Mr. Beard
Social Studies Dept.

Name_____Date_____Block_____

Unit 3 Industrial Revolution

***Slide* 1- The Industrial Revolution**

- The Industrial Revolution refers to the _____ changes in the organization of manufacturing industry that transformed countries from rural agricultural to _____ industrial economies.
- It began in the late 18th century in the Midlands area of _____, then spread throughout the country, into continental Europe, and to the northern _____ _____.

***Slide 2*- Prelude: The Population Explosion**

- _____
- War
- Disease
- Stricter _____ measures
- The elimination of the black rat

- Famine, war, and _____ were common in Europe prior to the Industrial Revolution.
- Many of the innovations we will _____ in the following slides contributed to the decline of these _____.
- By the end of the 17th century, Europeans had _____ many measures (including quarantining the ill) to prevent the spread of the plague.
- In 1721, the last plague _____ occurred in Marseilles, and the disease did not recur in _____ or on the European continent.
- The brown rat thrived during the 17th and 18th _____, while the black rat, which carried *pastuerella pestis* (the plague), was eliminated.

Mr. Beard
Social Studies Dept.

Name_____Date_____Block_____

***Slide 3*- Further Reasons for Population Growth**

- Advances in _____, such as inoculation against smallpox

- Improvements in _____ promoted better public health

- An increase in the food supply meant fewer _____ and epidemics, especially as transportation _____

- In December of 1715, Lady Mary Wortley Montague came down with _____ and developed severely pitted skin.
- Though the disease had previously killed her brother, she managed to _____.
- As a result of her experience, Montague become a crusader for the practice of _____, which she had learned while living in Turkey with her ambassador husband.
- She began her _____ by having her son and daughter inoculated.
- Edward Jenner (1749–1823) would eventually receive credit for the smallpox _____, but it was really Lady Mary Montague who pioneered and made the approach acceptable in Western _____.
- The practice of inoculation would eventually filter throughout _____ and would be extended to prevent a variety of infectious diseases.
- Europeans had improved urban sanitation during the _____ years because they believed that dangerous miasmas (vapors or smells) caused _____.
- They created safer _____ delivery systems and carried away refuse on a more regular basis.
- Although miasma theories proved inaccurate, the _____ improvements did help a great deal in controlling disease.
- Increased food supply helped reduce _____.
- We will now _____ several of the reasons for this phenomenon.

Mr. Beard
Social Studies Dept. Name_____Date_____Block_____

***Slide 4*- The Enclosure Movement**

- In the second half of the 17th century, the English _____ (landowners) passed the Enclosure Acts, prohibiting peasants' access to _____ lands.

- The Enclosure Acts curtailed access to _____ lands, allowing the landed gentry to better organize and keep track of _____, land, and animals.
- Landowners also enclosed their own _____ to deny access to peasant farmers.
- Several methods of _____ proved popular, including growing hedges or putting up stone walls or _____ fences.
- The former _____ was particularly popular in Britain's Lowlands region.
- The movement began in _____, having the biggest effect on the Midlands, East Anglia, and Central England.
- It spread to many other European countries, including Russia, Hungary, _____, France, and Denmark.
- Although _____ to the medieval era, enclosure was particularly common throughout the late 17th, 18th, and early _____ centuries.
- **The Pros:** Many farmers benefited from the Enclosure _____, which led to more productive methods of farming and an increase in _____ production.
- Small, unproductive farms went out of _____, ceding their land to larger, economically-sound farms.
- Poor farmers who had been making no _____ were able to work on large farms to support their families.
- **The Cons:** The Enclosure Movement was a practical _____ for organizing land among wealthy landowners, but it adversely impacted peasant _____, who struggled with poverty and lack of adequate work.

- Many poor farmers were forced to give up their parcels to _____ landowners and move to cities in search of work.
- Peasant families holding land by custom were generally unable to produce _____ documents proving their ownership.
- Accustomed to using the public lands to obtain _____, fruit, nuts and "pig fodder," a _____ sometimes known as "gleaning rights," this access no longer existed.

***Slide 5*- Innovations: The Threshing Machine**

- Scottish mechanical engineer Andrew Meikle invented the _____ machine (c. 1796) for use with crops.
- The machine separated the _____ from the stalks and husks far more quickly than hand threshing; as a result, crop production _____ and led to agricultural abundance.
- The following slides show several innovations that proved critical to the early _____ Revolution in Britain.
- Without the greatly increased yields that these _____ fostered, society would not have gained the security in its food supply that allowed for increased industrial specialization and _____ in areas other than agriculture.

***Slide 6*- The Seed Drill**

- Englishman Jethro Tull _____ the mechanized seed drill around 1701.
- Uniform seeding allowed _____ between the rows of seedlings during growth, thus _____ crop yield.
- Before this invention, _____ carried their seeds in bags and walked through the fields throwing the _____ into hand-ploughed furrows, or rows.
- This _____ did not allow for a very even distribution and wasted a good deal of the seed, resulting in lower plant _____.

