**The Industrial Revolution Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Second Most Transformative Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_Pd.\_\_\_\_\_\_\_\_\_\_\_\_**

**Revolution in Human History Notes Worksheet**

**Renaissance to Industrialization**

The Renaissance provided the intellectual spark that led to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Revolution.

The Scientific Revolution led directly to the Industrial Revolution by providing the solutions and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to mechanize the production of goods for human consumption

The Industrial Revolution is one of the most \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ events in human history!

**Terms and Concepts**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – Having to do with industry, business or manufacturing

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – a transformative change in the way things are done

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – a change from making things by hand to making them in factories.

**Historical Significance of the Industrial Revolution**

An ancient Greek or Roman would have been just as comfortable in Europe in 1700 because daily life was not much different – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ were not much changed in 2000+ years!

The Industrial Revolution changed human life drastically & irrevocably!

More was created in the last 250+ years than in the previous 2500+ years of known human history

Industrialization made possible the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ class and the high \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_ we enjoy today!

**What was the Industrial Revolution?**

The Industrial Revolution was a fundamental change in the way \_\_\_\_\_\_\_\_\_\_\_\_ were \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, from human \_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, speeding up production while drastically reducing \_\_\_\_\_\_\_\_\_\_.

Industrialization fits perfectly into the ethos of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and the effects of this change have been \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The more efficient means of production and subsequent higher levels of production triggered far-reaching changes to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ societies

Created a prosperous middle class

Expanded the scope of human achievement and knowledge

Allowed man to control his \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and take charge of his destiny.

**The Industrial Revolution**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ were invented which replaced human labor

New \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ sources were developed to power the new machinery – \_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_ (gas, kerosene) which made the machines independent of human power

Some historians place advances in atomic, solar, and wind energy at the later stages of the Industrial Revolution

Increased use of metals and minerals

Aluminum, coal, copper, iron, \_\_\_\_\_\_\_, etc.

Increased sophistication and power allows for an ever increasing living standard for humans.

Expansion of human endeavor and human knowledge is made possible!

**The Industrial Revolution**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ improved

Ships

Wooden ships → Iron ships → Steel ships

Wind-powered sails → Steam-powered boilers

\_\_\_\_\_\_\_\_\_\_\_ are the most cost-effective way to transport raw materials and finished goods. Almost everything we buy is transported at least partially by ship.

\_\_\_\_\_\_\_\_\_\_\_\_\_—steam, coal and diesel powered, provided the most efficient way to transport raw materials, finished goods and human beings on land. It still is the most cost-effective way to transport goods on land.

Automobiles—Automobiles and trucks provided mobility for the individual and a way to efficiently ship merchandise to retail locations. This changed the culture of the US and altered forever the living standards of Americans.

**Communication improved—rapid communication possible! Global reach!**

Telegraph Telephone Radio

**Transportation: Rail and Canal**

**Railroads**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ nations first laid track in their own countries, then in their colonies and other areas under their political influence

Russia – Trans-Siberian railroad (1891-1905)

Germany – Berlin-to-Baghdad railroad across Europe to the Middle East

Great Britain – Cape-to-Cairo railroad vertically across Africa

Canals

\_\_\_\_\_\_\_\_\_\_\_\_ Canal (1869) – provided access to the Indian Ocean from the Mediterranean Sea without the need to sail around Africa

Kiel Canal (1896) – North Sea connected to the Baltic Sea

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Canal (1914) – provided access from one side of the Americas to the other without the need to sail around the tip of South America

**Transportation: Auto and Air**

**Automobiles**

Charles Goodyear – vulcanized \_\_\_\_\_\_\_\_\_\_\_\_\_\_, 1839

Gottlieb Daimler – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, 1885

Henry Ford – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ line, 1908-1915

**Airplanes**

Orville and Wilbur Wright – airplane, 1903

Charles Lindbergh – first non-stop flight across the Atlantic, 1927

20th-century – growth of commercial aviation

**Developments**

\_\_\_\_\_\_\_\_\_\_ production of goods

Increased numbers of goods

Increased \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of goods produced

Development of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ system of production

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-to-\_\_\_\_\_\_\_\_\_\_\_\_\_ migration

People left farms to work in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Development of modern \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Financial capital for continued industrial growth

Development and growth of new socio-economic classes

Working class, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and wealthy industrial class

Commitment to research and development

Investments in new technologies

Industrial and governmental interest in promoting \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and overall \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ growth

Increase in investment in science and technology

**Origins of the Industrial Revolution**

**The Industrial Revolution**

**First Phase of Industrialization (1740-1860)**

Industrial processes are introduced

Marriage of science, technology, energy, organization to produce industrial efficiency

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are the first to industrialize, iron for ships, trains, buildings and machines; hallmark of the age!

