the way people lived and worked after dark

#### Henry Bessemer – Bessemer Process

In 1856 Henry Bessemer the first process for manufacturing Steel inexpensively

Steel was now widely used In buildings and machines



### Eli Whitney – The Cotton Gin



In 1793 Eli Whitney invented cotton gin This device removed seeds from cotton The cotton gin increased amount of cotton Some historians believe this allowed slavery in the US South to become more sustainable

#### Jethro Tull – Seed Drill



- Jethro Tull perfected the Seed Drill in 1700
- This allowed seeds to be sowed in neat rows
- This invention helped provide the basis for modern agriculture