- Tull's seed drill, on the other hand, could be _____ behind a horse.
- It had _____ and contained a _____ filled with seed.
- A wheel-driven device _____ the seed out evenly as the entire machine was pulled across the field.

***Slide 7*- Jethro Tull (1674–1741)**

- Despite his aristocratic _____, Jethro Tull's simple, elegant tool made him an icon and hero for _____ farmers in his era and today.

***Slide 8*- Townshend's Four-Field System**

- After 1730, Charles "Turnip" Townshend introduced the four-field method of crop _____.
- Crop rotation is critical because consistent _____ of the same crop on a field leads to a decline in important soil nutrients, thus _____ crop yield.
- In Townshend's _____, farmers would plant a staple crop such as barley or wheat one year, change to another _____ crop the next year, and plant turnips and clover for the next two years.
- The latter two crops helped replenish the _____ with nutrients it had lost during the barley and _____ planting years.
- The droppings from _____ that grazed on the clover and turnips further helped _____ the soil.
- Turnips had been used in _____ as cattle feed since the 1660s, but Townshend was the first to use them for _____ rotation.

***Slide 9*- Selective Breeding**

- Select animals with the best _____

- Produce bigger _____

- Robert Bakewell and other _____ experts interbred different types of sheep, trying to create a new breed that _____ the best characteristics of others.
- These _____ greatly increased the average sheep's size.
- One of these cross-bred _____, the Dishley, had long, coarse wool and produced a high quality and yield of _____.
- Bakewell also experimented with breeds of _____.
- In 1769, he _____ the Longhorn, which provided exceptional meat.
- Bakewell was also the first to _____ his animals out to be bred with other people's livestock.
- His farm in Dishley, Leicestershire, became a model of _____ management.
- Another farmer, Thomas Coke, also experimented with cattle, sheep, and _____ and produced several new breeds.

***Slide 10*- Britain Takes the Lead**

- Great Britain's _____:

- Plentiful iron and _____

- A navigable _____ system

- A strong commercial _____ that provided merchants with capital to invest in new _____

- Colonies that supplied _____ _____ and bought finished goods

- A government that _____ improvements in transportation and used its navy to protect British _____

- The last three of these advantages (commercial power, colonies, and _____ support of transport improvements) can be credited in part to the relatively calm political situation in _____.
- The European continent, on the other hand, suffered volatile _____ conditions that impeded innovation.

***Slide 11*- The Importance of Textiles**

- For hundreds of years, the _____ of cloth had required the weaver to pass a shuttle containing thread back and forth across the _____ area of the loom.
- This process required the use of both _____, and some types of weaving could only be done by two people sitting together at the _____.
- In 1733, John Kay invented the _____ shuttle, exponentially increasing the processing speed of _____.
- One person could now _____ the loom alone and could make many shapes and sizes of cloth.
- These changes doubled the _____ of weaving.
- The flying shuttle consisted of a _____ box at each end of the loom.
- A long board called the shuttle race _____ the two shuttle boxes.
- Using cords attached to the top of the loom, a _____ could single-handedly knock the shuttle back and forth from one shuttle box to the other, weaving the _____ across the loom in the process.
- By 1800, many people _____ handlooms with a flying shuttle.
- There may have been as many as a quarter million looms in _____ by that time.

Mr. Beard
Social Studies Dept.

Name_____Date_____Block_____

***Slide 12*- The Domestic or "Putting Out" System**

- The _____ industry was the most important in England

- Most of the _____ was done in the home

- Textile _____ was the most important industry in 18th-century Britain.
- Most textile work was carried out in the _____, often in conjunction with farm work.
- This method of production was often called the "putting-out" system because _____ would "put out" the materials for home-based workers to manufacture into _____ products.
- Merchants controlled _____ production from start to finish.
- They bought raw _____ from sheep farmers, had it spun into yarn by farmers' wives, and took it to rural weavers to be made into cloth; this weaving process was _____ than relying on urban craftsmen.
- Merchants then _____ the cloth and gave it to finishers and dyers.
- Similar home-based methods of _____ and controlling the process of manufacture, often referred to as "cottage industries," became prevalent with other items, including nails, cutlery, and _____ goods.

***Slide 13*- The Spinning Jenny**

- In 1764, inventor James Hargreaves built a _____ that became known as the spinning jenny (or spinning frame).
- The machine used eight spindles with a _____ wheel that allowed the operator to _____ eight threads at once.
- Legend states that Hargreaves invented the _____ jenny after observing a spinning wheel that his daughter Jenny had accidentally knocked over.
- Despite its fall, the _____ was still turning.