**Second Phase of Industrialization (1860-1914)**

Consolidation of industrialism and the industrial \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Expansion of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to vastly speed up the industrial process; all facets of national economy are mechanized and industrialized (ex. agriculture, education)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is industrialized and conflict becomes exponentially more lethal towards the end of this phase, leading to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Wars and beyond.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a system that runs on automatic pilot; no one leader controls it and nothing can stop it once it gets started!

Today we are in the \_\_\_\_\_\_\_\_\_\_-Industrial Age, where the US is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ nation and manufacturing has moved to more cost-effective locations like \_\_\_\_\_\_\_\_\_\_, Malaysia and Vietnam.

**The Industrial Revolution**

The Industrial Revolution was the result of a marriage between \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The Industrial Revolution used ideas of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ “survival of the fittest” to frame the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that drove the revolution

The Industrial Revolution was a rapid change in the methods of producing goods.

The Industrial Revolution was the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ most \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ revolution in human history

Changed the way goods are produced and consumed

Changed the way humans \_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, while creating the modern class stratification in society.

Provided material wealth that lifted mankind substantially out of dire poverty!

**Transformation of Labor**

During the Industrial Revolution, the manufacture of goods was increasingly done by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ instead of human hand labor

The energy to drive the machines was from inanimate sources rather than human or animal power. Water, Coal, Steam and Oil=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!

The goods themselves increasingly were derived from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ objects

The central component was the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, a \_\_\_\_\_\_\_\_\_\_ to speed up manufacturing, increase efficiency and produce more wealth more cheaply than ever.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ no longer creates, but rather runs the machinery of production; part of the process!

Labor is a\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ like everything else! In a competitive market, \_\_\_\_\_\_\_\_\_ trend \_\_\_\_\_\_\_\_\_\_\_!

**Industrialization of Labor**

The processes required to manufacture a product are reduced to their individual steps. (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

Each step now becomes a \_\_\_\_\_\_\_\_\_\_ skill job.

Labor simply operates the machines, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Labor is fungible, replaceable and portable; labor typically is performed where costs are the lowest!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is no longer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; Labor is simply a part of the overall industrial system.

Human beings are treated in this system like machines!

**The Labor Force**

No single description could include all of these 19th century workers:

Factory workers

Urban artisans

Domestic system craftsmen

Household servants

Miners

Countryside peddlers

Farm workers

Railroad workers

Variations in duties, income, and working conditions made it difficult for them to unite.

**The Condition of Labor**

All working people, however, faced possible \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, with little or no provision for security.

In addition, they were subject to various kinds of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:

The closing of factory gates to late workers

\_\_\_\_\_\_\_\_\_\_\_ for tardiness

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for drunkenness

Public \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for poor quality workmanship

Beatings for non-submissiveness

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in \_\_\_\_\_\_\_\_\_\_\_ or non-payment of wages owed!

No disability for on the job injury and no recourse in a dispute with bosses!

**Prolitarianization**

During the \_\_\_\_\_\_th century, factory workers underwent a process of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (i.e., they lost control of the means of production).

**Family Structures Changed**

With the decline of the domestic system and the rise of the factory system, family life changed.

At first, the entire family, including the children, worked in the factory, just as they had at home.

Later, family life became fragmented (the father worked in the factory, the mother handled domestic chores, the children went to school).

Family members were \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ units living in mutual support.

Family as a Unit of Consumption

In short, the European family changed from being a unit of production and consumption to being a unit of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ alone.

The Family existed to pool its resources together to survive and maintain the human workers needed to tend the machines.

The value of the workers \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with the increasing speed and power of the machines.

**Management Revolution**

Industrial \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Management \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is reduced to smallest individual steps

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of corporate managers oversee the industrial production

Management allows for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ supervision, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and adaptability in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ line.

\_\_\_\_\_\_\_\_\_\_\_\_\_ can control thousands of employees and implement decisions almost immediately in a highly \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ environment.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is part of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ process!

