Political and Industrial Revolutions

Lesson 1 The American Revolution

ESSENTIAL QUESTION
Why does conflict develop?

GUIDING QUESTIONS
1. Why did England found colonies in North America?
2. How did conflict develop between Britain and its American colonies?
3. How did war between Britain and the American colonies lead to the rise of a new nation—the United States of America?

Terms to Know

- persecute: to treat a group of people cruelly or unfairly
- constitution: a document that describes how a country will be governed and guarantees people certain rights
- boycott: to protest by refusing to do something
- popular sovereignty: the idea that government is created by the people and must do what the people request
- limited government: a government whose powers are limited by laws or a document such as a constitution

Where in the world?

When did it happen?

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1607</td>
<td>Virginia's House of Burgesses formed</td>
</tr>
<tr>
<td>1620</td>
<td>Pilgrims establish colony in Massachusetts</td>
</tr>
<tr>
<td>1660</td>
<td>Treaty of Paris ends the Revolutionary War</td>
</tr>
<tr>
<td>1776</td>
<td>Declaration of Independence is signed</td>
</tr>
<tr>
<td>1783</td>
<td>Congress creates the U.S. Constitution</td>
</tr>
</tbody>
</table>
Political and Industrial Revolutions

Lesson 1 The American Revolution, Continued

Britain’s American Colonies
Puritans set up the first English colony in North America. In England, the Puritans were persecuted, or punished for practicing their religion. The Puritans came to America and built the Plymouth settlement. Other people looking for religious freedom, including the Quakers, came later.

The English settled thirteen colonies in North America. The southern colonies had large plantations. They used enslaved Africans to work the land. The northern colonies had smaller farms because of the cooler climate and rocky soil.

The early colonies set up rules to govern their people. The Puritans wrote the Mayflower Compact to govern Plymouth. Settlers in Virginia elected a group of leaders to run their colony. Over the years, most English colonies wrote their own plans for government. These plans were called constitutions.

Road to Revolt
The American colonies had close trading ties with Britain. The colonies provided raw materials to Britain. In exchange, they bought manufactured goods such as clothing and furniture from Britain.

For many years, Britain tried to control this trade using the Navigation Acts. These laws required the colonies to sell goods only to members of the British Empire. Colonists also had to pay a tax to buy goods from any country that was not part of the British Empire. The colonists grew angry with these laws. They wanted the freedom to buy and sell goods at the best prices.

The Navigation Acts required colonists to:
- sell goods only to members of the British Empire
- pay a tax to buy goods from any country that was not part of the British Empire

The war with France to control North America had left Britain deeply in debt. The British government then decided to add taxes to items sent to the colonists. Britain needed the money to pay back its debts.

The colonists were angry. They began to boycott British goods. This means the colonists refused to buy goods from Britain. Colonists believed they were not fairly represented in Britain’s government, so the British taxes were unfair.
In 1773 Parliament passed the Tea Act. This law said the British East India Company did not have to pay the same tax as the American tea merchants. In protest, some angry colonists dressed as Native Americans dumped a cargo of British tea into Boston Harbor. This event became known as the Boston Tea Party.

The British responded by passing the Intolerable Acts. These laws shut down Boston Harbor, put Massachusetts under military control, and forced colonists to house and feed British soldiers. Leaders from the colonies met in Philadelphia at the First Continental Congress. They discussed how the British laws could be reversed. Some leaders called for independence.

**A War for Independence**

Tension in the colonies led to a battle at Lexington, Massachusetts, between the British soldiers and the colonists. Congress tried to make peace with the British one last time. When that effort failed, the colonial leaders called for independence. On July 4, 1776, Congress issued the Declaration of Independence. The conflict became a war for independence.

**Declaration of Independence**

- All men are created equal.
- People have rights that no one can take away.
- Governments must protect people’s rights.
- People can overthrow governments that do not protect their rights.

The American army was smaller and less skilled than the British army, but it had a strong leader in General George Washington. The British had the disadvantage of fighting far from home. They did not know the land very well, and they had to conquer the whole country to win.

The colonists’ victory at the Battle of Saratoga in 1777 changed the war. That is when the French became convinced the colonists could win and agreed to help the Americans. The British surrendered and two years later the Treaty of Paris ended the war. The United States was born.
Political and Industrial Revolutions

Lesson 1 The American Revolution, Continued

U.S. leaders wrote a plan of government called the Articles of Confederation. The Articles created a national government, but the states held most power. Over time, the plan proved to be too weak to meet the needs of the new country. In 1787 leaders met to create a stronger plan. The Constitution they wrote is still the law today.