- Hargreaves realized it would be possible for one person to spin multiple _____ at once by using several spindles lined up in a row.
- The new machine allowed the Hargreaves family to _____ much more yarn than any of their neighbors.

***Slide 14*- The Water Frame**

- _____ the spinning jenny:

- Horses

- The _____ wheel

- The spinning _____ was too cumbersome to be operated by hand, so _____ Richard Arkwright sought another way to run the machine.
- At first, Arkwright _____ using horses.
- When this proved impractical, he _____ further and found a solution that used a wheel powered by _____ water.
- Harnessing the power of England's abundant _____, the spinning jenny could now continue to _____ day or night.

***Slide 15*- Cotton Imported to Britain Between 1701 and 1800**

1701	£ 1,985,868
1710	715,008
1720	1,972,805
1730	1,545,472
1741	1,645,031
1751	2,976,610

1764	3,870,392
1775	4,764,589
1780	6,766,613
1790	31,447,605
1800	56,010,732

- Look carefully at this table. The figures on the right are in British pounds. Most of the cotton imported to the British Isles during the 18th century came from the _____. How do you think the American Revolution affected this _____?
- Are the _____ consistently increasing or decreasing?
- What do the changes in the figures tell you about the pace of the _____ Revolution in Britain?

***Slide 16*- Cotton Goods Exported by Britain 1701 to 1800**

1701	£ 23,253
1710	5,698
1720	16,200
1730	13,524
1741	20,709

1751	45,986
1764	200,354
1780	355,060
1787	1,101,457
1790	1,662,369
1800	5,406,501

- By 1802, the cotton/textile _____ made up between 4 and 5 percent of Britain's national income.
- By 1812, 100,000 spinners and 250,000 _____ were working in the industry.
- Production had _____ to 8 percent and had overtaken the woolen industry.
- More than half the value of British home exports in 1830 consisted of cotton _____.
- The cotton industry originally developed in three main _____ districts: Manchester, the Midlands, and the Clyde Valley in Scotland.
- By the 1780s, the industry became more concentrated in Lancashire, where a large proportion of the _____ depended on cotton and textile production.
- Do you think this dependence might have presented any _____ for the people of Lancashire?
- What are some _____ of single-product economies?
- Look at the tables again. In what years were the _____ or decreases in manufacturing inconsistent?

- What factors _____ have accounted for these inconsistencies (e.g., bad harvests, political unrest)?

Slide 17 **- The Coming of the Railroads: The Steam Engine**

- Thomas _____

- The _____ engine

- Thomas Newcomen built the first steam _____, although this invention is generally credited to James Watt.
- Newcomen used his first steam engine to _____ water out of a _____.

Slide 18**- James Watt's Steam Engine**

- Condenser

- Increased _____

- In 1763, James _____ was asked to repair a Newcomen steam engine.
- He modified the engine by adding a _____ that increased the machine's efficiency.
- This invention made the steam engine an economical _____ of power and was so successful that for a hundred years no drastic alterations were made to the _____.

Slide 19**- Trevithick's Engine**

- In 1801, Richard Trevithick first attached a steam engine to a _____.

- Trevithick's _____ was not successful for moving people, but he had planted the idea of human _____ transport.

- Richard Trevithick is considered to be the true inventor of the _____ locomotive.
- He developed a high _____, non-condensing steam engine that improved on Watt's design.
- On Christmas Day in 1801, he _____ the first steam passenger vehicle.

- By _____, Trevithick had applied steam to hauling loads along a _____.
- His steam _____ was used to transport iron a distance of about nine miles, which in his time was a _____ achievement.
- Trevithick's "Catch-Me-Who-Can" locomotive (shown on this slide) was _____ in 1808.
- Its top speed was about _____ miles per hour.

Slide 20*- Stephenson's *Rocket

- Just a few years later, George Stephenson _____ and built the *Rocket*, the first steam locomotive practical for pulling _____ stock (train cars).
- The _____ was a critical player in the advent of the Liverpool & Manchester Railway.
- The directors of the Liverpool & Manchester _____ were unsure whether to use locomotives or stationary _____ on their line.
- To help decide, they held a competition in _____ in which the winner would receive £500.
- Each locomotive had to haul a _____ three times its own weight at a speed of at least ten _____ _____ _____.
- The locomotives had to run 20 times up and down a _____, a distance equivalent to a trip _____ Liverpool and Manchester.
- The *Rocket* won the _____, reaching speeds of up to _____ miles per hour.

***Slide 21*- The Liverpool and Manchester Railway**

- The first widely-used _____ train was the Liverpool & _____ Railway.

- The L&M incited a _____ in railway _____ for the next 20 years.

- By 1854, every _____-sized town in England was connected by _____.

- The 31-mile-long Liverpool & Manchester _____ opened on September 15, 1830.
- Passenger _____ began their journey at the Crown Street Station in Liverpool and _____ at Water Street in Manchester.