**Origins of Industrial Revolution**

The Industrial Revolution began in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:

**Enclosure Movement**

Landowners enclosed common farmland, forcing poor farmers to find jobs in urban areas

**Investment Capital**

Surplus of money to invest by entrepreneurs

Mature banking system creates capital pools for investment

**Natural Resources**

Abundant water & coal for energy

**Colonial empire for obtaining raw materials cheaply.**

**Markets**

Britain has huge overseas colonial \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ markets for manufactured goods; guaranteed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!

**Old World Manufacture
Pre-Industrialism**

Prior to the Industrial Revolution goods were hand made by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_; need: speed up the process!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Industry-production done in the\_\_\_\_\_\_\_\_\_\_\_\_ by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

\_\_\_\_\_\_\_\_\_\_ work—individuals piece together a product from parts provided; \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ step in industrial process!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: During the first half of the 19th century, the European manufacturing process shifted from small-scale production by hand at home to \_\_\_\_\_\_\_\_\_\_\_-scale production by machine in a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ setting.

The Machine converts workers into industrial cogs in a system of production that creates vast amounts of wealth for industrialists and poverty for workers whose wages are driven lower.

**At the Expense of Workers**

The shift meant high quality products at \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ prices, but often at the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. For example, the raw wool and cotton that fed the British textile mills came from:

Lands converted from farming to sheep raising, leaving farm workers without jobs

The southern plantations of the United States, which were dependent upon slave labor

**Urban Growth**

Those who could no longer make a living on the land migrated from the countryside to the cities to seek work in the factories.

**Population Growth**

At the same time, the population of Europe continued to grow.

Huge labor pool to feed the machines!

**The Plight of the Cities**

The sheer number of human beings put pressure on city resources:

Housing, water, sewers, food supplies, and lighting were completely \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Conditions in the Countryside**

The only successful farmers were those with large landholdings who could afford agricultural \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Most peasants:

Didn’t have enough land to support themselves

Were devastated by poor harvests (e.g., the Irish Potato Famine of 1845-47)

Were forced to move to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to find work in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; no other alternative existed for earning a living!

**Why the Industrial Revolution Started in England in 18th Century**

England’s Resources: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The Commercial Revolution made many English merchants very wealthy

These merchants had the capital to invest in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ system – money to buy \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_ materials

**England’s Resources: Colonies and Markets Stimulate English Industrialism**

Wealth from the Commercial Revolution spread beyond the merchant class and created \_\_\_\_\_\_\_\_\_\_\_\_\_\_

England had more \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ than any other nation; British Empire covered \_\_\_\_\_\_\_\_% of Earth’s surface.

Its colonies gave England access to enormous markets and vast amounts of raw materials for English factories.

Colonies had rich textile industries for centuries

Many of the natural cloths popular today, such as calico and gingham, were originally created in India

China had a silk industry—the British skillfully dominated this trade.

England controlled the seas!

**England’s Resources: Raw Materials**

England itself possessed the necessary raw materials to create the means of production

\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Power (waterfalls, streams, rivers)

\_\_\_\_\_\_\_\_\_\_\_\_\_ – vast coal reserves powered steam engines

\_\_\_\_\_\_\_\_\_\_\_\_\_ – basic building block of large machines, railroad tracks, trains, and ships

\_\_\_\_\_\_\_\_\_\_\_—important metal used in many industrial alloys.

**England’s Resources: Workers**

Serfdom and guilds ended earlier in England than other countries

English people could freely travel from the countryside to the cities

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Acts – caused many small farmers to lose their lands, and these former farmers increased the labor supply

Concentrated supply of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_workers ready to work the new factories; the first industrial armies!

**England’s Resources: Merchant Marine**

World’s largest \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fleet

Merchant marine built up from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Revolution

Vast numbers of ships could bring raw materials and finished goods to and from England’s colonies and possessions, as well as to and from other countries

**England’s Resources: Geography**

England is the political center of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, an island

Great Britain (as the entire island was called beginning in \_\_\_\_\_\_\_\_\_) did not suffer fighting on its land during the wars of the 18th century

Island has excellent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Damp climate benefited the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ industry (thread did not dry out)

Government stable

No internal trade barriers

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: 1st to Industrialize!

The Textile industry was the first to industrialize in England

Textiles required relatively \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ capital investment and firms could \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ out of profits.

Textiles were a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that was in strong demand thanks to a rising \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!

**Technical Innovations**

1733-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ invented the flying shuttle for weaving thread.

1764-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ invented the Spinning Jenny to create thread

1787—\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ invented the water-powered loom to weave cloth.

1782—\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ improved the steam engine to drive machinery; factories could be set up anywhere!