The Constitution included two important ideas. The first idea, popular sovereignty, says that government gets its power from the people. The second idea is limited government. This means that the government does not have total power. It has only those powers identified in plans such as the Constitution.

The Constitution made the United States a republic led by an elected president. The first president of the United States was the hero of the war, George Washington. Later, a Bill of Rights was added to the Constitution. It guaranteed certain rights to all citizens.

- The United States is a representative government led by a president.
- Some powers belong to state governments. Some powers belong to the national, or federal, government.
- The jobs of government are divided among the executive, legislative, and judicial branches.
- A system of checks and balances makes sure no single branch of government gets too much power.

Check for Understanding

Number the following sentences about the settling of the colonies and the forming of the United States so that they are in the correct order.

1. The Puritans settle Plymouth Colony.
2. The American colonies win their independence.
3. The U.S. Constitution is written.
4. The Battle of Saratoga is the turning point in the war.
5. Colonial leaders issue the Declaration of Independence.
6. The colonists boycott British goods.

Reading Check

8. What kind of government did the Americans set up after the American Revolution?

9. Place a one-tab Foldable along the dotted line. Write Rise of a New Nation on the anchor tab. Write War between Britain and Colonies along the bottom of the tab and The United States of America at the top of the tab. Draw an arrow from the bottom title to the top title.

On the back, write what you remember about the war leading to the rise of a new nation.
Political and Industrial Revolutions

Lesson 2 The French Revolution and Napoleon

ESSENTIAL QUESTION
Why is history important?

GUIDING QUESTIONS
1. Why did revolution break out in France?
2. How did supporters of France’s revolution enforce their reforms?
3. How was Napoleon able to take over France’s government?
4. How did Napoleon build and then lose an empire?

Terms to Know
estate a social class in France before the French Revolution
bourgeoisie the French word for middle class
coup d’etat a change of government in which a new group of leaders seizes power by force

Where in the world?

When did it happen?

<table>
<thead>
<tr>
<th>1780</th>
<th>1790</th>
<th>1800</th>
<th>1810</th>
<th>1820</th>
</tr>
</thead>
<tbody>
<tr>
<td>1789 The French Revolution begins</td>
<td>1793–1794 Reign of Terror in France</td>
<td>1804 Napoleon crowns himself emperor</td>
<td>1815 Napoleon is defeated at Waterloo</td>
<td></td>
</tr>
</tbody>
</table>

You Are Here in History

1792 King Louis XVI is executed
Political and Industrial Revolutions
Lesson 2 The French Revolution and Napoleon, Continued

The Revolution Begins
The American Revolution had a great influence on the world. Like the Americans, many French people wanted political changes, including more freedom and equality.

In the 1700s, France was one of the most powerful countries in Europe. Its people were divided into three estates, or social classes. The First Estate was clergy and church officials. They made money using church lands. The Second Estate was the nobles. They lived in luxury at the king’s court or in country homes. Neither group paid taxes.

Everyone else in France belonged to the Third Estate. Merchants, doctors, and bankers were at the top of this group. They were called the bourgeoisie, or middle class. The Third Estate also included city workers and peasants. They paid taxes, but had no voice in governing the country.

During this time, King Louis XVI asked the nobles and clergy to begin paying taxes. They refused. Members of the Third Estate formed a new group—the National Assembly. They wrote a constitution that limited the king’s power.

The people feared the king would end these reforms. On July 14, 1789, a large crowd stormed a royal fortress and prison called the Bastille. Peasants throughout France rebelled against the nobles. The National Assembly issued the Declaration of the Rights of Man. It promised freedom of the press, speech, and religion.

**Declaration of the Rights of Man**
- Government gets its power from the people.
- All people are equal under the law.
- People have freedom of press, speech, and religion.
- People are assumed innocent until they have been proven guilty.
- No one will be arrested or imprisoned unfairly.

King Louis did not accept the new laws made by the National Assembly. There was a dangerous scramble for power. In 1792 the French people elected a new government called the National Convention.
A Republic in France

The National Convention ended the monarchy and made France a republic. In December 1792, the National Convention found King Louis XVI guilty of helping France’s enemies. A month later, he was beheaded on the guillotine. The king’s death made the citizens of France feel powerful.

A group called the Committee of Public Safety put new reforms in place. It was led by Maximilien Robespierre. The committee opened new schools, taught peasants new farming skills, and worked to control prices.

The committee, however, also punished anyone it thought might be disloyal to the republic. Thousands of people were beheaded for doing or saying things against the government. Because of the fear this created, this time period is called the Reign of Terror. The people of France wanted to end the Reign of Terror. The National Convention removed Robespierre from power and had him executed.

A group of men called the Directory took over the government. The Directory tried to stop food shortages, rising prices, and attacks by other countries. They did not succeed. The French people began to look for a strong leader who could solve their problems.

Napoleon Leads France

Napoleon Bonaparte was a gifted military officer. He rose to the rank of general by the time he was 24 years old. While he was away serving in the French military, Napoleon heard of the weakening government in France. He returned to take part in a coup d’état. This is when new leaders use force to take over the government.

Napoleon was called the First Consul and became a strong leader. He reorganized the government to strengthen his control. He created a new system of laws and made peace with the Catholic Church. However, not all of Napoleon’s changes were good for citizens. For example, he put limits on freedom of speech. In 1804 he crowned himself emperor of France. This was the end of the republic governed by the people.

The Creation of an Empire

Napoleon wanted to build a great empire. He fought a series of battles. By 1807, he had nearly reached his goal. As emperor, Napoleon ruled France and parts of Germany and Italy. His relatives governed other lands.
The British stopped Napoleon's invasion of their country at the Battle of Trafalgar. Napoleon next ordered his empire to stop trading with Britain. However, the boycott was hard to enforce and finally ended unsuccessfully.

<table>
<thead>
<tr>
<th>Napoleon's Empire</th>
</tr>
</thead>
<tbody>
<tr>
<td>1805</td>
</tr>
<tr>
<td>1807</td>
</tr>
<tr>
<td>1812</td>
</tr>
<tr>
<td>1814</td>
</tr>
<tr>
<td>1815</td>
</tr>
</tbody>
</table>

Napoleon then led 600,000 soldiers into Russia during the summer of 1812. The Russians refused to fight. They drew Napoleon deeper into their country and waited. When winter came, Napoleon's army did not have the clothing or the supplies they needed. The Russian winter caused more than 500,000 French soldiers to die.

Napoleon suffered his final loss at Waterloo, Belgium, in 1815. The French emperor was sent to an island in the southern Atlantic Ocean. He stayed there until his death in 1821.

European leaders met at a conference called the Congress of Vienna and brought back the powerful royal families who had ruled Europe before Napoleon. They tried to create a balance of power among the countries. They hoped this would keep all nations at peace.

### Check for Understanding

Name two ways the French Revolution changed the lives of French citizens.

1. ___________________________
2. ___________________________

Who was Napoleon and what role did he play for France?

3. ___________________________

### Explaining

9. How did the Russians defeat Napoleon’s army?

   ___________________________

### Reading Check

10. Why did the Congress of Vienna support rule by powerful monarchs?

   ___________________________

### Foldables

11. Place a three-tab Foldable along the dotted line. Write the title *French Revolution* on the anchor tab. Label the three tabs *Before, During, and After*.

   Use both sides of the tabs to list what you remember about France before, during, and after the revolution.
Lesson 3 Nationalism and Nation-States

ESSENTIAL QUESTION
How do governments change?

GUIDING QUESTIONS
1. What political ideas shaped Europe during the 1800s and early 1900s?
2. Why did new nations arise in Europe during the mid-1800s?
3. How did the United States change during the 1800s?
4. How did the countries of Latin America win independence?

Terms to Know
nationalism the desire of people with the same customs and beliefs for self-rule
guerrilla warfare a form of war in which soldiers make surprise attacks on their enemies
kaiser emperor of Germany
abolitionism movement to end slavery

Where in the world?

When did it happen?

1800 1840 1880 1920

1821 Mexico gains independence
1861 U.S. Civil War begins
1870 Italy unites
1871 Germany unites
1920 U.S. women gain the right to vote

You Are Here in History
1832 Britain expands voting rights
1865 U.S. Civil War ends
1871 Germany unites
Nationalism and Reform

Nationalism is the wish for self-rule among people who share the same culture. During the 1800s, nationalism and demands for political reform led to far-reaching changes in Europe and the Americas.

While the rest of Europe experienced war and revolution, Great Britain responded peacefully to the demands for political change. In 1832 the British government made a law that allowed most middle-class men to vote. Over time, more men in the country and in the cities gained the right to vote. Workers, however, were still not allowed to vote. British women first gained the right to vote in 1918.

The British government also faced the call for self-rule from Ireland. In the 1840s, Ireland suffered a famine. The British government did not send enough aid. At least one million Irish people died of starvation and disease. After this tragedy, the call for Irish independence increased, but the British still would not allow self-rule.

England | The government gave citizens more rights.
--- | ---
Ireland | The Irish pushed for independence but did not get it.
France | France became a republic. Then it had an emperor. After a civil war, it became a republic again.
Austria | Austria established a separate kingdom for Hungarians within its borders.
Russia | Czar Alexander freed serfs and built new industries.

In the mid-1800s, France became a republic and Napoleon’s nephew, Louis Napoleon, was elected president. Louis Napoleon soon became Emperor Napoleon III. After a civil war between the upper class and working class, France became a republic again.

Nationalism also led to the birth of the country called Austria-Hungary. Austria had many Hungarians who wanted independence. Hungary became a separate kingdom but also linked to Austria.

In Russia, Czar Alexander II tried to reform his country. He built factories and improved farming to make Russia stronger. He also freed the serfs. These peasants, who farmed land for landlords, felt they were not given enough land. They remained unhappy.
New Nations in Europe

In the mid-1800s, Austria controlled most of Italy. An independent kingdom called Piedmont forced Austria out of northern Italy. Nationalists in southern used guerrilla warfare to fight for independence. Guerrilla warfare is a form of fighting that uses surprise attacks. By 1870, all of Italy was united.

Nationalism also grew stronger in the German states. The Prussian leader Otto von Bismarck strengthened the army and defeated Denmark, Austria, and France. Other German states decided to avoid war with Bismarck. In 1871, Germany united under an emperor called the kaiser.

Growth of the United States

During the 1800s, the United States pushed its borders westward. The idea that the United States should stretch from the Atlantic Ocean to the Pacific Ocean was called “Manifest Destiny.”

Differences in the way of life between Americans in the North and South, however, caused tensions. The economy of the South relied on farming that used enslaved African Americans for labor. The North had an industrial and manufacturing economy. Some Northerners believed in abolitionism. This was a movement to end slavery.

<table>
<thead>
<tr>
<th>Different Ways of Life</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>North</strong></td>
</tr>
<tr>
<td>• an industrial and manufacturing economy</td>
</tr>
<tr>
<td>• used paid workers for labor</td>
</tr>
</tbody>
</table>

In 1860 Abraham Lincoln was elected president. He was against slavery. Southern states were afraid Lincoln would end slavery. Eleven states left the U.S. and formed their own nation. They called it the Confederate States of America. It was 1861 when the American Civil War began.

The North had more people and more factories than the South. Despite this, the South won most of the early battles. Finally, the North threw all of its resources against the South. After four years of fighting, the North won. More than 600,000 Americans had died in the Civil War.
After the war, African Americans were freed from slavery. New factories, railroads, and cities were built. Immigrants helped the population grow. Women fought hard for their rights. In 1920 they won the right to vote.

**Independence in Latin America**

Inspired by the American and French revolutions, a former slave named Toussaint L’Ouverture led enslaved Africans in a revolt in Haiti. In other Latin American countries, revolutions were led by priests and wealthy military leaders such as Simón Bolívar.

<table>
<thead>
<tr>
<th>Year of Independence</th>
<th>Countries</th>
<th>Year of Independence</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1804</td>
<td>Haiti</td>
<td>1825</td>
<td>Bolivia</td>
</tr>
<tr>
<td>1811</td>
<td>Paraguay</td>
<td>1828</td>
<td>Uruguay</td>
</tr>
<tr>
<td>1816</td>
<td>Argentina</td>
<td>1830</td>
<td>Ecuador, Venezuela</td>
</tr>
<tr>
<td>1818</td>
<td>Chile</td>
<td>1838</td>
<td>Costa Rica, Honduras, Nicaragua</td>
</tr>
<tr>
<td>1821</td>
<td>Mexico, Colombia, Peru</td>
<td>1840</td>
<td>El Salvador</td>
</tr>
<tr>
<td>1822</td>
<td>Brazil</td>
<td>1844</td>
<td>Dominican Republic</td>
</tr>
<tr>
<td>1823</td>
<td>Guatemala</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Check for Understanding**

Give one example of how nationalism affected each of these countries.

1. Ireland ________________________________
2. Italy ________________________________
3. Germany ________________________________
4. The United States ________________________________

**Identifying**

9. In what two years did the most Latin American countries gain independence?

   _____________
   _____________

**Listing**

10. Which Latin American countries gained independence in the 1820s?

   _____________
   _____________

**Reading Check**

11. How did Haiti’s revolution differ from other Latin American countries?

   _____________
   _____________

12. Place a one-tab Foldable along the dotted line. Write Nationalism in the middle of the tab. Draw four arrows pointing away from the title. Write words or phrases you remember about the rise of nationalism.
Political and Industrial Revolutions

Lesson 4 The Industrial Revolution

ESSENTIAL QUESTION
How does technology change the way people live?

GUIDING QUESTIONS
1. Why did the Industrial Revolution begin in Britain?
2. How did the new inventions help advance the growth of industry?

Terms to Know
industrialism an economic system where machines do work that was once performed by animals or humans
corporation a type of company that sells shares of ownership of the company to investors

Where in the world?

When did it happen?

1750 1800 1850 1900

1769 James Watt designs steam engine
1807 Robert Fulton develops steamboat
1830s Samuel Morse invents telegraph
1856 Henry Bessemer invents new steelmaking process
1876 Alexander Graham Bell develops telephone

You Are Here in History
Birth of Industry

**Industrialism** is the use of machines to do work that used to be done by people or animals. Industrialism started in Britain in the 1700s. Over the next 200 years, it spread to other parts of the world. It affected life so greatly that this period is known as the Industrial Revolution.

Industrialism began in Britain for many reasons. New laws let British landowners change the way they used their land. For many years, landowners had rented their land to villagers. These villagers farmed the land. They could keep livestock on public lands.

The new enclosure laws allowed landowners to put fences around their land as well as around public lands. By fencing their land, landowners created larger farms where more crops could be grown. They also used their land to raise sheep for the textile, or cloth, industry.

These practices helped landowners earn more money than they had before. They spent their money investing in new businesses. At the same time, new farm machines, such as the steel plow, meant that farms needed fewer workers. They went to work in new industries.

Another reason industrialism began in Britain was the growth of the population. More and better food meant people had healthier lives and lived longer. There were more people to work in factories.

Also, Britain had a rich supply of natural resources. This included strong rivers for powering mill wheels, coal for fuel, and iron supplies for building machines.
Finally, Britain was home to many inventors. The first inventions of this time period changed the textile industry. Before the Industrial Revolution, cloth was made by people who worked in their own homes. They worked alone using their own looms and sewing machines. However, machines became too big and too expensive to use at home.

Businesspeople called entrepreneurs built factories to hold the new inventions. In a factory, hundreds of workers use machines to make products. Factories provide a more organized and cheaper way to produce large amounts of goods.

<table>
<thead>
<tr>
<th>Inventor</th>
<th>Invention</th>
</tr>
</thead>
<tbody>
<tr>
<td>James Hargreaves</td>
<td>spinning jenny (spun cotton into thread)</td>
</tr>
<tr>
<td>Richard Arkwright</td>
<td>water-powered spinning machine</td>
</tr>
<tr>
<td>Edmund Cartwright</td>
<td>powered loom (for weaving cloth)</td>
</tr>
<tr>
<td>James Watt</td>
<td>steam engine (to power machines)</td>
</tr>
<tr>
<td>Henry Bessemer</td>
<td>discovered how to make steel from iron</td>
</tr>
</tbody>
</table>

Over time, entrepreneurs looked for different ways to make money. They formed businesses called **corporations**. A corporation sells shares, or part ownership, of the company to investors. This gave the entrepreneurs the money to hire more workers and build new factories.

**Growth of Industry**

At first, the Industrial Revolution gave Britain an advantage over other countries. Britain became the richest country in the world. The British government tried to protect this advantage. They passed laws to keep ideas, inventions, and workers in Britain.

Despite these efforts, many inventors and entrepreneurs left anyway. They took their industrial knowledge with them. As a result, the Industrial Revolution spread.

Like Britain, the United States had many natural resources. This made it easy for the U.S. to industrialize. New England became the home of many factories.
Pennsylvania was home to new coal mines and ironworks. Roads, railways, and canals helped move goods throughout the country.

Science helped industry advance. During the 1800s, inventors found many ways to use electricity. Thomas Edison made the light bulb and used electricity to create light.

Electricity also made new forms of communication possible. In the 1830s, Samuel Morse invented the telegraph. It allowed coded messages to be sent across long distances. In 1876 Alexander Graham Bell invented the telephone. It used tiny electrical wires to carry sound. In 1895 Guglielmo Marconi made the first wireless telegraph, which later developed into the radio.

Other inventors changed transportation. Robert Fulton invented a steamboat. It changed the way people traveled on rivers. Rudolf Diesel and Gottlieb Daimler created a type of engine that burns oil-based fuel. It is called an internal combustion engine. At first, the new engines powered boats. Then they were used in two other inventions: the car and the airplane.

**Check for Understanding**

How were natural resources important to industrialization?

1. ____________________________________________  ____________________________________________

   Name two ways each item changed.

2. Land use ____________________________________  ____________________________________

3. Manufacturing _______________________________  _______________________________

4. Transportation _______________________________  _______________________________

**Marking the Text**

8. Underline the three inventions that allowed new forms of communications.

**Reading Check**

9. How did electricity change communications?

   ____________________________________________  ____________________________________________

**Foldables**

10. Place a two-tab Foldable along the dotted line to cover the Check for Understanding. Write Industrial Revolution on the anchor tab. Label the two tabs Britain and America.

Draw an arrow from Britain to America. Use both sides of the tabs to record information you remember about the spread of the Industrial Revolution.
Political and Industrial Revolutions

Lesson 5  Society and Industry

ESSENTIAL QUESTION
How do new ideas change the way people live?

GUIDING QUESTIONS
1. How did industry change society in Europe and North America during the 1800s and early 1900s?
2. What new political ideas arose as a result of industrial society?
3. How did artists and writers describe the new industrial society?
4. What advances made in science in the mid-1800s have transformed life today?

Terms to Know
urbanization the increase in the number of people living in cities rather than in rural areas
liberalism a political philosophy based on the Enlightenment ideas of equality and individual rights
utilitarianism the idea that the goal of society should be to provide the greatest happiness for the largest number of people
socialism the idea that the means of production should be owned and controlled by the people, through their government
proletariat the working class
labor union an organized group of workers who try to improve wages and working conditions

When did it happen?

<table>
<thead>
<tr>
<th>1800</th>
<th>1840</th>
<th>1880</th>
<th>1920</th>
</tr>
</thead>
<tbody>
<tr>
<td>1800 Robert Owen founds a utopian community</td>
<td>mid-1800s The Realist art movement begins</td>
<td>1859 Darwin publishes <em>On the Origin of Species</em></td>
<td>late-1800s The Modernist movement arises</td>
</tr>
</tbody>
</table>

What do you know?
For each inventor, write the name of his invention. If you do not know what the inventor created, leave the line blank.

Alexander Graham Bell  ________________
Thomas Edison    ________________
Samuel Morse    ________________
Guglielmo Marconi  ________________
the Wright Brothers  ________________
A New Society

The Industrial Revolution caused the growth of cities, or **urbanization**. Cities offered new jobs and a new way of life. Workers earned more money. The middle class began to grow.

Factory workers had a tougher life. Children and adults worked long hours for six days each week. Factories were hot, dirty, and unhealthy. Diseases spread quickly. Workers were often hurt by the machines they used. Reformers called for laws to make factories safer. New laws also improved pollution and water.

<table>
<thead>
<tr>
<th>Working Conditions in Factories</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Children and adults worked long hours.</td>
</tr>
<tr>
<td>• Workers did the same tasks over and over.</td>
</tr>
<tr>
<td>• Factories were hot, dirty, and unhealthy.</td>
</tr>
<tr>
<td>• Diseases spread quickly.</td>
</tr>
<tr>
<td>• Workers were often hurt by the machines they used.</td>
</tr>
</tbody>
</table>

The Industrial Revolution had a huge impact on the lives of women. Although they had fewer rights than men, women were able to earn their own money by working in businesses and government service. They began to call for more political rights in the 1800s. They demanded the right to vote and to hold public office.

**Industrialization Changes Political Ideas**

The Industrial Revolution inspired people to find ways to improve society. **Liberalism** is the idea that all people have individual rights such as equality under the law and freedom of speech. Most Liberals, however, thought that the right to vote should belong only to men who owned property. Some, like British economist Adam Smith, thought government should not interfere with business.

Others believed that the government should help make society better. This was called **utilitarianism**. Other thinkers supported an idea called **socialism**.

Socialists believed that people should own and control the means of production, including factories, land, and raw materials. They wanted the government to manage these on behalf of the people. Some socialists, including Karl Marx, thought that this idea did not go far enough.
Marx believed that the working class, or proletariat, would revolt and create a society based on communism. Under communism, all people would be equal and share the wealth of the society.

Other efforts also improved the lives of workers. Workers formed labor unions to fight for their rights. A labor union is an organized group of workers who try to improve working conditions. Labor unions helped workers get higher pay and safer working conditions.

<table>
<thead>
<tr>
<th>New Political Ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Liberalism</strong></td>
</tr>
<tr>
<td>• All people have individual rights.</td>
</tr>
<tr>
<td>• Government should leave business alone.</td>
</tr>
<tr>
<td><strong>Utilitarianism</strong></td>
</tr>
<tr>
<td>• Government should work to make society better.</td>
</tr>
<tr>
<td>• Utilitarians wanted full rights for women, better health care, and better education.</td>
</tr>
<tr>
<td><strong>Socialism</strong></td>
</tr>
<tr>
<td>• The people should own the means of production.</td>
</tr>
<tr>
<td>• Government should manage the means of production for the people.</td>
</tr>
<tr>
<td>• Wealth should be shared by all people.</td>
</tr>
<tr>
<td><strong>Communism</strong></td>
</tr>
<tr>
<td>• Social classes would not exist.</td>
</tr>
<tr>
<td>• Workers would control government.</td>
</tr>
<tr>
<td>• Workers would create a society in which people would share everything equally.</td>
</tr>
</tbody>
</table>

**Revolution in the Arts**

The growth of industry also sparked new movements in the arts. Artists and writers known as romantics wanted to use imagination to express their feelings and inspire strong feelings in others. The German composer Ludwig von Beethoven is among the most popular romantics.

In contrast, realists tried to show life as it really was. Britain's Charles Dickens became famous for describing the lives of everyday people. Modernists tried new subjects and new styles in their work. Some studied social issues such as crime, alcoholism, and women's rights. Others looked for meaning in dreams. Impressionist painters tried to show the color and light of the outdoor world.
The New Science
Scientific research increased in the 1800s. Charles Darwin developed a theory of evolution. In his book *On the Origin of Species*, he explained that plants and animals change very slowly over time. Darwin believed that humans developed from animal species. People argued about his ideas. Over time, many people came to accept his theory.

In 1796 Edward Jenner developed a vaccine, or type of medicine, that stopped people from getting a disease called smallpox. About 50 years later, Louis Pasteur discovered germs. He proved that killing germs prevented many diseases. This explained why vaccines worked.

<table>
<thead>
<tr>
<th>Scientist</th>
<th>Discovery</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gregor Mendel</td>
<td>children receive their traits from their parents</td>
<td>became the father of genetics</td>
</tr>
<tr>
<td>Louis Pasteur</td>
<td>disease-causing bacteria</td>
<td>allowed doctors to fight disease more easily</td>
</tr>
<tr>
<td>Joseph Lister</td>
<td>ways to sterilize medical tools</td>
<td>saved lives of patients who would have died from infection</td>
</tr>
<tr>
<td>Albert Einstein</td>
<td>theory of relativity</td>
<td>led to the development of the atomic bomb</td>
</tr>
</tbody>
</table>

Check for Understanding
List five ideas that changed the way people lived.
1. ____________________________________________
2. ____________________________________________
3. ____________________________________________
4. ____________________________________________
5. ____________________________________________

Reading Check
9. How did Louis Pasteur extend the work of Edward Jenner?
   ____________________________________________
   ____________________________________________
   ____________________________________________

10. Place a two-tab Foldable along the dotted line. Cut the tabs in half to form four tabs. On the anchor tab, write *Ideas Bring Change*. Label the four tabs *economics, politics, the arts, and science*.

Use both sides of the tabs to record one thing you remember about the changes that occurred in each area.