***Slide 22*- The Growth of the Railroads**

- These drawings show us the status of rail _____ at the end of the 18th century.
- This depot and _____ still exist today, so we know the drawings are quite accurate.
- During this era, a _____ could travel up to 44 miles each day.
- While train travel _____ an enormous improvement in the speed of travel, it was only the beginning of mass _____.

***Slide 23*- The Telegraph**

- In 1844, Samuel _____ sent the first successful telegraph _____ between two cities (Baltimore and Washington, D.C.).
- The _____ proved to be a major breakthrough in communications, allowing people to get news far more _____ about events taking place hundreds—or even thousands—of _____ away.
- In 1858, _____ Victoria of England inaugurated the first use of transatlantic _____ by sending a 98-word message to President James Buchanan of the United States.

Mr. Beard
Social Studies Dept. Name_____Date_____Block_____

***Slide 24*- British Dominance**

- At the beginning of the 19th century, _____ had more rail lines and major urban centers than any other _____.
- While London was the economic _____ of England and the British empire, the Industrial Revolution had transformed many other towns and cities into large _____ centers.
- Particularly important were the _____ cities of Manchester and Leeds.

***Slide 25*- Steam-Powered Water Transport**

- In 1807, Robert Fulton attached a _____ _____ to a ship called the "Clermont."

- The steam engine propelled the ship by making its _____ wheel turn.

- While the steamship was _____ in the United States and had a great impact on industry there, it also affected the Industrial Revolution in England.
- Steamships began to ply British _____ and were soon used for transatlantic travel.

***Slide 26*- Steel**

- Early steel-making was a fairly _____ and expensive process.
- In 1858, Sir Henry Bessemer addressed this _____ by creating a new type of furnace called the Bessemer converter.
- This machine produced high-quality _____ at half the price of earlier methods, reducing production costs for countless _____.
- The invention fueled the growth of _____ centers and multistory buildings that required steel structuring.

***Slide 27*- The Great Exhibition at the Crystal Palace**

- The Great Exhibition of 1851 in _____ was mounted to symbolize Great Britain's economic, _____, and military superiority.

- The British government staged the Great Exhibition of 1851 to show off Britain's _____, industrial, and military superiority.
- It was a truly _____ event, with more than 13,000 exhibits from all over the globe showcasing the achievements of the British _____ at home and in the colonies.
- The British designed the _____ grounds and buildings to impress the world and the more than 6.2 million visitors who came to the exhibition.
- The park surrounding the Crystal Palace, for example, contained an impressive set of _____ that used close to 12,000 jets.

***Slide 28*- Labor Conditions**

- Laborers often worked in dangerous and _____ conditions

- In the illustrations in this slide, workers are shown _____ in the shallow tunnels of late 18th-century mines.
- Notice that a _____ is in the front in the lower picture.
- Female _____ workers often suffered abuse at the hands of male workers.

***Slide 29*- Women: The Labor Behind the Industry**

- During the Industrial Revolution, _____ of labor occurred along gender lines.
- Women had different jobs than men, although they participated in many of the same _____ during this period.
- High poverty rates among both _____ and married women forced many to find work outside their _____ in domestic service, textile factories, piecework shops (where workers were paid by the piece), and coal mines.

- Some women found that new urban and _____ work opportunities improved their way of life and gave them some extra spending money.
- Others encountered increased _____, isolation, and dependence on employers for day-to-day sustenance.

***Slide 30*- Child Labor: Unlimited Hours**

- Factories employed many _____, benefiting not just from their energy but also from their small _____, which could manipulate tiny parts of _____ more easily.
- _____ could also legally pay children less than adults, and parents were often eager to send their children to _____ and bring in more income for the family.
- Children as young as _____ years old worked long, difficult days for very little pay.
- Children sometimes worked up to 19 hours a day with single _____ of one hour or less.

***Slide 31*- Child Labor: Dangers**

- The smallest and youngest children in _____ factories usually worked as scavengers.
- This very dangerous task involved picking up tiny pieces of loose _____ from under the machinery.
- Working _____ in British mines were perhaps even worse.
- An 1842 Parliamentary Committee reporting on mines found that many children were _____ under intolerable circumstances.
- Children as young as four years old worked as "trappers," opening _____ doors to let "hurriers" (also children) pull through loaded wagons.

- Often working in the dark because they could not afford _____, children labored in these conditions up to _____ hours a day.
- The Parliamentary Committee further reported that _____ beat the children for falling _____ on the job.

***Slide 32*- Child Labor: Punishment**

- _____

- Beatings

- _____ sent to prison

- Child _____, most of whom came from severely impoverished backgrounds frequently found it impossible to keep up with the pace required in the factories—primarily because they were often _____ and debilitated.
- Many children were _____ for falling behind.
- They were also beaten or docked pay for arriving to work late and for _____ to other children.
- Apprentices who ran away from _____ sometimes faced prison sentences.
- Despite _____ working conditions, meager pay, and vicious punishments, family poverty _____ many children to go to work.