**Textiles**

With the invention of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ industry took off.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ could now be made far faster than ever before.

Cost of production was dramatically slashed and the retail cost of cloth plummeted. A rising tide of cheap goods made a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ standard of living affordable for more people.

Rising production of wealth made possible the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class and created the modern \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ class, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Spinning Wheel**

The spinning wheel was the first invention for the manufacture of textiles, but it was very slow.

Threads were spun one at a time, by hand and then had to be woven into cloth.

**James Hargreaves:
The Spinning Jenny**

The spinning jenny could spin up to eight threads at time. The spinning jenny was much faster than the spinning wheel.

Automated the process of thread making and sped up the production of textiles.

**Samuel Crompton (1753-1827)**
**The Spinning Mule**

The spinning mule used water power to spin the thread, which was much faster than doing it by hand.

More cloth could now be made faster and more efficiently.

The Spinning Mule was invented by Samuel Crompton between 1775-79.

**Edmund Cartwright (1743-1823) The Power Loom**

The power loom used water power to weave \_\_\_\_\_\_\_\_\_\_\_\_\_\_

People could make a lot of cloth quickly.

Edmund Cartwright developed the Power Loom in 1784

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the textile industry!

**Steel**

With the invention of \_\_\_\_\_\_\_\_\_\_\_\_\_, buildings could be made much taller=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!

Steel was much harder than iron, which would bend if made too tall.

The steel industry created many new products, and led to the invention of the car.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Steel reshaped the landscape of American cities, allowing for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ development and skyscrapers, which changed the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of urban areas.

**Iron & Steel Processes**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (1741-1800) invented the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ process to burn off impurities and create a higher grade of iron—British iron industry boomed as a result, producing 3 million tons by 1852

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(1813-1898) invented the Bessemer Process for \_\_\_\_\_\_\_\_\_\_ production

Used \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ blown through molten pig iron to burn off the impurities

Steel was created quickly and in large batches of up to 30 tons. It was economical in the use of fuel and the process operated around the clock to make \_\_\_\_\_\_\_\_\_\_\_\_, reliable, high \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ steel.

Steel became the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ building material of the late Industrial Revolution!

**Andrew Carnegie (1835-1919)**

Andrew Carnegie, an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, became a multi-millionaire in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ business by putting many of his competitors out of business.

He helped create \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in Pittsburgh, PA, the largest steel manufacturing firm in the world.

Carnegie gave away most of his fortune when he died, establishing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ all over the country

**Ripple Effects of the Industrial Revolution: Transforming Life!**

**Transportation**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-efficient bulk transportation

Railroads created new jobs for farm laborers, cheap transport meant cheap prices for goods everyone could afford; transport efficiency led to higher profits that were invested---\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ growth!

\_\_\_\_\_\_\_\_\_\_\_\_\_—large, ocean going vessels made of \_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and capable of carrying immense cargoes allowed for very cheap transport of goods. Most raw materials and manufactured goods were carried by ship to market—most efficient form of transport; still is!

**Energy**

Water– waterfalls and waterwheels provide energy

Coal—cheap source of energy makes factory location variable; cities favored locations!

**Factory System**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ production facility transforming \_\_\_\_\_\_\_\_\_ materials into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ goods quickly and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on a large scale basis in 24/hr production

**Urban Areas**

Cities provide cheap \_\_\_\_\_\_\_\_\_\_ pools centrally located for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; transport, residential hubs for workers make cities efficient industrial centers!

**Labor**

Skilled—machinists, operators

Unskilled—brute labor

Immigrant—pool of cheap labor for emerging industrial economy!

**Factory System**

Developed to replace the domestic system of production

Faster method of production

Workers concentrated in a \_\_\_\_\_\_ location & production regime.

Production anticipated demand

For example: Under the domestic system, a woman might select fabric and have a businessperson give it to a home-based worker to make into a dress. Under the factory system, the factory owner bought large lots of popular fabrics and had workers create multiple dresses in common sizes, anticipating that women would buy them.

**Economic Changes: Factory System Perfected with the Assembly Line**

Developed by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ between 1908 and 1915

Brought the work to the worker instead of the worker to the work

Product moves along a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ belt, with each worker contributing labor along the way to create the finished product

Efficient manufacture of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ products at the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ possible cost.

