

(Renaissance and Enlightenment)

Students' Learning Outcomes:

After studying this chapter, students will be able to:

- Analyze, and describe with evidence, some of the main events, people, and changes covered in the Modern Period in Europe.
- Describe some of the reasons behind the Industrial Revolution.
- Explain how the steam engine drove the Industrial Revolution throughout the World.
- Identify the countries that gained huge economic benefits by adapting to the Industrial Revolution.

Main Events, People, and Changes Covered in the Modern Period in Europe

Europe is known not only for its revolutions and wars but also for its socio-cultural changes, including the Renaissance, the Reformation, and Colonialism. The effects of these changes can still be seen in the world today.

During 15th and 16th centuries CE, the European society witnessed tremendous changes. The beginning of Renaissance developed enquiring spirit and scientific outlook among the Europeans. The Reformation movement challenged the medieval religious set up. The age of Enlightenment was the age of reason and science. It enhanced the thought of the artists and scientists. During this age there was growth of individualism. The French Revolution of 1789 CE overthrew the ancient regime and medieval absolutism from France. It championed the cause of liberty, equality and fraternity.

The Renaissance in Europe

Renaissance means "rebirth" or "revival". The Renaissance in Europe was a cultural and socio-political movement of the 15th and 16th centuries CE. It stressed the rediscovery of texts and ideas from classical antiquity. The Renaissance got its start in Italy but soon covered all of Europe. The Renaissance was a cultural rebirth that touched all of the Europe. It saw revolutions in thinking, science, and art, as well as world exploration. This was the time of Leonardo da Vinci, Michelangelo, and Raphael etc.

Putting an end to the Medieval Age, the Renaissance marked the transition from Middle Ages to the modern age. In the 15th century CE, Europeans developed new form of literature, art, architecture and culture, i.e. Renaissance. It started in Italy first and then spread over to other countries of Europe. Systematically Renaissance expanded the horizon of human knowledge which reflected in various fields including art, literature and science, etc.



Factors of Renaissance

The following causes paved the way for the advent of Renaissance:

- The first and foremost factor of renaissance was the decline of feudalism.
- Impacts of Crusades as there were many religious wars in between the Christians and Muslims in the 11th and 14th centuries CE.
- Decline in the influence of church in the 13th and 14th centuries CE.
- Some progressive rulers, popes and nobles adopted a lot of measures to boost in the ushering of the Renaissance.
- Geographical voyage was a also potent factor of Renaissance.

- There was remarkable progress in trade and commerce during 12th and 13th centuries CE.
- The invention of printing machine helped disseminate knowledge wider and faster than ever before.
- The main cause of Renaissance was the fall of Constantinople.

Famous People

Famous Renaissance artists and writers included Leonardo de Vinci, Michelangelo, Raphael and William Shakespeare. Nicolaus Copernicus and Galileo Galilei made revolutionary discoveries in science. Saint Thomas More was a Renaissance scholar.

Do You Know?

- In 1454 CE, printing machine was utilized for commercial use. William Caxton brought this machine to England in 1476 CE. With the march of time; printing machines were established in Italy, France, Belgium and other European countries. Thus books could be published very easily with a short span of time. People could easily get books and learnt many things. This galvanized Renaissance.

Leonardo Da Vinci (1452-1519 CE)

Leonardo da Vinci was an Italian artist. His work as a scientist and an inventor make him a true Renaissance man. He served as a role model applying the scientific method to every aspect of life, including art and music. Leonardo da Vinci began painting the Mona Lisa in 1503, and it was in his studio when he died in 1519 CE. He worked on it intermittently over several years, adding multiple layers of thin oil glazes at different times.



Leonardo da Vinci

Michelangelo (1475-1564 CE)

Michelangelo was an Italian sculptor, painter, architect and poet of the High Renaissance. He was born in the Republic of Florence. His work had a major influence on the development of western art, particularly in relation to the Renaissance ideas of humanism and naturalism. He worked on the Medici Chapel, the Laurentian Library, and even the military fortifications of the city of Florence. Perhaps his most famous work was St. Peter's Basilica in Rome. He also painted The Last Judgment.