***Slide 33*- Child Labor: Movements to Regulate**

- Factory owners _____ that child labor was good for the economy and helped build children's _____

- Factory Act of 1833: _____ child labor and the number of _____ children could work in textile mills

- In 1833, the British government passed the Factory Act to _____ conditions for child laborers in textile factories.

The act stipulated the following:

- No child under _____ years of age was permitted to work.
- Employers had to have a _____ or age certificate for each child laborer.
- Children between the ages of nine and _____ could not work more than nine hours a day.
- Children between 13 and 18 could not work more than _____ hours a day.
- Children could not work at _____.
- Each child had to receive at least two hours of _____ per day.
- Four factory inspectors were appointed to _____ the law throughout the whole country.
- Despite these _____, the Factory Act did not put an immediate stop to mistreatment because it only applied to children working in textile mills, not _____ mines or other types of factories.
- The Mines Act of 1842 established _____ on child mine labor, barring children under ten from working in the mines.

***Slide 34*- Trade Unions**

- Agricultural laborers who had formed a _____ union in the village of Tolpuddle were arrested on false charges and sent to the British _____ of Australia.

- By the end of the 19th _____, labor conditions had greatly improved.
- These improvements, however, had only been achieved with _____ from workers, who increasingly protested their _____ working conditions.
- Workers eventually _____ their gatherings and protests into trade unions.
- In 1780 and 1799, Combination Laws made it _____ for workers to gather together to pressure employers for shorter hours, _____ pay, or better working conditions.
- As a result, trade _____ in effect became illegal.

***Slide 35*- Labor Unions**

- Sir Francis Burdett

- The 1871 Trade Union Act

- In the cartoon shown in this slide, Sir Francis Burdett is depicted as triumphant over the _____ and anti-union politicians who hindered the cause of trade unions.
- They are shown in front of a _____ where many trade unionists were incarcerated.
- Burdett had been a leading parliamentary _____ of unions in the 1820s.
- He was jailed for a short time because of his _____ views.
- Many extremely _____ strikes occurred before 1870, leading to hundreds or perhaps thousands of _____ and deaths.
- The government, led by _____ Minister William Ewart Gladstone, appointed a Royal Commission to investigate the trade unions.
- As a result of the Royal Commission's work, _____ passed the Trade Union Act of 1871, recognizing the collective or _____ identity of trade unions and effectively legalizing them.
- Trade unions were thereafter allowed to _____ all of their own activities.
- As a result of this _____, trade unions could sign contracts, enter into agreements, and function as legal entities (not simply as gatherings of people); in addition, they could exercise all these _____ without punishment or prosecution.
- Trade unions also received exemptions and immunities: for example, _____ would not intervene during strikes.

***Slide 36*- The Chartists**

- _____ reformers

- Chartists wanted the _____ to adopt a "People's Charter"

- Adopted by _____ convention of labor organizations in 1838

- Influenced the struggle for _____ voting rights

- A number of different _____ groups emerged in the middle of the 19th century.
- Some complained peacefully, while others used sabotage and _____.
- The Chartists were members of a political _____ movement that promoted the adoption of a "People's Charter."

This document called for:

- _____ by ballot
- universal _____ suffrage
- annual _____
- equal electoral districts
- no property qualifications for _____ of Parliament
- The Chartist _____ gathered momentum in large part due to the fervor and speaking talents of Feargus O'Connor.
- He traveled all over northern _____—a highly industrialized region where recurrent economic depressions had caused considerable discontent—to garner _____ for the charter.
- In August of 1838, the charter was adopted at a national _____ of labor organizations in Birmingham.
- The movement continued to grow for decades and greatly _____ the struggle for universal male voting rights.

***Slide 37*- The Luddites**

- "General Ned Ludd" and the "_____ of Redressers"

- Many workers expressed outrage over low _____ and the employment of un-apprenticed workmen, who did not share the privileges and higher wages of _____ workmen.

- Some of these disgruntled _____, who later came to be called Luddites, broke into factories and destroyed _____.
- The Luddites referred to themselves as the "Army of Redressers"; their leader was "General Ned Ludd," although there is little _____ to suggest that he was a real person.
- The impact of the Luddite movement, however, was felt through the _____ of equipment throughout the Midlands.
- In a matter of weeks, 200 machines were _____ and special police units had to be hired to _____ factories.
- The Prince Regent offered a reward (shown in this notice in this slide) to anyone "giving information on any person or persons wickedly _____ the frames."
- Today, the term "Luddite" refers to a _____ who is opposed to new technology.