Factory Assembly lines depend on the principle of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Economic Changes: Factory System – Assembly Line Brings Division of Labor**

Assembly lines bring the\_\_\_\_\_\_\_\_\_\_\_\_ to the worker, saving time

Each worker \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in one part

An automobile worker may spend 30 years in a factory only ever putting passenger-side doors on motor vehicles

Focusing on one aspect of production can be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ but can also make a worker an expert at that particular aspect

\_\_\_\_\_\_\_\_\_\_\_\_\_ level of labor is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to only that portion of the process that is required of the worker; keeps labor \_\_\_\_\_\_\_\_\_\_\_\_ down!

**Economic Changes:
Factory System**

Manufacture comes from the Latin manu and facere, meaning to make by hand

But during the Industrial Revolution, the meaning of manufacturer switched from the person who made an article by hand to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ who hired workers to make articles

Workers no longer owned the means of production (simple hand tools)

Instead, the newer means of production (expensive machinery) were owned by the capitalist

**Economic Changes:
Mass Production of Goods**

Motor vehicle production in the United States

1895 – 33,000 motor vehicles

1910 – 181,000 motor vehicles

2000 – 5,542,000 passenger cars alone

**Factors contributing to mass production**

Standardized (or interchangeable) parts

Assembly line

Labor \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ production meant more items were produced at lower costs

More people could afford to buy manufactured goods, which in turn spurred demand

**Factory System**

Work performed in a factory where workers tend the machines as part of the process, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the machines.

Workers frequently had to “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_” for a job, working without pay sometimes for months to prove they could do the job.

Women and children worked 12-16 hours per day for low wages that were continually lowered due to competition for scarce jobs.

No safety standards were in place; workers were \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; workplace accidents were deadly and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Labor-children as young as 6 worked in coal mines and textile mills. No possibility for education existed for most

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ housing—most workers lived in crowded tenement apartment buildings that were unsafe and unsanitary in \_\_\_\_\_\_\_\_\_\_\_\_\_\_ areas that were experiencing population explosions.

Worker health was \_\_\_\_\_\_\_\_\_\_\_\_\_; in England, workers lived only \_\_\_\_\_\_\_\_\_\_\_\_ as long as the owners.

**Reactions to Industrialization**

Adam \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_—wrote “The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_” (1776) advocating lassiez-faire, free-market economics of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; he predicted the market would work as though guided by “an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ hand”

Thomas \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_—wrote about the problem of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the industrial world and the inevitability of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

David \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, a British economist supported Malthus and the “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_”—when wages are high, more children are born, creating more workers and in the long run, lower wages; \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is inevitable!

The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- (1800) Jeremy \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_—preached \_\_\_\_\_\_\_\_\_, goal of society is to provide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the greatest number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_. Therefore all laws or actions should be judged according to their utility. John Stuart\_\_\_\_\_\_\_\_\_\_\_ was also a utilitarian “On Liberty”, said government should stop harm to workers.

Karl \_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_—Marx wrote the Communist \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as a reaction to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Revolution. Said \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ was the last stage before a return to nature, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Marxism is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ determined theory rooted in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Darwinism—”Survival of the Fittest”—only the worthy survive and succeed was the motto of the age.

**The Nature of Social Change**

**Social Changes**

The Industrial Revolution represented a triumph of the\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ class and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ over the landed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Strong \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class emerged and access to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ was expanded

An impoverished \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ class emerged to fill the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of Europe and America.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_—overall, it did \_\_\_\_\_\_\_\_\_, despite pervasive poverty in urban areas.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_—unemployed craftsmen who tried to stop the Industrial Revolution by smashing the machines—they failed!

**New Social Classes Emerged:**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_—owners of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (means of production)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- property-less workers who sell their labor to survive; the poorest segment of the new industrial society, the human cogs in the industrial machine!

**Process of Diffusion**

spreading industrial mechanization from Europe to America and beyond. History of Industrialization has been one of\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!

**Competition and Imitation**

Capitalism encouraged extreme \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of successful technologies that provided a competitive edge

Despite laws governing industrial \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ was transferred to countries eager to industrialize; lure of \_\_\_\_\_\_\_\_\_\_\_\_\_ triumphed over rule of \_\_\_\_\_\_\_\_!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Law—\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ could get patents and the exclusive right to profit from their inventions for a set period of time. This encouraged innovation and the many violations of patent law quickened the diffusion of industrial mechanization throughout the world.

**Globalization**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ became larger, multinational and increasingly powerful in the global marketplace

The Industrial Revolution and revolutions in transportation and the unification of markets led to the globalization of the economy, an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that binds all trading nations together.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ drives industrial activity globally, in the quest for new \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, more efficient production and higher\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!