Michelangelo

Raphael (1483-1520 CE)

Raphael was an Italian painter and architect of the High Renaissance. Raphael's work are celebrated for their harmonious composition and vibrant colouring. His father, Giovanni Santi was a painter and poet for the local Duke. As a young boy, Raphael learnt the basics of painting from his father.

His work is admired for clarity of system, composition, visual and ideal of human dignity. He was pioneer of the new artistic style called Mannerism.

William Shakespeare (1564-1616 CE)

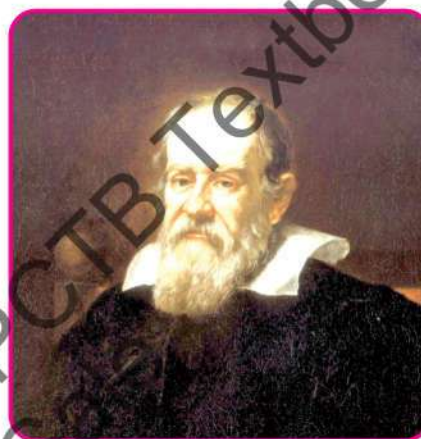
William Shakespeare is widely regarded the greatest writer in the English language and the world's greatest dramatist. He wrote many great plays. He worked as an actor as well. Shakespeare's greatest plays included Romeo and Juliet, Hamlet, Othello, King Lear, and Macbeth. He also became famous for his poetry. He wrote sonnets on a variety of themes.



Raphael



William Shakespeare



Galileo Galilei

Galileo Galilei (1564-1642 CE)

Galileo Galilei was an Italian philosopher, astronomer, and mathematician who made great contributions to the sciences. He grew up during the Italian Renaissance. He pioneered the use of telescope for observing the planets and stars. As Galileo studied the planets and the Sun, he became convinced that the Earth and the other planets revolved around the Sun. He discovered craters and mountains on the Moon. His work laid the foundation for today's modern space probes and telescopes.

Saint Thomas More (1478-1535 CE)

Saint Thomas More was an English writer, lawyer, statesman, social philosopher and Renaissance humanist. He held many important jobs including Speaker of the House of Commons, Lord Chancellor and advisor to the King Henry VIII. He wrote Utopia which describes the political system of an imaginary island state.



Saint Thomas More

Colonialism and Imperialism

Europeans have conquered, settled, and ruled a huge proportion of the Earth's land mass. The effects of these overseas empires are still felt today. Historians generally agree that Europe's colonial expansion happened in several phases. The 15th century CE saw the first settlements in the America and this extended into the 19th century CE. At the same time, the English, Dutch, French, Spanish, Portuguese, and other European countries explored and colonized Africa, India, Asia, and the continent that would become Australia.

These empires were more than governing bodies over foreign lands. The impact also spread to religion and culture, leaving a touch of European influence throughout the world.

The Age of Exploration

Renaissance encouraged new discoveries and inventions. It greatly contributed to the progress of human civilization. The invention of Mariner's Compass during the Renaissance period provided an impetus to navigation. It also paved the way for the process of colonialism. There were races for colonies among various European nations. There also started numerous bloody wars. The Age of Exploration (also called the Age of Discovery) began in the 14th century CE and continued through the 16th century CE. It was the time when the European nations began exploring the world. They discovered new routes to India, much of the Far East, and the Americas.

i- Christopher Columbus (1451-1506 CE)

Christopher Columbus was an Italian explorer and navigator who completed four voyages across the Atlantic Ocean between 1492 CE and 1504 CE. He discovered America in 1492 CE.

ii- Vasco Da Gama (1460-1524 CE)

In 1497 CE, the Portuguese explorer Vasco Da Gama set sail from Lisbon, Portugal towards India. His voyage made him the first European to reach India by sea. He opened up the first sea route connecting Europe to Asia. Vasco Da Gama's discovery of the Cape Route opened the way for an age of Portuguese exploration and colonialism in Asia.



Christopher Columbus



Vasco Da Gama



John Cabot

iii- John Cabot (1450-1499 CE)

John Cabot was an Italian explorer and navigator. During the 1470s CE Cabot sailed to the eastern part of the Mediterranean Sea as a trader. He became famous for his 1497 CE voyage to north America under the commission of Henry VII of England. He is known for discovering Canada.

iv- Pedro Alvares Cabral (1467-1520 CE)

Cabral discovered Brazil in south America. The Portuguese navigator was the first European to reach the Brazilian coast, in 1500 CE.

v- James Cook (1728-1779 CE)

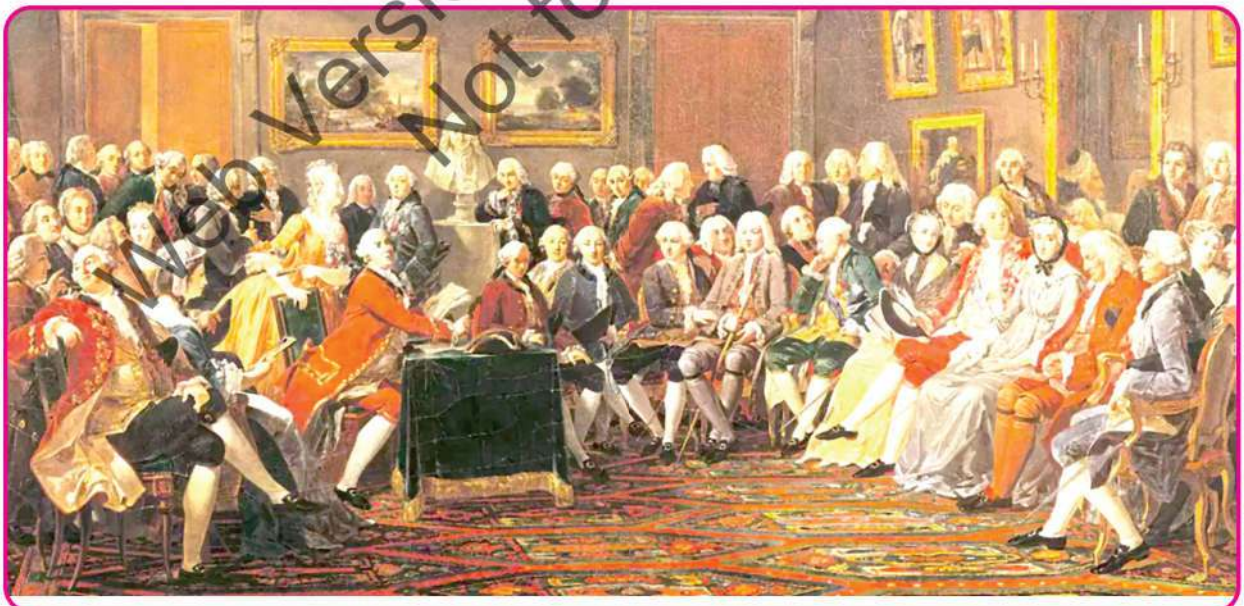
James Cook was a British explorer, navigator and cartographer. He was captain in British Royal Navy. He is famous for his three voyages in the Pacific Ocean and to New Zealand and Australia.

The Reformation

The Reformation was a split in the Latin Christian church during the 16th century CE. It was against the medieval religious set up in Europe. It all began in Wittenberg, Germany in 1517 CE with the ideals of the able leadership of Martin Luther. His preaching appealed to a popular circle. The Reformation was both a spiritual and political revolution that led to a number of reformed churches. It helped shape modern Government and religious institutions.

The Enlightenment

The Enlightenment was an intellectual and cultural movement of the 17th and 18th centuries CE. The major thinkers of the Enlightenment stressed the value of reason over blind faith and superstition.

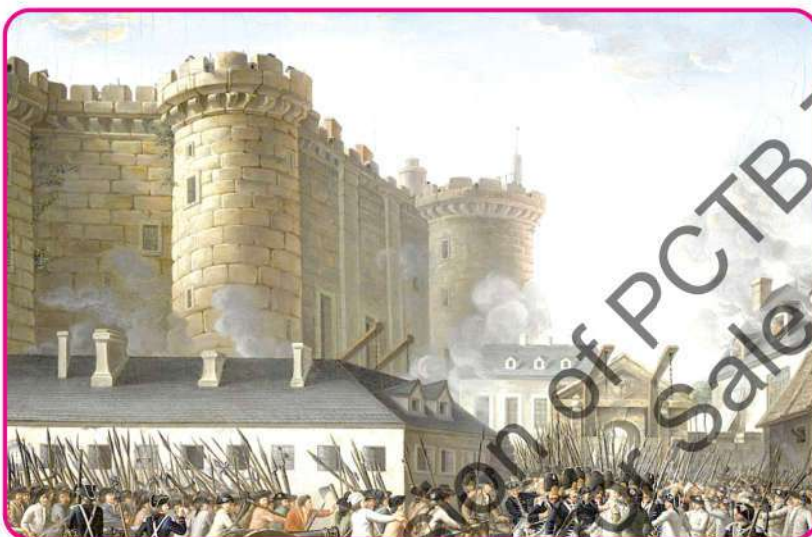


Thinkers of Enlightenment Era

This movement was spearheaded over the years by a group of educated writers and thinkers. The philosophies of men like Hobbes, Locke and Rousseau led to new ways of thinking about society, Government, and education that would forever change the world. Likewise, the work of Newton reshaped "natural philosophy." Their influence is undeniable.

The French Revolution

The French Revolution, which began in 1789 CE, affected every aspect of France and much of Europe. Quite often, it is called the start of the modern era. The Revolution began with a financial crisis and a monarchy that had overtaxed and overburdened its people. It ended the monarchy in France and established democracy. It also caused other countries to declare war on France. The French Revolution succeeded in obtaining power for the lower class, declaration of human rights, principles of liberty and equality. Additionally, it led to the rise of Napoleon Bonaparte.



A Scene of French Revolution



Napoleon Bonaparte

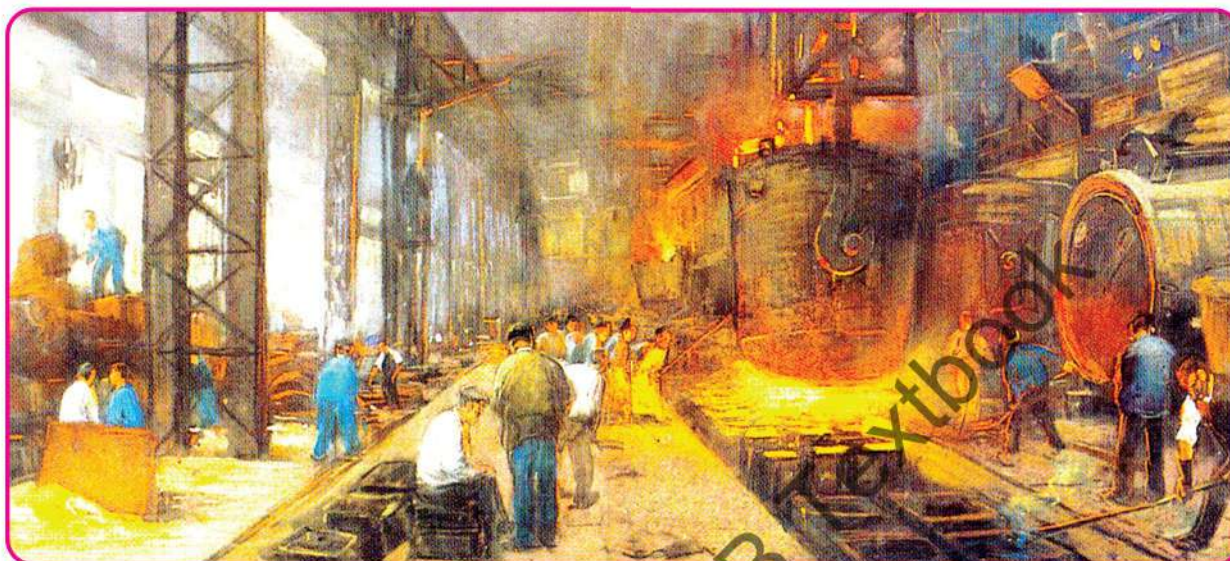
Do You Know?

Napoleon Bonaparte (1769–1821 CE) was a French military and political leader who rose to prominence during the French Revolution and led several successful campaigns during the Revolutionary Wars. He was an Emperor of France from 1804 CE to 1815 CE.

The Industrial Revolution

- The second half of the 18th century CE saw scientific and technological changes that would radically change the world. The first "Industrial Revolution" began around 1760s CE and ended sometime in 1840s CE. During this time, mechanization and factories altered the nature of economics and society. In addition, urbanization and industrialization reshaped both the physical and mental landscape.

- This was the age when coal and iron took over industries and began to modernize production systems. It also witnessed the introduction of steam power that revolutionized transportation. This led to a great population shift and growth.



Industrial Revolution in Europe

- The Industrial Revolution was a period of major industrialization and innovation during 1760 CE and 1860 CE. The Industrial Revolution began in Great Britain and quickly spread throughout the world. The main causes of the Industrial Revolution were:
 - Capitalism (Private ownership of the means of production and their operation for profit)
 - European Imperialism (Extending rule over people and other countries)
 - Mining of resources
 - Impact of the Steam Power Engine
 - Agricultural Revolution
 - Scientific Revolution
 - Governmental Policies
- The American Industrial Revolution commonly referred to as the Second Industrial Revolution began in the 1870s CE and continued through World War II.
- This period saw the mechanization of agriculture and textile manufacturing and a revolution in power, including steamships and railroads, that affected social, cultural, and economic conditions.
- Many inventions were made including the sewing machine, X-ray, lightbulb, calculator, Telegraphs and anesthesia, etc.
- Industrial Revolution developed the economy.
- It led to the emergence of machines.
- It caused the mechanization of agriculture.

- Communication and transportation improved dramatically.
- The Industrial Revolution created an increase in employment opportunities.
- Wages at factories were higher than what individuals were earning as farmers.
- Populations migrated to urban areas searching for jobs. This led to significant improvements in city planning.

The Steam Engine

- The steam engine was one of the most important inventions of the Industrial Revolution.
- Steam engines were used in all sorts of applications including factories, mines, locomotives, and steamboats.



Steam Engine Locomotive

- Before steam power, most factories and mills were powered by water, wind, horse, or man.
- Water was a good source of power, but factories had to be located near a river. Both water and wind power could be unreliable as sometimes rivers could dry up during a drought or freeze during the winter and wind didn't always blow.

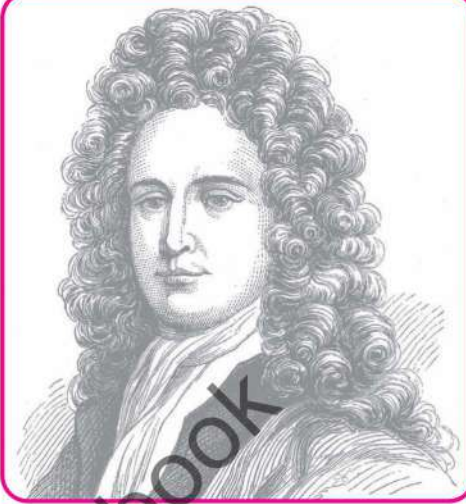
Do You Know?

- Steam engines use hot steam from boiling water to drive a piston back and forth. The movement of the piston was then used to power a machine or turn a wheel. To create the steam, most steam engines heated the water by burning coal.

- Steam power allowed for factories to be located anywhere.
- It also provided reliable power and could be used to power large machines.

Invention of Steam Engine

- One of the first steam engines was invented by Thomas Savery in 1698 CE. It was not very useful, but other inventors made improvements over time.
- The first practical fuel-burning engine was invented by Thomas Newcomen in 1712 CE. The Newcomen Steam Engine was used to pump water out of mines.
- James Watt, a Scottish mechanical engineer improved Newman Steam Engine with his Watt Steam Engine in 1776 CE.
- The Watt Steam Engine improved the efficiency of steam engine considerably. His engine was smaller and fuel (coal) efficient.



Thomas Savery



Watt Steam Engine

- By the early 18th century CE, Watt steam engines were used in factories throughout England. Smaller steam engines were used in transportation including trains and steamboats.
- Observing the success of railways in England, Americans were eager to bring them to the United States. The flood gates would open in 1829 CE as the first steam locomotives were imported to the United States.
- There are few things in American history as iconic as the steamboats that used to sail the rivers and canals of 19th century CE America. These ships brought new levels of reliability to American industry.



Steam Engine Locomotive

- Richard Trevithick, a British inventor and mining engineer is credited with inventing the first high pressure engine. In 1804 CE, he built the first ever steam locomotive to run along a track.
- Robert Fulton was an american engineer and inventor who is credited with developing the world's first commercially successful steamboat, the North River Steamboat also known as Clermont in 1807 CE.

Do You Know?

- One horsepower is equal to 745.7 watts. The unit of power (the watt) was named after inventor James Watt. James Watt used the term "horsepower" to describe how much power his engine could produce. .

Economic Benefits

- The Industrial Revolution began in England in the late 18th century CE, and spread during the 19th century CE to Belgium, Germany, northern France, the United States and Japan.
- These countries gained many economic benefits. As a result of trade, wealth brought economic prosperity. Railroads and waterways were built to link many cities.
- Karl Marx, a German philosopher and economist, developed the theory of Communism. The Communism is an economic system in which all property is owned by the community and persons contribute and receive according to their ability and needs.
- Transportation system was built. Buses, cars and other vehicles appeared on roads. The invention of the telegraph furnished instant communication between distant places.
- The economic prosperity greatly contributed to the Renaissance.
- Wealthy merchants extended patronage to artists and classical culture and literature, etc. flourished.
- Scottish economist and philosopher Adam Smith gave the concept of Capitalism. The Capitalism is an economic and political system in which a country's trade and industry are controlled by private owners for profit rather than by the state.

Timeline of Events

1095-1300 CE	The Crusades were a series of religious wars spanning more than two centuries CE across the majority of the so-called High Middle Ages, the Crusades were, in essence, military expeditions initiated by the medieval papacy to wrest the Holy Lands from Moslem control.
1300s-1700s CE	The Renaissance was a fervent period of European cultural, artistic, political and economic "rebirth" following the Middle Ages.

1452-1519 CE	Leonardo da Vinci was an Italian artist and engineer and most influential figures of the Renaissance who is best known for his paintings, notably the Last Supper (1495–1498 CE) and the Mona Lisa (1503–1519 CE).
1475-1564 CE	Michelangelo was an Italian sculptor, painter, and architect widely considered to be one of the greatest artists of the Renaissance. His most famous works have to be his Pieta, sculpture of David, and painting of the Sistine Chapel ceiling.
1483-1520 CE	Raphael was a master painter and architect of the Italian High Renaissance who is best known for his paintings, notably The School of Athens (1509-1511 CE) and The Madonna of the Pinks (1506-1507 CE).
1400-1800 CE	The Age of Exploration also called the Age of Discovery was a period of time when the European nations began exploring the world, discovered new routes to south east Asia, much of the Far East, and established settlements in north and south America.
1451-1506 CE	Christopher Columbus was an Italian explorer and navigator who completed four voyages across the Atlantic Ocean and discovered America.
1460-1524 CE	Vasco da Gama was a Portuguese explorer and the first European to reach India by sea.
1500 CE	The age of modern colonialism began about 16th century CE, following the European discoveries of a sea route around Africa's southern coast and of America.
1500-1820 CE	From 16th century CE to the early 19th century CE, is an era in which European nations sought trade routes with the Far East, explored the New World, and established settlements in north and south America as well as in south east Asia.
1517 CE	Reformation was a religious movement instigated by Martin Luther in 1517 CE for changing a religious, political, or societal institution for the betterment of people.
1564-1616 CE	William Shakespeare was an English playwright, poet and actor who is widely regarded as the greatest writer in the English language and the world's greatest dramatist.
1564-1642 CE	Galileo Galilei was an Italian astronomer, physicist and inventor commonly called the father of observational astronomy.

1698 CE	Thomas Savery invented one of the first steam engine.
1700s CE	The Enlightenment, also known as the Age of Reason was an intellectual and cultural movement in the 18th century CE that emphasized reason over superstition and science over blind faith.
1712 CE	Thomas Newcomen invented practical fuel burning steam engine.
1728-1779 CE	James Cook was a British explorer, navigator, cartographer, and captain in the British Royal Navy, famous for his three voyages in the Pacific Ocean and to New Zealand and Australia.
1760-1840 CE	The Industrial Revolution was the transition period from creating goods by hand to using machines which gave more goods at affordable prices.
1776 CE	Watt Steam Engine was invented by James Watt.
1788 CE	The British established their first settlement in Australia.
1789-1799 CE	The French Revolution was a period of major social upheaval that began in 1789 CE and ended in 1799 CE. During this period, French citizens radically altered their political landscape, uprooting centuries-old institutions such as the monarchy and the feudal system. It ended when Napoleon Bonaparte took power in 1799 CE.
1807 CE	Robert Fulton invented the world's first commercial steamboat, Clermont.
1889 CE	A wrought-iron lattice tower, The Eiffel Tower was constructed in Paris, France.

Skills:

- Use a timeline to identify the Modern Period in Europe.
- Read relevant books, search from the Internet and gather information about the Modern Period in Europe.
- Read relevant books, search from the Internet and gather information about the advantages, and disadvantages, of the Industrial Revolution.
- Explore inventions that were caused by the Steam Engine.
- Analyze some of the impacts of the Industrial Revolution on the Subcontinent.
- Explain how European countries started capturing Asian and African countries as their colonies in search of raw material for their industries.



MAIN POINTS

1. The Renaissance in Europe was a cultural and socio political movement of the 15th and 16th centuries CE.
2. The Reformation movement challenged the medieval religious set up.
3. The Enlightenment was an intellectual and cultural movement of the 17th and 18th centuries CE which enhanced the thought of the artists and scientists.
4. The French Revolution called the start of the modern era began in 1789 CE. It affected every aspect of France and much of Europe.
5. The Industrial Revolution was a period of major industrialization and innovation during 1760 CE and 1860 CE.
6. The American Industrial Revolution commonly referred to as the Second Industrial Revolution began in the 1870s CE and continued through World War II.
7. Leonardo Da Vinci (1452-1519 CE) was an Italian artist and a true Renaissance man. Mona Lisa is his famous painting.
8. Michelangelo (1475-1564 CE), was an Italian sculptor, painter, architect and poet of the High Renaissance. His most famous work was St. Peter's Basilica in Rome.
9. Raphael (1483-1520 CE) was an Italian painter and architect of the High Renaissance and was pioneer of the new artistic style called Mannerism.
10. William Shakespeare (1564-1616 CE) is widely regarded as the greatest writer in the English language and the world's greatest dramatist. Romeo and Juliet, Hamlet, Othello, King Lear, and Macbeth are his greatest plays.
11. Galileo Galilei (1564-1642 CE) was an Italian philosopher, astronomer, and mathematician who made great contributions to the sciences. He pioneered the use of telescope for observing the planets and stars.
12. Saint Thomas More (1478-1535 CE), was an English writer, lawyer, statesman, social philosopher and Renaissance humanist.
13. Christopher Columbus was an Italian explorer and navigator who discovered America in 1492 CE.
14. The Portuguese explorer Vasco Da Gama was the first European to reach India by sea.
15. Pedro Alvares Cabral (1467-1520 CE) discovered Brazil in south America.
16. The steam engine was one of the most important inventions of the Industrial Revolution.
17. Thomas Savery invented the first steam engine in 1698 CE.
18. The first practical fuel-burning engine was invented by Thomas Newcomen in 1712 CE.
19. James Watt, a Scottish mechanical engineer improved Newcomen Steam Engine with his Watt Steam Engine in 1776 CE.
20. In 1804 CE, Richard Trevithick, a British inventor built the first ever steam locomotive to run along a track.

EXERCISE

Q.1: Tick (✓) the correct answer.

- i. The French Revolution began in:
 - (a) 1769 CE
 - (b) 1779 CE
 - (c) 1789 CE
 - (d) 1799 CE
- ii. Karl Marx, a philosopher belongs to:
 - (a) Germany
 - (b) France
 - (c) Italy
 - (d) Scotland
- iii. Leonardo Da Vinci was an Italian:
 - (a) king
 - (b) artist
 - (c) explorer
 - (d) cartographer
- iv. First steam engine was invented by Thomas Savery in:
 - (a) 1668 CE
 - (b) 1678 CE
 - (c) 1688 CE
 - (d) 1698 CE
- v. The first and foremost factor of the Renaissance was the decline of:
 - (a) communism
 - (b) imperialism
 - (c) feudalism
 - (d) capitalism

Q. 2: Give short answers of the following:

- i. Who was Galileo Galilei?
- ii. Who invented the first successful commercial steamboat?
- iii. Write three advantages of Industrial Revolution.
- iv. What is meant by "Renaissance".
- v. When did the Enlightenment Movement start?

Q. 3: Write the answers of the following in detail:

- i. Describe some of the main events in the Modern Period in Europe.
- ii. Highlight the important people in the Renaissance Period in Europe.
- iii. Discuss the benefits of Industrial Revolution.
- iv. Describe some of the reasons behind the Industrial Revolution.
- v. The steam engine was one of the most important inventions of the Industrial Revolution. Describe.
- vi. Write a note on The Age of Exploration.

Learning Activities

The Teacher will:

1. Generate a discussion to help students identify how European countries started capturing Asian and African countries as their colonies in search of raw material for their industries.
2. Divide the class into groups to gather information to analyze some benefits of the Industrial Revolution in the Subcontinent.
3. Identify the impact of Industrialization on the world.
4. Show a video to discuss the advantages and disadvantages of the Industrial Revolution.
5. Use research methodology to help students explore inventions that were caused by the Steam Engine.



Critical Thinking:

Critical thinking Questions about the Modern Period in Europe:

1. What were the changes that shaped the Modern Era?
2. What two factors fostered the Renaissance in Italy?
3. How did the Renaissance revolutionize European art and thought?
4. What are two ways in which William Shakespeare's work showed Renaissance influences.

Classroom Project



- Collect information (life period, pictures, important work, etc.) about the famous personalities like Sir Issac Newton, Martin Luther, Sandro Botticelli of the Renaissance Period in Europe. Make a chart and display in the classroom.

Glossary

Invention:	The action of inventing something, typically a process or device
Feudal:	Antique, according to, resembling, or denoting the system of feudalism
Medieval:	Relating to the Middle Ages or likened to the Middle Ages
Magna Carta:	A charter of liberties. A document constituting a fundamental guarantee of rights and privileges.
Advancements:	A development or improvement.
Empire:	An extensive group of states or countries ruled over by a single monarch, an oligarchy, or a sovereign state.
Dynasty:	A succession of people from the same family who play a prominent role in politics. A line of hereditary rulers of a country.
Dome:	A rounded vault forming the roof of a building or structure, typically with a circular base.
Segregate:	Set apart from each other. isolated or divided.
Subcontinent:	The part of Asia containing Pakistan, India and Bangladesh.
Contribution:	The part played by a person or thing in bringing about a result or helping something to advance.
Crusade:	A series of medieval military expeditions made by Europeans to recover the Holy Land from the Muslims in the 11th, 12th, and 13th centuries CE.
Abolish:	Eliminate, cancel, Formally put an end
Prestige:	Respect and admiration felt for someone on his achievements or quality.
Renaissance:	The revival of European art and literature under the influence of classical models in the 14th–16th centuries CE.
Reformation:	The action or process of reforming an institution or practice.
Colonialism:	The policy or practice of acquiring full or partial political control over another country, occupying it with settlers, and exploiting it economically.
Imperialism:	A policy of extending a country's power and influence through colonization, use of military force, or other means.
Enlightenment:	The action of enlightening or the state of being enlightened.
Communism:	A theory or system of social organization in which all property is owned by the community and each person contributes and receives according to their ability and needs.
Capitalism:	An economic and political system in which a country's trade and industry are controlled by private owners for profit, rather than by the state.