***Slide 38*- The "Peterloo Massacre"**

- The most celebrated _____ of the early 19th century was the "Peterloo Massacre" of 1819.
- On August 16, 1819, laborers _____ annual parliaments planned a meeting to agitate for universal suffrage.
- A crowd of about 50,000 gathered in St. Peter's Fields to _____ to several speakers.
- By early afternoon, the length and size of the _____ so alarmed city magistrates that they ordered armed _____ in the Lancashire militia to arrest some of the organizers and disperse the _____.
- The _____ ended up charging and firing upon the crowd, however, killing 11 and wounding approximately 400 others.
- Different_____ reported different crowd sizes, but it was undoubtedly well-attended.

***Slide 39*- The New Industrial Class Structure**

- The social class _____ that emerged during the Industrial Revolution can be broken down as follows:
- Upper Class: Very rich industrial families; _____
- Upper Middle Class: Businesspeople and _____, including lawyers and doctors
- Lower Middle Class: Other professionals, including _____, shop owners, and office workers
- Working Class: _____ workers and small _____
- Impoverished: Itinerant workers and the _____

***Slide 40*- Lower and Middle Class Housing**

Working class housing:

- In the rush to _____ houses for workers moving to the cities, builders quickly constructed _____.
- These row _____ houses tended to be overcrowded and unsanitary, and landlords did not adequately maintain them.
- In one typical example, 17 people from _____ families lived in a 15 by 12 foot area.
- Some tenements had yards in the back with an outdoor _____ that all residents used.

Middle class housing:

- Although its residents were _____, emerging middle class districts still suffered from the poor _____ that plagued entire cities.
- Disease spread quickly through _____, without regard to social distinctions.

***Slide 41*- Travel**

- The social _____ traveled in different manners as well.

- The lithographs shown in this slide (produced by A. J. C. Bourne in 1839) depict (from top to bottom) first-, second-, and _____-class travel.

***Slide 42*- Social Mobility**

- This illustration of a "typical apartment" appeared in a Parisian _____ in 1845

- This illustration in this slide offers a classic example of the Industrial Revolution's impact on housing and _____ development (Bibliotheque National, Paris).
- Servants are shown working on the _____ floor, while an elderly couple dances to music a young girl plays on the piano.
- On the first floor (known as the second floor in the United States), two _____ people relax in elegant surroundings.
- Above them on the second floor, a bourgeois family lives in comfortable but somewhat _____ conditions.
- The rooms on the third floor are _____.
- In the room on the left, a _____ appears to be evicting a resident, while a man and woman in the other room entertain themselves with a small dog.
- The fourth floor is _____ into three rooms.
- Two artists relax in the room on the left, a young man sits in the _____ room, and a poor man and woman live with their three children in the room on the right.

***Slide 43*- Methodism**

- _____ Wesley

- "Instant _____"

- Appealed to the _____ class

- Many members of the working class were attracted to a new _____ movement called Methodism, _____ by John Wesley.
- Methodism was a _____ doctrine stating that people could go to heaven by acting _____ and believing in God.

- This idea of "instant salvation" _____ to the working classes, who had little time or money to _____ to religious activities and donations.
- Methodism's simple message _____ people who worked dangerous mine and factory jobs: these workers faced increasing _____ insecurity in a rapidly industrializing world.
- Charismatic _____ spoke directly to people in English rather than in Latin and made them feel _____ accepted.
- Revival meetings, which included _____ and preaching, took place in cottages and barns.

***Slide 44*- New Economic Theories**

- New social and _____ philosophies arose as a response to increasing industrialization and _____ in working conditions
- In the following slides, we will look some of the leading economic _____ from this period.

***Slide 45*- Adam Smith (1723–1790)**

- Adam Smith laid the _____ framework for the concept of the free market

- Born in _____, Adam Smith is often considered the founder of economics as a discipline.
- In his 1776 book, *An Inquiry into the Nature and Causes of the Wealth of Nations,* Smith postulated that self-interest guides the most _____ use of resources in a nation's economy, and that _____ welfare occurs as a by-product of pursuit of economic self-interest.
- Smith then argued that government _____ to promote the social good are ineffective compared to unbridled market forces; he also opposed government _____ in the economy.

- His most _____ work was *The Wealth of Nations*, published in 1744.
- Adam Smith and the other economic _____ shown on the following slides addressed many fundamental economic issues _____ to the Industrial Revolution.
- Because many of these men _____ the negative outcomes of continued industrialization, economics became known at the time as the "dismal science."

***Slide 46*- Thomas Malthus (1766–1834)**

- In *An Essay on the Principle of Population* (1798), Malthus predicted that the _____ _____ would not meet the needs of the growing population

- Thomas Malthus postulated that food _____ would decrease population, thus bringing the food supply into better _____ with the remaining population.
- This balance, however, could be _____ by rising birth rates, which would eventually cause food shortages to reappear.

***Slide 47*- David Ricardo (1772–1823)**

- The "Iron _____ of Wages"

- David Ricardo's "Iron Law of Wages" _____ that wages naturally tend toward a minimum level that corresponds to the subsistence needs of workers.
- Ricardo's ideas were even more "dismal" than those of Malthus because he saw the working class as trapped in their _____-level conditions.
- He did not offer any _____ solutions to the cycle of poverty.

***Slide 48*- Karl Marx (1818–1883)**

- Philosopher, social scientist, _____ and revolutionary, Karl Marx is regarded by many as the most influential economic and social _____ of the 19th century

- Karl Marx theorized that the struggle between _____ classes was fundamental to society.

- He believed that society faced a constant _____ between the rich and the working classes, and that this class division could be blamed in large part on _____ ownership of the means of production (e.g., corporations, factories).
- In order for class _____ to be resolved, Marx believed that the major means of production had to be _____ owned.
- _____ had a tremendous impact on the world's political systems.
- Two of his most influential writings are:
- *The Communist Manifesto*, written with Friedrich Engels in _____, the same year as the revolutionary uproar that swept across _____.
- *Das Kapital (The Capital)*, in which he outlined his economic _____ in great detail.
- Marx was eventually forced to move to _____ to avoid political persecution.
- He lived in _____ his entire life and died nearly penniless, despite having radically _____ the political and economic foundations of Europe.

***Slide 49*- Jeremy Bentham (1748–1832)**

- Utilitarianism: "The greatest good for the _____ people" or "The greatest good over the _____ pain"

- Jeremy Bentham studied law and _____ to arrive at his theory of utilitarianism, which stressed that all actions should be completed with the _____ of achieving the greatest happiness for the greatest number of people.

***Slide 50*- Robert Owen (1771–1858)**

- Utopian _____
- Founded New Lanark Mills in _____ as a model cooperative factory
- Many _____ visited New Lanark, and a few adopted aspects of Owen's _____

- Despite the many appalling pictures of working class life under _____, utopian socialists such as Robert Owen believed in the power of communal organization.
- Preceding Marx by a full _____, Owen showed (albeit in microcosm) the potential profitability of treating _____ and children well.
- At his New Lanark Mills cooperative in Scotland, Owen provided _____ working and living conditions for all his workers—particularly children.
- He soon stopped employing children under _____ years old and arranged for their education.
- Not all _____ socialists had as much success as Owen, but many achieved notoriety for their _____ and efforts, including Count de Saint-Simon, Charles Fourier, and Étienne Cabet.

***Slide 51*- British Industrialization**

- By the middle of the 19th century, industrialization had _____ across Europe and the United States, aided by the development of railroad links that brought resources to the new factories and _____ their finished goods to world markets.
- During the late 18th and early 19th centuries, Great Britain invested considerable _____ in its wars with America and with Napoleon's empire.
- These conflicts, however, did not impede Britain's ability to _____ with the rest of the world.
- The British navy protected the island nation from _____, allowing internal trade to continue and grow.
- The British even managed to profit from war by increasing _____ of war supplies to sell to their allies.

***Slide 52*- France**

- Couldn't keep up with _____ industrialization

- French Revolution and resulting political chaos _____ economic development

- France began a phase of _____ industrialization in 1836, when Eugène Schneider, a wealthy Alsatian businessman, began to produce railway equipment.
- In 1838, Schneider _____ the first French locomotive, "la Gironde," which made him very wealthy.
- Despite this burst of industrial _____, the French Revolution and other uprisings in 1830 and 1848 significantly hindered France's economic _____.

***Slide 53*- French Industrialization after 1848**

- Government investment

- Public _____

- _____

- France and many other European countries _____ major political upheaval in 1848, collectively known as the Revolutions of 1848.
- By that year, France had industrialized _____, particularly in major urban centers such as Paris.
- The end of the Revolutions of 1848 _____ in an even more significant era of French industrialization.
- One of the initiators of this _____ had been Baron Haussman, who had replaced much of Paris' medieval infrastructure after the end of the Napoleonic Wars, _____ modern urban facilities such as boulevards, parks, and transportation.
- These changes served as a _____ for the entire country after 1848.
- The French government installed sewers, market places, new neighborhoods, roads, a _____ system, and port facilities.
- By 1870, telegraph _____ had been installed throughout most parts of _____.

- These modernization efforts enabled France to attract _____ investors who could fund more industrialization _____.

***Slide 54*- Germany**

- The *Zollverein*

- _____

- The Industrial Revolution began about a _____ later in Germany than it did in England.
- The *Zollverein* (German for "customs union") united 38 German states in 1834 and created a better trade _____ by reducing internal tariffs and _____. (Tariffs are charges for goods that cross a geographical boundary.)
- In 1818, _____ became the first German state to abolish internal tariffs.
- By 1834, the *Zollverein* _____ 18 German states in a "customs union" (comparable to a free trade zone like the North American Free Trade Agreement today).
- The *Zollverein* eventually _____ tariffs between almost all German states.
- Trade between these states was therefore not _____, but trade between these states and non-*Zollverein* members was _____ to tariffs, which a central agency collected and then distributed to each German state in _____ to its population and resources.

***Slide 55*- Electricity: Edison**

- Thomas Edison's greatest _____ was the development of a practical incandescent electric light.
- Contrary to popular belief, he didn't "invent" the light bulb but instead _____ upon a 50-year-old idea.

- In 1879, using low-current _____, a small carbonized filament, and an improved vacuum inside a glass sphere, he was able to produce a _____, long-lasting source of light.
- The earliest electric lighting was very dim _____ to gas or oil lighting.
- This _____ meant that it was some time before electric lighting became an acceptable _____ for most people.
- Electric lighting's convenience and cleanliness, combined with the added _____ it provided towns and cities at night, made it _____ by the end of the century.

***Slide 56*- Electricity: Tesla**

- In the 1880s, electrical engineer Nicholas Tesla _____ the principles of alternating current.

- The electric _____, or the Tesla coil, keeps the current _____ in the power lines.

- Tesla's _____ allowed for safer lighting and power delivery to major urban centers.
- It also had a _____ impact on industry because it provided factories with increasingly dependable _____ of power.

***Slide 57*- Cultural Impact: Romanticism**

- The Romantics glorified the divine power of _____ as a reaction to the Industrial Revolution's achievement of controlling nature through _____.

- Romanticism was a literary and _____ movement in the late 18th and early 19th centuries.
- Romantics hailed individualism and _____ and rejected the mechanization of daily life that the Industrial Revolution had brought.

- They encouraged people to _____ with nature and to allow themselves to experience greater emotional _____ and feeling.

Several well-known Romantic figures include:

- William Wordsworth (English poet)
- Samuel Taylor Coleridge (English poet)
- _____ Blake (English poet)
- Ralph Waldo Emerson (American poet and essayist)
- Henry David Thoreau (American essayist)
- James Wyatt (English architect)
- Robert Schumann (German composer)
- _____ Wagner (German composer)
- John Constable—a famous landscape artist who painted this scene, called the Hay Wain

***Slide 58*- Cultural Impact: The Visual Arts**

- French artist Honore Daumier painted the _____ and working classes.

- In *Third-Class Carriage* (shown here), he _____ with great compassion a group of people on a train journey.

- *Third-Class Carriage* is an example of an Industrial Revolution-era artist _____ the social themes of the period.
- Before this time, the arts (especially painting) had been the province of the _____ classes, who were generally _____ in depictions of the poor.

***Slide 59*- Cultural Impact: The Visual Arts**

- J.M.W. Turner

- *The Fighting "Temeraire"*

- Romantic art often illustrated old idyllic scenes like _____, castles, or farms, along side steam trains, boats, or some other industrial _____.

- The painting in this slide _____ the passing of a bygone era.
- The *Temeraire* was one of the ships that _____ the Battle of Trafalgar and is being towed away to be destroyed by a _____ steam tugboat.

***Slide 60*- Cultural Impact: Literature**

- Charles Dickens (1812-1870)

- Charles Dickens's _____ defined the poverty of the Industrial Revolution.
- His works include *Hard Times*, *Oliver Twist*, *Great* _____, and *A Christmas Carol.*
- Dickens's writings _____ many descriptions of urban life during the Industrial Revolution and _____ the plight of the poor, whom he supported and championed throughout his _____.

***Slide 61*- Cultural Impact: Literature**

- Emile _____

- Emile Zola (1840–1902) was a French _____ who wrote about many of France's most important social _____.
- His novel *Germinal* described the _____ and difficulties that confronted miners in a French village _____ the Industrial Revolution.
- This book culminates in a _____ against the mining company.

***Slide 62*- SUMMARY- Was the Industrial Revolution more beneficial or harmful?**

- The Industrial Revolution changed _____ society significantly.

Consider the following:

- --Thousands of people moved from _____ to urban centers where _____ was located.
- This led to crowding and the creation of _____ in the cities.

Mr. Beard
Social Studies Dept.

Name_____Date_____Block_____

- New social class divisions _____ including a new wealthy "bourgeoisie" (middle class), the owners of the factories and other industrial enterprises, as well as a new lower working class, which often had poor working _____ and lived in poverty.
- Industrialization brought _____ high levels of environmental pollution.
- The _____ of coal for energy and home _____ often blackened city skies.
- Increased food production and manufactured _____ meant greater _____ and lower prices.
- This meant economic _____ for many people in the industrialized countries and a higher _____ of living.
- By 1900, many people in the Western world _____ more and lived _____ than their predecessors.