Today we are in the Industrial Revolution 2.0, as other regions of the world go through the process of Industrialization!

**Spread of Industrialism**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (1768-1835): Father of the American Industrial Revolution

Samuel Slater (June 9, 1768 – April 21, 1835) an Englishman who memorized the plan for a textile mill and brought the technology to the United States; first case of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!

Sold his expertise to Moses \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and eventually set up textile mills throughout New England

Brought in English managerial expertise as well to ensure success.

Owned\_\_\_\_\_\_\_\_\_ textile mills when he died and was worth over 1 million dollars.

**Eli Whitney (1765-1825)**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Parts—Eli \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (December 8, 1765 – January 8, 1825) conceived of interchangeable parts as a way to mass produce guns for the US Army—led to assembly line style production utilizing division of labor & interchangeable parts

Introduced \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ analysis to determine profitability of industrial process as well as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ studies

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_— invented the cotton gin which allowed for efficient cleaning of cotton, stimulating the US cotton boom and the rise of the US Textile Industry.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Machine- invented the milling machine, which is a machine tool for milling solid objects—used in the manufacture of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ machinery.

Whitney's defenders have claimed that he invented the American \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of Manufacturing, the combination of power \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, interchangeable parts and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_ that would underlie the nation's subsequent industrial revolution!

**Economic Changes: Factory System Possible Due to Standardized Parts**

Eli Whitney is popularly credited with the invention of interchangeable parts in the late 1700s

But interchangeable parts had already been used in Europe

Before the late 1700s, each part of an item (like a musket) was made individually by a single person, with each part made to fit the whole

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, or interchangeable, parts were created en masse to make a lot of duplicate products (such as hundreds of muskets)

Manufacturers decided upon standard sizes for their goods and created large quantities of components

Such as deciding that a musket barrel should be two feet long and making 100 duplicate musket barrels, then deciding that triggers for these muskets should be two inches tall and making 100 2-inch triggers

Standardized parts could be kept in a set location in a factory

As a worker assembled an article, he or she would take whatever parts were needed from a bin of standardized (interchangeable) parts

**The Lowell Experiment: Bringing Industrialization to America!**

1830’s Lowell Massachussetts—Textile manufacturing center. Need: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ System of company towns that cared for workers; \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ideal for workers.

Rural \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ were employed in the mills, provided housing in company \_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at company sponsored \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and literary events.

Company towns were not the answer to labor shortages, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ was!

More and more people moved to cities where there were factory jobs

This was more true of the North than the South which remained agricultural

Wage labor became the norm

**Thomas Edison & The Electric Light**

Can you imagine what life would be like without the electric light?

Thomas Edison invented the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ light.

Thomas Edison also invented many other things, like the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Samuel Morse (1791-1872) & The Telegraph**

In 1844, Samuel Morse demonstrates his \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by sending a message to Baltimore from the chambers of the Supreme Court in Washington, DC. The message, "What hath God wrought?," marks the beginning of a new era in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The telegraph used \_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to send messages over electric lines. These dots and dashes became known as\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Code.

**Alexander Graham Bell (1847-1922)
& The Telephone**

Alexander Graham Bell patented the first telephone in 1876.

Provided for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ voice communication over long distances.

Improved communication and served to aid in the eventual \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the economy.

**Stock Market & Corporations**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ market invented

“\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_” would receive a percentage of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ became stock market center

Stock market became a vehicle for raising capital \_\_\_\_\_\_\_\_\_\_\_\_\_\_ for economic \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ became the dominant organization in the new industrial economy; becoming \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ integrated and controlling most areas of the industrial process.

Corporations became so powerful they could actually influence the operation of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!

**Results of the Industrial Revolution**

**Energy and the New Global Economy in the Post Industrial Age**

**Energy**

The energy sources for the Industrial Revolution were:

**Water**

**Coal**

**Steam**

**Oil**

**John D. Rockefeller (1839-1937)**

Owned \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Oil Company and was the richest American ever. In the second part of the Industrial Revolution \_\_\_\_\_\_\_\_\_ became the fuel of choice

The Industrial Revolution represented a globally\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ change that has altered the course of human \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and human \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Today we are in the \_\_\_\_\_\_\_\_\_\_\_\_-Industrial Age and are dealing with a global economy where manufacturing is done remotely in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ nations. What will the future look like? Explain below: