

Standard VII

Social Science

Part I



Government of Kerala

DEPARTMENT OF EDUCATION

State Council of Educational Research and Training (SCERT); Kerala

2016

THE NATIONAL ANTHEM

Jana-gana-mana adhinayaka, jaya he
Bharatha-bhagya-vidhata.
Punjab-Sindh-Gujarat-Maratha
Dravida-Utkala-Banga
Vindhya-Himachala-Yamuna-Ganga
Uchchala-Jaladhi-taranga
Tava subha name jage,
Tava subha asisa mage,
Gahe tava jaya gatha.
Jana-gana-mangala-dayaka jaya he
Bharatha-bhagya-vidhata.
Jaya he, jaya he, jaya he,
Jaya jaya jaya, jaya he!

PLEDGE

India is my country. All Indians are my brothers and sisters.

I love my country, and I am proud of its rich and varied heritage. I shall always strive to be worthy of it.

I shall give respect to my parents, teachers and all elders and treat everyone with courtesy.

I pledge my devotion to my country and my people. In their well-being and prosperity alone lies my happiness.

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Typesetting and Layout : SCERT

First Edition : 2014, Reprint : 2016

Printed at : KBPS, Kakkanad, Kochi-30

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Dear Students,

We are all members of the society. It is the duty of every citizen to embrace its virtues and to react against its vices. Our rich culture and the various comforts we enjoy today are the contributions of the past generations as well. We should not only honour their sacrificial deeds but also guard their achievements and preserve them for future generations.

Our existence is dependent on the bond between man and environment. Hence we should protect our environment and should carefully utilize it for social development with the realization that it belongs to the future generations as well. As members of a democratic nation, we should be able to enjoy our rights and perform our duties. Learning Social Science encourages such insightful deeds and paves the way to excellence. I hope this text book will help you to gain adequate knowledge, to seek and find more, and to be responsive in society.

Wishing you the best,

Dr. P.A.Fathima
Director
SCERT

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**Certain icons are used in this
textbook for convenience**



**For further reading
(Need not be subjected to evaluation)**



Questions for assessing the progress



Summary



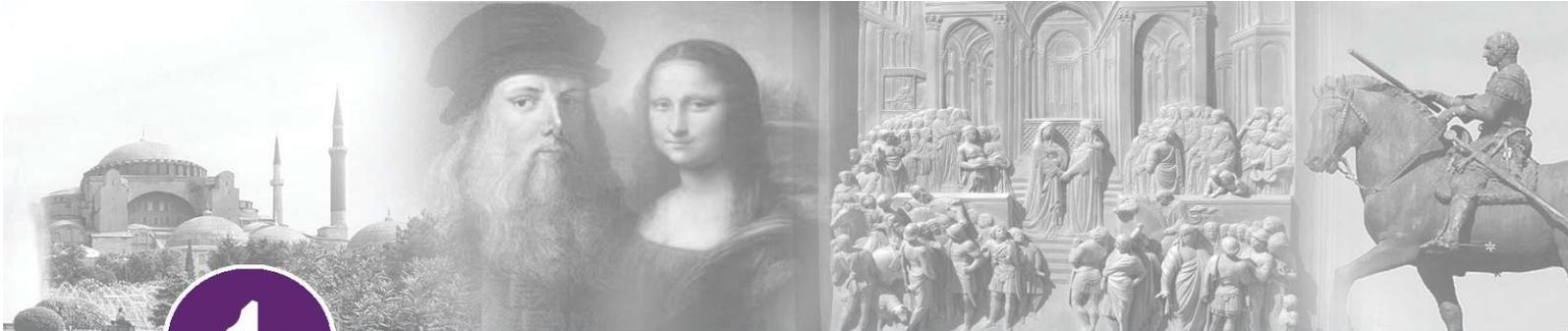
Significant learning outcomes



Let us assess



Extended activities



1

Europe in Transition



Hagia Sophia



This is Hagia Sophia, one of the important monuments in the history of the world. It was built in the 6th century AD. Now it is preserved as a history museum in Turkey. It is the

epitome of the architectural splendours of Constantinople, a city rich in historical monuments. Do you know the importance of Constantinople in the history of the world?



Locate Constantinople in the map.

Constantinople (the present Istanbul), the erstwhile capital of the Eastern Roman Empire has a unique place in the history of the world.

What were the features of Constantinople?

- Centre of knowledge.
- Abode of scholars and a treasure trove of scholarly texts.
- Gateway from Asia to Europe.

When the Turks conquered Constantinople in 1453, it resulted in the fall of the centuries old Eastern Roman Empire. Consequently, scholars, artists and writers fled from Constantinople to nearby areas in great numbers. Many of them migrated to Italy.

Why did they migrate to Italy?

- Italy was a country that upheld the rich Greco - Roman tradition.
- The rich Italian traders were the patrons of art, literature and culture.
- These traders were keen to preserve the historical and cultural heritage.

Hence, the Italian cities furthered thinking and encouraged the spirit of learning among the immigrant scholars. By the end of the 13th century, the Renaissance, which began in Italy flourished and spread to other nations.

The Renaissance

The fine arts, literature and history in the Medieval period were centred on religious ideology. The texts were invariably written in Greek and Latin as these languages were considered elite and scholarly. By the dawn of the 13th century, Latin and Greek gave way to regional languages like English, Spanish, and French. The writers of this period adopted the life of the common man as the central theme of their works. The literature of this period was no longer confined to religion and philosophy, but gave way to themes that depicted diverse aspects of human life. Similar changes occurred in other art forms like painting and sculpture. This vision, primarily concerned with the various aspects of human life, is known as humanism.

The new spirit of humanism inspired unique thoughts on the universe and human life. It promoted reasoning and the spirit of enquiry. Consequently, a new awakening in all spheres of human life became visible in Europe and it is known as the Renaissance.

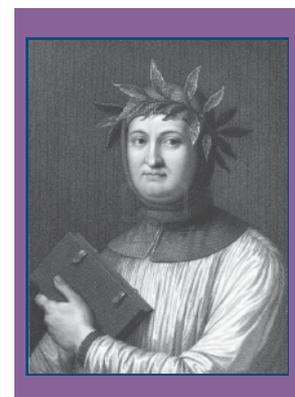


What were the situations that helped in developing humanism in Europe?

Now let us examine how the Renaissance influenced the different spheres of social life.

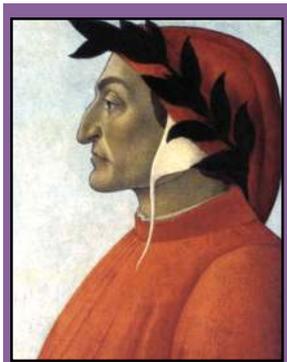
Renaissance in Literature

Petrarch (AD 1304 - 1374) was one of the eminent writers of the Renaissance period. He is known as the Father of Renaissance. The magnum opus of Petrarch is 'Secretum'.



Petrarch

The pictures of a few Renaissance writers and their works are given below.



Dante

The Divine Comedy



Boccaccio

The Decameron



Cervantes

Don Quixote



Erasmus

In Praise of Folly

Names of the major Renaissance writers are given in the following table. Fill up the corresponding columns with the names of their works.

Writers	Work
Petrarch	
Dante	
Boccaccio	
Cervantes	
Erasmus	

Renaissance in Arts

The Renaissance spirit was most pronounced in painting. Leonardo da Vinci was one of the great painters of the period. The Mona Lisa and the Last Supper are his famous paintings.

The pictures of a few prominent Renaissance painters and their works are given below:

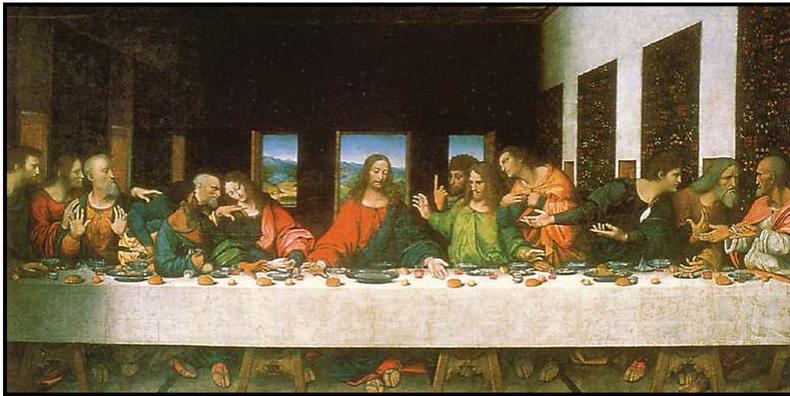


The Mona Lisa

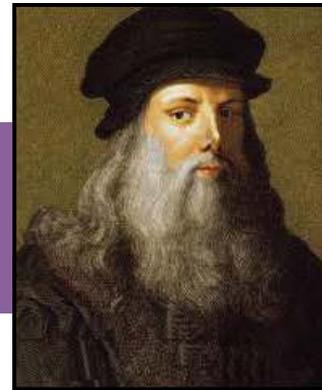


Mona Lisa

The Mona Lisa is a famous painting of the Renaissance period. The mysterious smile of Mona Lisa has led to much discussions and debates. Leonardo da Vinci, one of the famous artists of the Renaissance period, completed the painting in between AD 1503 and AD 1505. It is preserved in the Paris museum.



The Last Supper



Leonardo da Vinci



Michelangelo



The Last Judgment



Raphael



The School of Athens

The excellence in art was not limited to painting. In course of time, sublime works were created in the fields of architecture, sculpture, and music.

The prominent sculptors and architects and their works can be identified from the following pictures.



Lorenzo Ghiberti



The door of the Florence Baptistery



Donatello



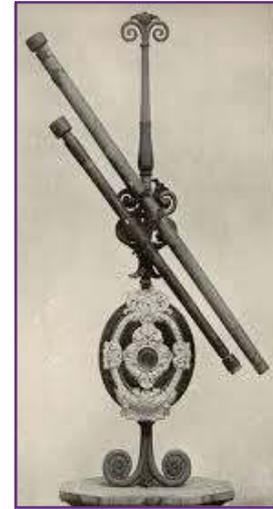
Gattamelata

Examine the pictures and fill out the names of Renaissance artists, their notable works, and respective fields.

Artist	Work	Field
Lorenzo Ghiberti	The door of the Florence Baptistery	Architecture

Renaissance in Science

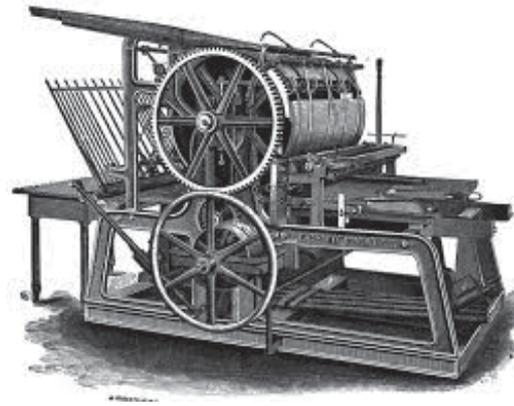
You have learned that the Sun is the centre of the Solar System and all planets, including the Earth, revolve around it, haven't you? But formerly it was believed that the Earth was the centre of the universe. In the Renaissance period, this belief was proven false. Copernicus propounded the theory of the Solar System and announced that the Earth revolves round the Sun. Later, Galileo Galilei invented the telescope and using it he scientifically proved that the theory put forward by Copernicus was true. It became easier to propagate the Renaissance ideas widely among the masses with the invention of the printing press by Gutenberg.



Galileo's
Telescope



Johannes Gutenberg



Gutenberg's Printing Press

The Story of Printing



The printing press was invented by a German blacksmith, Johannes Gutenberg in 1439. It was made of replaceable wooden alphabets. The invention of printing created a new reading culture. This resulted in revolutionary changes in the diffusion of knowledge. Gradually, the technology spread to other continents.

Discuss the influence of the Renaissance in the field of science.

The Reformation

The Renaissance had a say in the religious sphere also. The refinement underwent by the European Christianity in the 16th century is known as the Reformation. Martin Luther led this movement which began in Germany.



Martin Luther

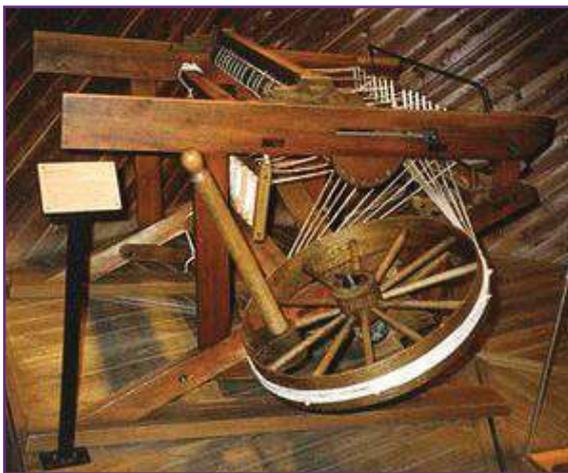
In Search of Sea Routes

We have seen that the Turks had conquered Constantinople. This dismantled the trade relation between Europe and Asia. It necessitated the European traders to discover new sea routes to Asia. The invention of the compass and the spirit of adventure uncovered unknown routes, oceans, and continents.

Industrial Revolution

The Renaissance in the field of science led to the invention of new machines which brought about immense changes in the field of production. Consequently, production increased while the cost of production decreased. Such changes in the field of production ushered in the Industrial Revolution. It began in England and revolutionized production, and trade.

Inventions during the Industrial Revolution



Spinning Jenny



Steam Engine

Inventions during the Industrial Revolution	Scientists
Flying Shuttle	John Kay
Spinning Jenny	James Hargreaves
Steam Engine	James Watt
Locomotive	George Stephenson

How did the scientific inventions influence the system of production? Discuss.



Summary

- The Renaissance began in Italy.
- Humanism was the most prominent characteristic feature of the Renaissance
- The Renaissance had tremendous influence on literature, art, science, and religion
- New sea routes were discovered and as a result, the Europeans reached different continents
- The Industrial Revolution brought about changes in the field of production.



Significant learning outcomes

- Finds out the factors responsible for the Renaissance.
- Explains that the Renaissance had a crucial role in developing humanism and the spirit of enquiry.
- Analyses that the Renaissance influenced different spheres of human life.
- Evaluates that the developments in the field of science and technology brought about the Industrial Revolution.



Let us assess

- Describe the influence of humanism in the fields of art, literature, and science.
- List out the new sea routes and their explorers.
- The Renaissance artists and their works are listed below.

Match column A with column B.

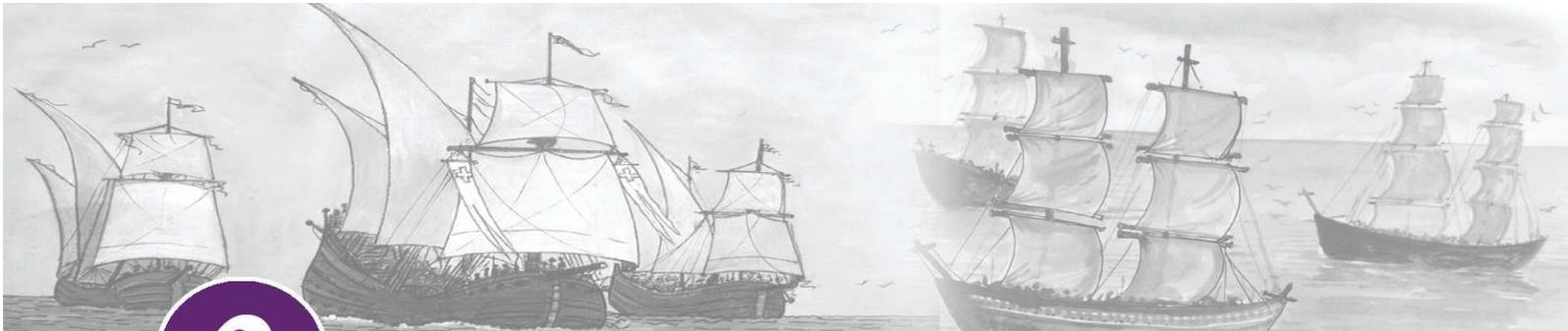
A	B
The Mona Lisa	Donatello
The Last Judgment	Leonardo da Vinci
The School of Athens	Michelangelo
Gattamelata	Raphael



Extended activities

- Collect the pictures of the writers, artists, and scientists of the Renaissance period and prepare an album with proper description.





2

From Trade to Power



Even the black gold has a story to tell

Friends,

I am pepper. Can I invite you to the Europe a few centuries ago?

The rural folks in Europe would kill some of their cattle for meat and preserve it for the prolonged winter season.

The heavy snow fall in the winter was not favourable for the grass to grow in the cattle fields. Both the people and cattle faced shortage of food during the season. The solution for this was to preserve the cattle meat as food for winter.

Remember that there was neither electricity nor refrigerator of any kind during that time. So they found me effective in preserving the meat and making it tastier. In short, I was inevitable for them.

My friends cardamom, cinnamon and ginger, all spices like I am, were also loved by them. The traders came in search of us from the time immemorial.

Didn't you listen to the story of pepper? What did you understand from the story?

- The spices of our land were essential to the foreigners.
- The traders all over the world used to visit here to collect the spices.

You have understood the previous chapter about the conquest of Constantinople by the Turks in 1453. This came in the way of the trade between Asia and Europe. The situation necessitated the European traders to find out a sea route to India. With the discovery of sea route to India, the Portuguese, the Dutch, the English and the French reached India for the purpose of trade.

From Portugal to Calicut

It was a sunny morning in the month of May 1498. Three huge ships anchored at Kappad near Calicut. The language and dress code of the mariners in the ships were quite different from the native people. They were a group of sailors from Portugal under the leadership of Vasco da Gama.



Vasco da Gama got a profit which was 60 times greater than the cost of their voyage by selling the goods they took back with them.

The Zamorin, the then ruler of Calicut (Kozhikode), did not provide trading facilities to Vasco da Gama. So he left for Kannur, gathered necessary goods and then returned to Portugal.

Almeida and Albuquerque, two sailors from Portugal reached here for trade following Vasco da Gama. Goa, and Daman and Diu were the major trade centres of the Portuguese. They constructed St. Angelo Fort at Kannur and Kottappuram Fort



Chavittunatakam

in Thrissur district. The Portuguese were also known as 'Parankis'. Agricultural crops like pineapple, guava, papaya, red chilly, cashew, tobacco etc. that are found in Kerala now, were introduced by the Portuguese. The widespread use of printing machine and the development of the art form 'Chavittunatakam' were some of the impacts of Indo-Portuguese relationship.

The Portuguese could not establish many trade centres in India. Let us examine the reasons for it.

- They did not have enough economic and military resources to compete with other European powers.
- They faced resistance from native forces.



Fort St. Angelo

Kunhali Marakkars, the admirals of Zamorin's naval force led the resistance against the Portuguese in the Malabar region.

Find out the influence of the Portuguese on different walks of Indian social life and prepare a brief note on it.

The Dutch

The Dutch were another European force who reached India following the Portuguese. Kochi and Kollam were the chief trade centres of the Dutch.

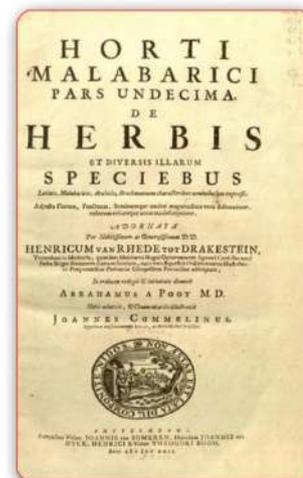
It was Van Rheedee, a Dutch Governor who initiated the compilation of 'Hortus Malabaricus', a book on the medicinal plants of Kerala. He completed the book with the help of Itti Achuthan Vaidyar.

The Dutch fought with Marthanda Varma, the King of Travancore following the disputes over trade. The Dutch were defeated in the Battle of Kolachel in 1741. They lost their ground in India with this war. The Dutch were also called 'Lanthans'.

You got an idea about 'Hortus Malabaricus', didn't you? Collect the folk wisdom on the medicinal plants in your locality and prepare a magazine on it.

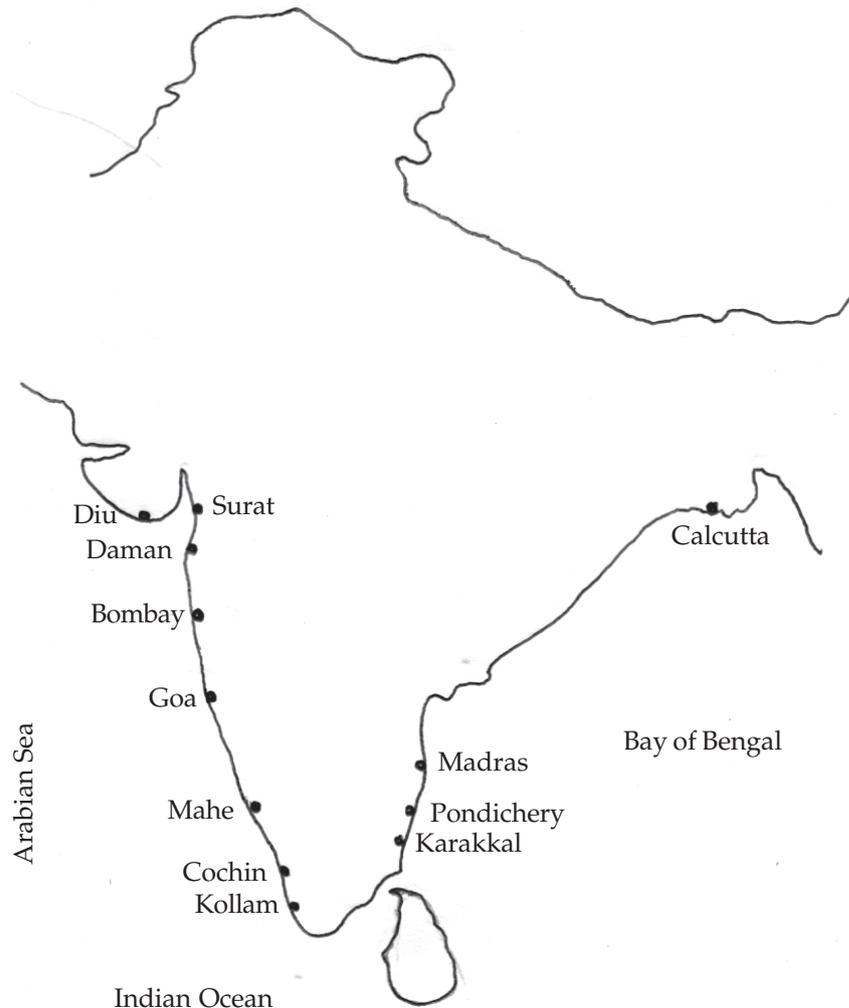
The advent of the English

The English East India Company was formed in England in 1600 for trade with the countries like India and China. Surat in Gujarat was the first trade centre of the Company in India. They also established trading centres at Bombay (Mumbai), Calcutta (Kolkata) and Madras (Chennai).



French Trade relations

The French East India Company was established in 1664 and the French reached India for the purpose of trade. Pondichery (Puducherry), Mahe and Karakkal were the chief trade centres of the French. Pondichery was their headquarters.



Prepare a list of different European trade centres based on the map given above. Can you identify any common feature of these trade centres?

In which states do these centres presently situate?

The Competition for the Monopoly of Trade

The European countries competed for monopolizing trade with India. The Portuguese and the Dutch were defeated at the very beginning of these competitions. The French and the English became locked in intense rivalry and the conflict between these forces lasted long. The series of conflicts between the French and the English in South India was known as 'Carnatic Wars'. Ultimately, the French were defeated.

The Company Gains Power

After gaining the monopoly of trade, the English East India Company focused on the acquisition of power in India. The Company rule in India had its inception in Bengal. Agricultural prosperity and the convenient trade facilities prompted the Company to capture power in Bengal. The British defeated Siraj – Ud – Daulah, the Nawab of Bengal, in the Battle of Plassey in 1757. The entire Bengal came under the Company rule with its success in the Battle of Buxar in 1764.



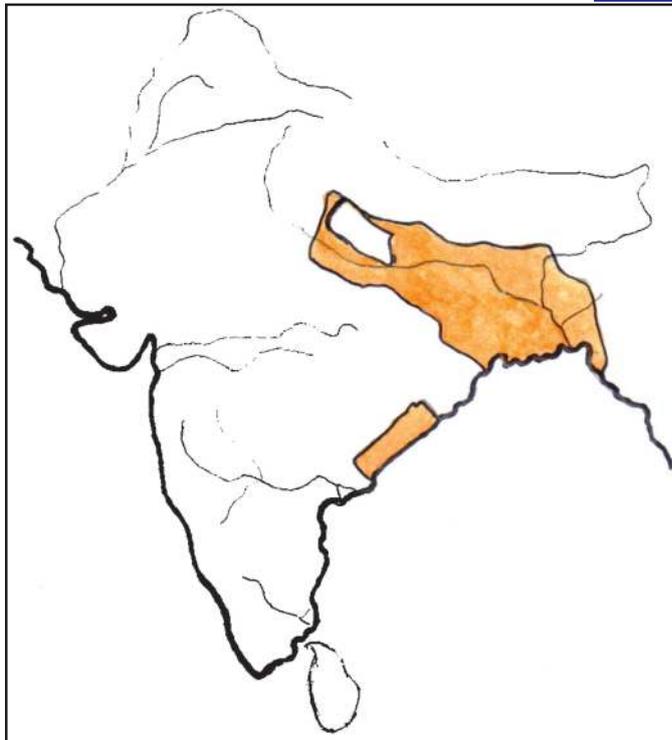
What were the factors that motivated the English East India Company to gain power in Bengal?

The war between the English and the French happened mainly in the Carnatic region which includes the major regions of the present Tamil Nadu. So these battles were known as the Carnatic Wars.

The Plassey and the Buxar



The British could succeed the Battle of Plassey through the secret alliance in which Robert Clive, the commander-in-chief of the British army forged with Mir Jafer, the commander – in – chief of Siraj – Ud – Daulah. However the success in Buxar was solely due to the superior British military power. They defeated the combined force of Sha Alam (the Mughal Emperor), Shuja – Ud – Daulah (the Nawab of Audh) and Mir Kasim (the former Nawab of Bengal).



 British India (After the Battle of Buxar)

The Reign Expands

Mysore was another region that was subjugated by the British. Mysore was a powerful kingdom in South India. It became the dominant power in the region during the reign of Hyder Ali and Tipu Sultan. Their domination extended even to the areas like Malabar. This interrupted the trade of the British in Malabar region. The friendly relation that Tipu Sultan maintained with the French also added fuel to the animosity of the British. This made them conquer Mysore. Tipu fought bravely with the British and died fighting in the Fourth Anglo–Mysore war. With the success of the British in Mysore wars, Malabar and Coorg came under the British reign.

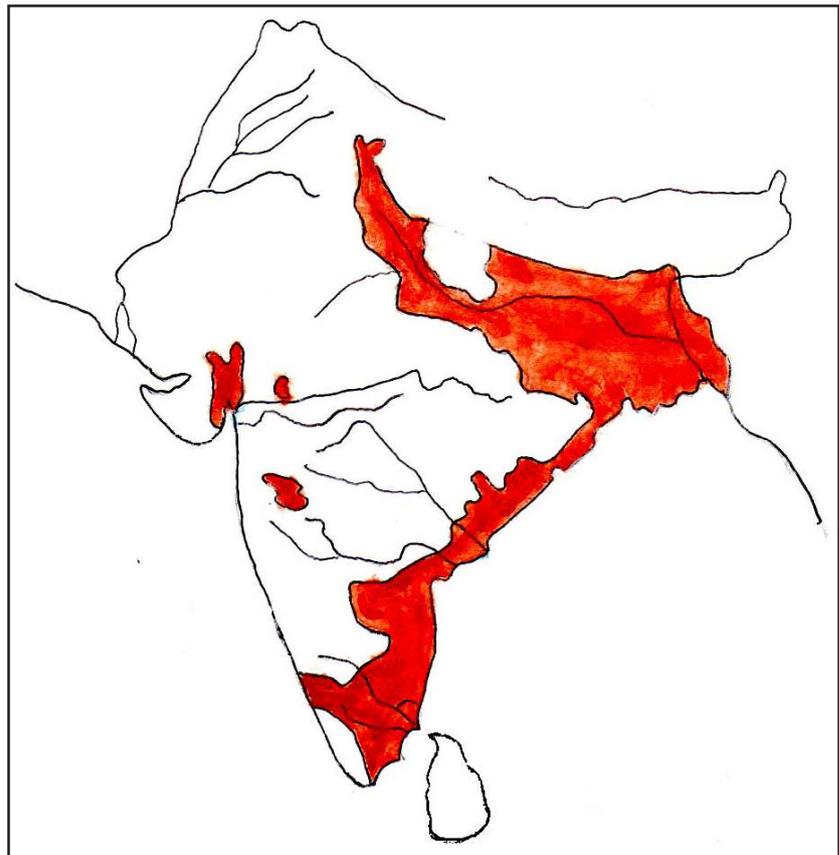


The Treaty of Sreerangapattanam

The British had to fight four wars before establishing their suzerainty in Mysore. The British annexed Malabar as per the Sreerangapattanam treaty signed between Tipu and the British after the third Anglo-Mysore war.



Tipu Sulthan



British India (at the beginning of 19th century)

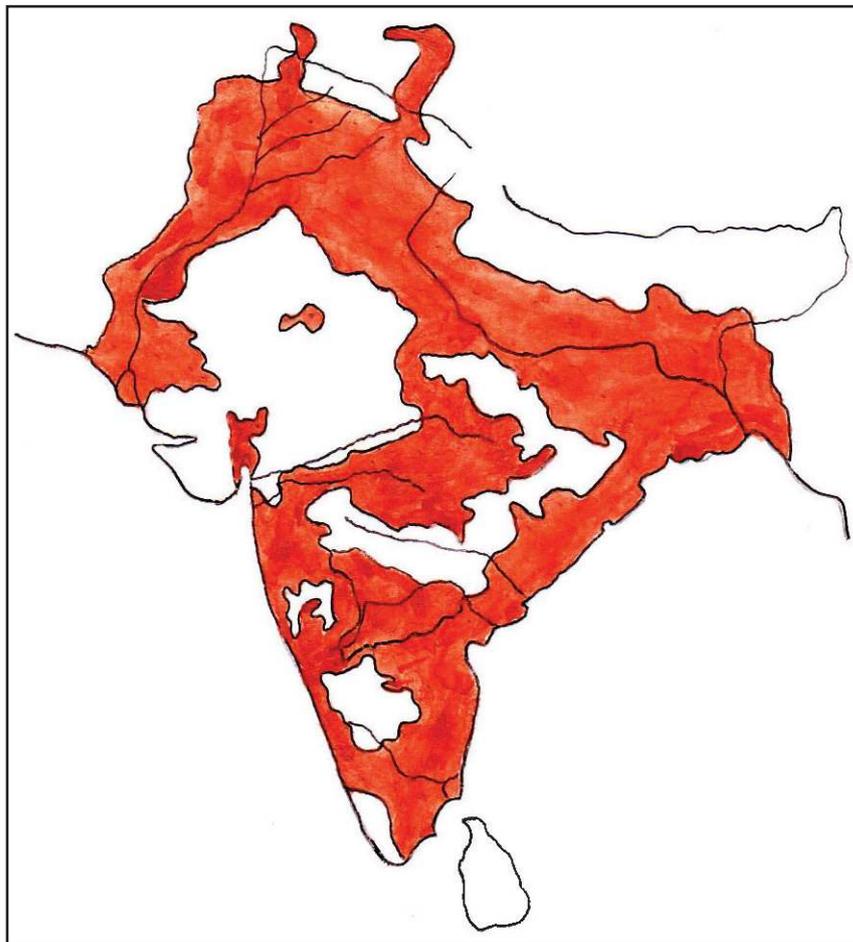
Subsequently the company conquered the Marathas who were a threat to the cotton trade of the British. Soon after, they conquered the princely states of Sindh, Punjab and Awadh.

We have seen that the British conquered the powerful princely states using military force. Such states came under the British rule. Certain other princely states were affiliated through treaties and legislations.

The 'Subsidiary Alliance' introduced by Lord Wellesley and the 'Doctrine of Lapse' executed by Lord Dalhousie had important roles in the acquisition of the princely states.



The princely states like Hyderabad, Thanjavore and Indore entered into the 'Subsidiary Alliance'.



 British India (1857)



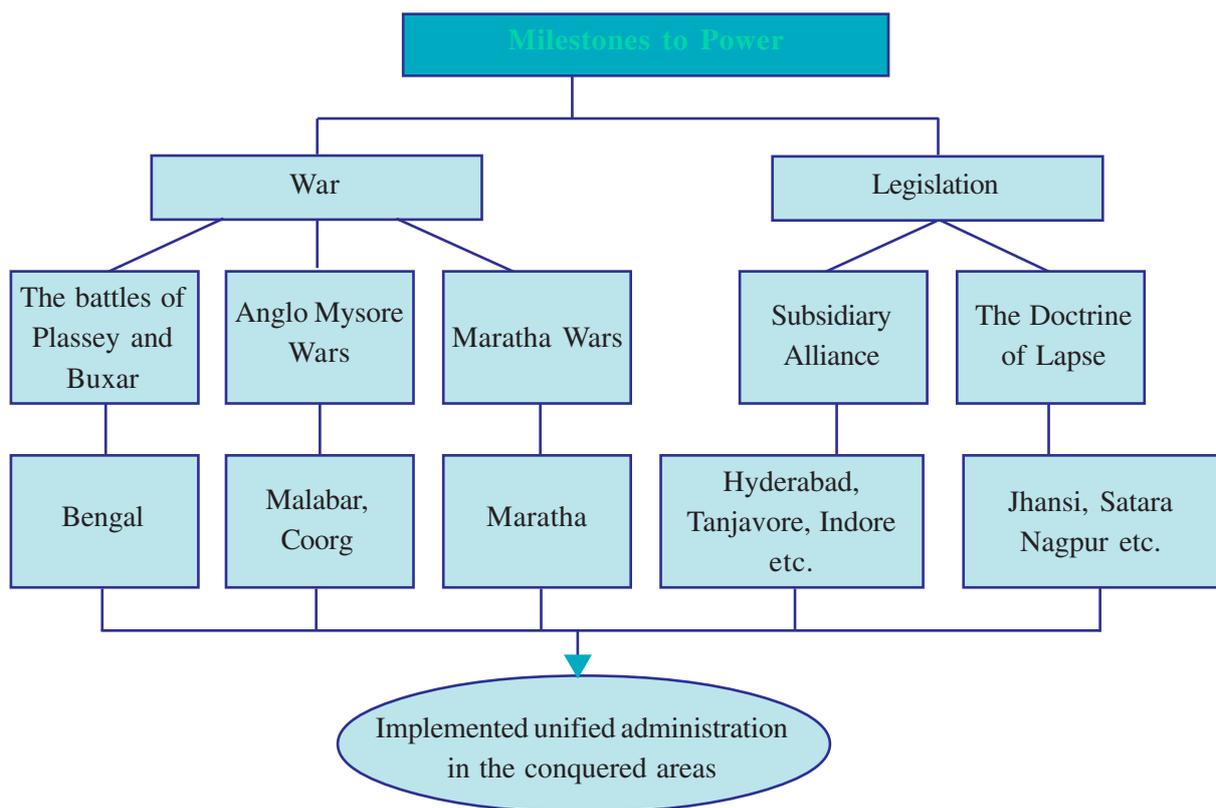
The British annexed Sambalpur, Sathara, Udaipur, Jhansi and Nagpur through the 'Doctrine of Lapse'.

The rulers who signed 'the subsidiary alliance' were assured protection by the Company against invasions and internal revolts. However, the actual administrative power of the states, were with the representatives of the Company.

Lord Dalhousie introduced the policy of 'Doctrine of Lapse'. As per the policy, when the ruler of a princely state died without a male heir, the British could annex the state with British India.

- 'The British adopted different strategies to annex the princely states'- Discuss the statement and prepare a note.

Almost all of India came under the British rule by 1857 and a unified administration was implemented in British India.



Organize a seminar on how the English East India Company, formed for trade became the rulers of India.



Summary

- The Portuguese, the Dutch, the English and the French reached India for trade.
- The contact with these countries influenced our social, cultural and economic life.
- It was England that succeeded in the competition for the monopoly of trade with India.
- The British annexed the princely states through wars and treaties and became the rulers of India.



Significant learning outcomes

- Evaluates that the traders from Portugal, Netherlands, England and France reached India with the discovery of sea route to India.
- Describes the ways through which the British were able to establish their political power in India after gaining monopoly of trade.
- Identifies and narrates that the British established their domination over the princely states through treaties and military force.



Let us assess

1. The Turk's conquest of Constantinople necessitated the Europeans to discover a sea route to India. Why?
2. The Portuguese could not establish many trade centres in India. Identify the reasons.
3. 'The contact with the Portuguese created lasting impact on our social, cultural and economic life'- Evaluate the statement.
4. Who were the 'Kunhali Marakkars'? What was their importance in the history of India?
5. Examine the reasons for the defeat of the French in the Carnatic Wars.
6. Arrange in chronological order.

6. Arrange in chronological order.
- The Battle of Plassey
 - The Battle of Kolachel
 - The arrival of the Dutch in India
 - The arrival of Vasco da Gama in Calicut
 - The arrival of the French in India
7. Identify the relationship between the items given in 'A' and fill up the blank spaces in 'B' based on the same relationship.

A. Goa	————▶	Portuguese
B. Pondicherry	————▶
A. Subsidiary Alliance	————▶	Lord Wellesly
B. The Doctrine of Lapse	————▶



Extended activities

- Identify the European countries that reached India for trade and colour them in the world map.
- Collect the pictures of the forts built by the Europeans in India. Visit any of the forts and prepare a report on it.
- Prepare a chart of the words with Portuguese origin that have been rooted in Malayalam as a result of the Indo-Portuguese contact.

3

Resistance and the First War of Independence



Thumb of the Nagodas

Nagodas were the sericulturists of Bengal. Weavers from various countries came to buy the silk they produced.

When Bengal came under the rule of the English East India Company, the officials began to exploit the Nagodas. They were compelled to do weaving for meager wages. They were made bonded labourers of the company, denying opportunity to seek any other means of livelihood. They were forced to live like slaves under the Company. The workers who were not willing to obey were tortured. Their properties were seized. They collectively decided to give up their traditional occupation, for it did not help them earn a living. Hence, they decided to cut off their thumbs as a protest against the policies of the East India Company.

You have seen the protest of the Nagodas. This was not an isolated event. The Company rule adversely affected all the workers engaged in traditional occupations. There were uprisings in different parts of our country against this. Who were exploited under the Company rule?

- Farmers
- Weavers
- Craftsmen
- Tribals

Against the Farmers

With the subjugation of Bengal, the attention of the Company shifted to the rich agricultural sector of the region. Their aim was to exploit the maximum resources. What were the strategies they adopted?

- Levied heavy taxes on farmers.
- No tax concessions were sanctioned even when drought and flood destroyed the agriculture.
- Middle men (Zamindars) were assigned to the duty of collecting tax.
- Imposed the condition that the tax was to be paid in the form of cash.
- The farmers had to depend on 'Sahus' - the private money lenders - for loans at a high rate of interest.

The Company identified that the fertile fields of Bengal were much favourable for growing the commercial crops like cotton, jute and indigo. These were the major raw materials for the industries in England. Consequently they decided to expand its cultivation and forced the farmers to do so. The fields that were used only for the cultivation of food crops changed into the plantations of cotton, jute and indigo. As a result farmers became landless and were forced to become labourers.

Conduct a seminar on "The hardships faced by different categories of people in Bengal under the Company rule."



Cotton cultivation



Jute cultivation

Against the Tribals



The Beginning of Railways

The intrusion of the Company was not limited to the agricultural sector. They framed several laws to exploit the forest resources. These laws gave the Company absolute control over the forests. This disturbed the collection of

The Indian Railways was launched on 16th April 1853. The first train from Bombay (Mumbai) to Thane was flagged off at



3.35 pm on that day. The train had 14 coaches that carried 400 passengers. On March 1861 the first train in Kerala ran from Tirur to Beypur.

forest products and adversely affected the tribal's traditional farming.

The tribal habitat was rich in mineral deposits and to exploit these, the British constructed roads and railways to these regions. These measures intensified the miseries of the tribals.

How did the forest laws imposed by the Company adversely affect the tribal life? Discuss.

Against the Weavers

You now know that cotton cultivation became widespread in India during the Company rule, don't you? However, the handloom industry in India declined. Let us examine the reasons.

- The large scale export of cotton, the raw material of handloom industry to Britain.
- The large scale import of cheaper textiles manufactured in the British factories
- Excessive taxes were levied on clothes made in India.

These factors rendered thousands of Indian weavers jobless.

Prepare a skit on the common problems faced by the weavers against the background of the Nagoda's protest.

The Uprisings

You have identified the major occupational groups, who lost their livelihood as a result of the Company rule, haven't you? These people started rebellions against the Company and Zamindars, the middle men of the Company.

Though not well organized, the resistance against the Company became common in different parts of the country.

Peasant revolts started at the very beginning of the Company rule. It is evident in the Sanyasi and Fakir rebellions that occurred in the end of the 18th century.

In 19th century several rebellions broke out in Malabar. It was led by the Mappila tenants and are known as the Mappila rebellions. Similar uprisings burst out in Bengal and were known as 'Faraizi rebellions.' Besides the peasants, the tribals also rose in revolt against the Company.

The major tribal groups, that organized rebellions are:

- The Bhils in Maratha
- The Kohlis in Ahammed Nagar
- The Kols in Chota Nagpur
- The Santhals in Rajmahal hills
- The Kurchiyas in Wayanad

The Santhal Rebellion

The Santhals were the inhabitants of the Rajmahal hills, in the Bengal province. The Santhal rebellion was the result of exploitation they faced from the Company officials and money lenders. The Rajmahal hills witnessed the sacrifice of more than 15,000 Santhals in this rebellion. It was under the leadership of Sidhu and Kanhu.



Discuss the circumstances that led to Santhal Rebellion and prepare a report.



A Santhal Folk Song

*Oh! Sidhu...
Smeared in blood...
Oh! Kanhu...
Screaming huul... hul...
These traders... these robbers...
Made us landless
We are smeared in blood...
For our beloved folks...*

Reference:

Ranajith Guha

Elementary Aspect of Peasant Insurgency

The kings and chieftains who lost their power were another group, that led rebellions. Some of them are :

- Raja Cheith Singh of Awadh
- Veera Pandya Kattabomman of Tirunelveli
- Marutupandyan of Shivganga
- Pazhassiraja of Malabar
- Kittoor Channamma of Karnataka
- Veluthampi Dalawa of Travancore
- Paliyathachan of Kochi

The Rebellions in Kerala

Pazhassi revolt was one of the major revolts of Kerala. The British lifted Pazhassiraja's right to collect taxes from Kottayam, in North Malabar. This was the immediate cause for Pazhassiraja's revolt. He led a guerrilla war against the British in the forests of Wayanad.

Thalakkal Chandu, Kaitheri Ambu, Edachana Kunkan and Athan Gurukkal were the prominent leaders who fought with Pazhassiraja in the revolt. The revolt ended with the death of Pazhassiraja.

The anti-British revolts in Travancore were led by Veluthampi Dalawa. The constant intervention of the Company in the home affairs of Travancore hindered the smooth administration of Dalawa. This was the main reason for him to turn against the British. Paliyathachan, the minister of Kochi extended his assistance to Dalawa. In the famous Kundara Proclamation of 1809, Dalawa called upon the people to fight against the British. However, he was defeated by the British.

The First War of Independence in 1857

We have learned about the isolated resistance that occurred in different parts of the country. The army of East India Company suppressed them.

By 1857, even people who were loyal to the Company turned against them. The Indian soldiers in the British army (Sepoys) and the kings who lost their hereditary rights as per the Doctrine of Lapse were the main leaders of the revolt.



The Final Journey of Pazhassi Raja

The Raja's body was taken and put in my palanquin, while the lady who was dreadfully reduced from sickness was put into Captain Clapham's.... The following day the Raja's body was despatched under a strong escort to Manantoddy and the Sheristadar sent with it with orders to assemble all the Brahmins and to see that the customary honours were performed at his funeral. I was induced to this conduct from the consideration that although a rebel he was one of the natural Chieftains of the country and might be considered on that account rather as a fallen enemy.

Kannur,

T.H. Baber

1805 December 31.

(Sub Collector - Malabar)

The living conditions of Sepoys were miserable and they had to lead a hard life. The Sepoys were disappointed with the following conditions.

- Meagre wages
- Prolonged working hours
- Denying leave
- Slave like treatment by superior officials
- Poor quality food

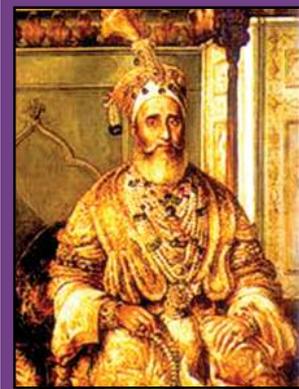
In this context, the Company supplied a new type of Enfield rifle to the Sepoys. There was a rumour that the cartridges to be used in this gun were greased with the fat of cows and pigs. Another rumour was that the bread supplied to the Sepoys was made from wheat flour mixed with bone powder. This provoked them to rebel. Mangal Pandey was the first Indian soldier to protest.

An organized revolt against the military officials started in Meerut. Then the soldiers reached Delhi and proclaimed the last Mughal ruler Bahadur Shah II as the Emperor of India.

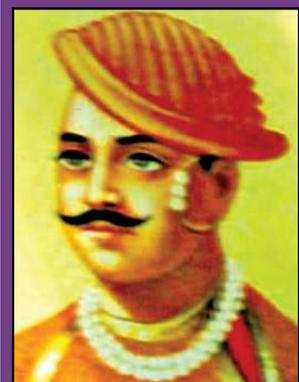
The revolt spread to different parts of North India. The rulers of princely states, who had lost their power also joined the rebellion. The revolt further spread to Kanpur, Lucknow, Allahabad, Jhansi, Arrah and Faizabad.



Mangal Pandey



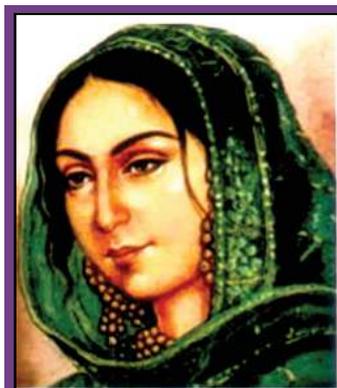
Bahadur Shah II



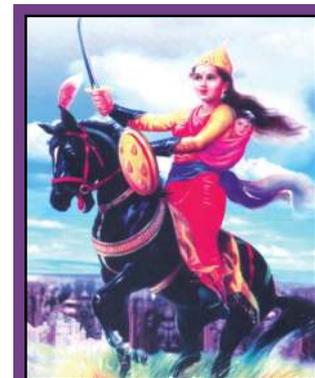
Nana Sahib



Tantia Tope



Begum Hazrat Mahal



Jhansi Rani



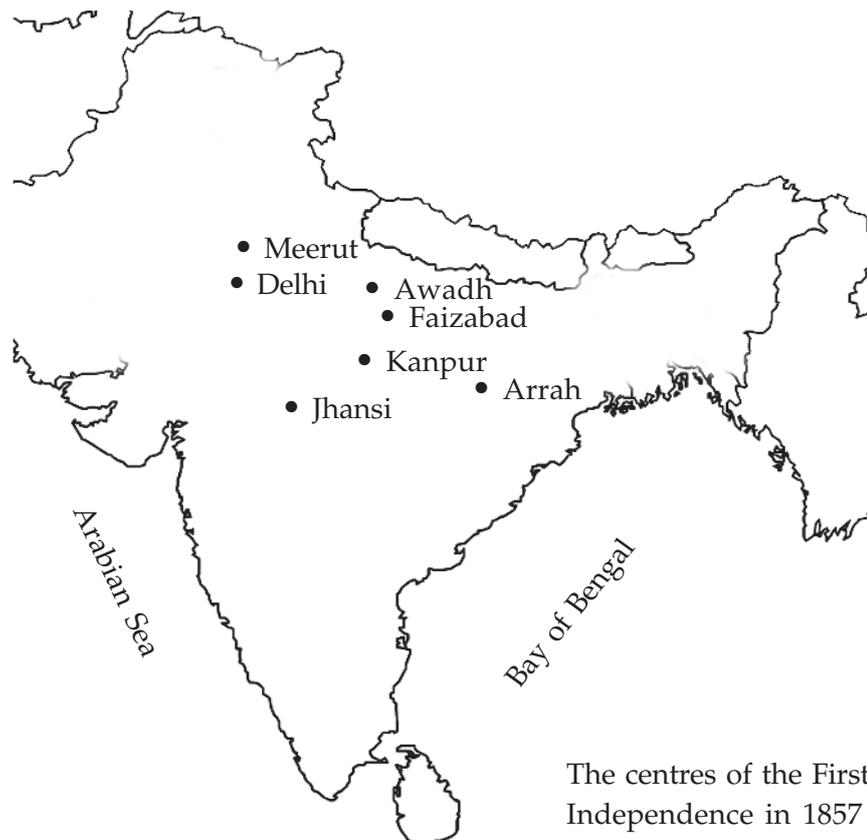
The revolt was led by Nana Sahib and Tantia Tope in Kanpur, Rani Lakshmi Bai in Jhansi, Begum Hazrat Mahal in Lucknow, Maulavi Ahmadullah in Faizabad and Kunvar Singh in Arrah. The Company suppressed the revolt and Bahadur Shah Zafar was expelled to Rangoon.

Let us examine the reasons for the failure of the First War of Independence.

- Though the revolt was widespread in North India, there was no coordination.
- The Company had all the advantages of stronger military power, better weapons and coordination.
- It failed to ensure mass support.
- The English educated Indians were against the revolt.
- The rulers of affluent princely states supported the Company.

Observe the map below.

- Identify the major centres of the revolt.



The centres of the First War of Independence in 1857

Lagta nahi he ji mera

*The days of life passed with the
Approaching dusk;
And now I'll stretch my legs
To sleep...
In the burial garden's comfort.
How unfortunate is Zafar!
For six feet of land
Couldn't be found
For the burial... In his soil!*

Bahadur Shah Zafar

- List out the respective states to which these places belong.

Even though the revolt failed, it was the first mass revolt against the Company rule. So the revolt is considered as the First War of Indian Independence.

The highlight of the revolt was the sense of unity that the people of India upheld irrespective of religion. It was this solidarity that motivated the sepoys to proclaim Bahadur Shah as 'Shahen shah-e-Hindustan' (The Emperor of India). This shows that the British efforts to breed communal hatred had not succeeded at least up to the period of the First War of Indian Independence.

Complete the following table.

The centres of the revolt	The leaders
Jhansi	Rani Lakshmi Bai

The Reign of the Queen

The First War of Indian Independence in 1857 brought many administrative changes in India. The rule of the English East India Company came to an end with the Queen's proclamation in 1858. India came under the direct rule of the British Queen.

Conduct a seminar in the class on 'The First War of Independence - 1857'.



Summary

- The policies implemented by the British brought misery to people from different walks of life.
- The exploited farmers, craftsmen, tribals, kings and chieftains rebelled against the British.
- The British government took over the administration from the English East India Company after the First War of Independence.



Significant learning outcomes

- Finds out that the British economic policies made life of Indians miserable.
- Evaluates the rebellions organized by farmers, craftsmen, tribals, kings and chieftains against the British.
- Identifies and describes the significance of the First War of Indian Independence in 1857.
- Comprehends the circumstances that led the British government to take over the administration of India from the English East India Company.



Let us assess

1. Match the columns in the table properly.

A	B
Santhal	Thalakkal Chandu
Bahadur Shah II	Kanpur
Pazhassiraja	Sidhu and Kanhu
Nana Sahib	Delhi

2. What were the hardships faced by the farmers due to the tax reforms of the British?
3. How did the import policy of the British affect different categories of people in Bengal?
4. What were the changes made in the administration after the First War of Independence in 1857?



Extended activities

- Prepare an album of the leaders of resistance movements against the British in Kerala and the First War of Indian Independence in 1857.
- Mark the centres of different resistance movements on a map of India.

4

India Towards a New Era

It was AD 1612-16.

A day in Surat.

A Baniya man was dead.

The body is being carried away for cremation to the burial ground. Hundreds of people accompany the funeral procession. Wife of the deceased is accompanied by relatives and maids. She has put on new clothes and ornaments as if she is about to enter the bridal chamber. The dead body is placed on the funeral pyre. She circles the pyre three times and sits on it, placing her husband's head on her lap.

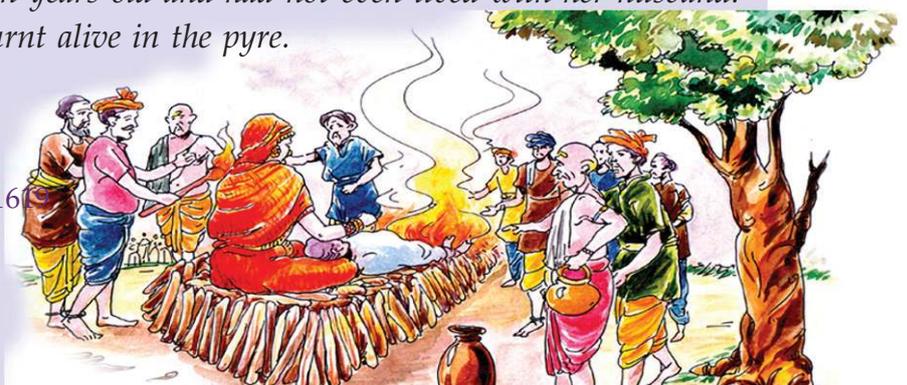
She is going to accompany her husband to the other world-that was the belief.

Firewood is placed around her. Ghee, oil and perfumes are showered over her and the pyre is lit.

She was not more than ten years old and had not even lived with her husband. Still, she as a wife was burnt alive in the pyre.

Source

*William Foster CIE,
Early Travels in India 1583-16*



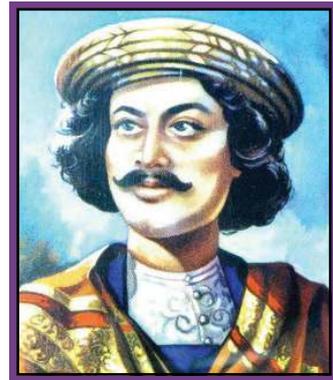
This is a description on 'Sati'; an evil practice that prevailed in India. Several such social evils and practices prevailed in India. Can you name some of them?

- Child marriage
- Prohibition on widow remarriage
- Human sacrifice
- Female infanticide
- Slavery
-
-

Several reform movements came up in the 19th century to fight against these evil practices. Social consciousness that developed due to English education and rational thinking led to these reform movements. The protests against the evil customs and superstitions, freedom of women, spread of education and a sense of pride on Indian culture were the common features of these movements. Let us familiarize with the important reform movements and leaders who initiated them.

Raja Rammohan Roy

Raja Rammohan Roy who gained western education strongly condemned the evil practices like Sati and child marriage that prevailed in India. His campaign against Sati persuaded Lord William Bentinck, the British Governor General to abolish Sati. He founded Brahma Samaj to propagate his ideology and gave the message that the ideals of all religions are basically the same. He strongly believed caste system to be the major source of disparity in Indian society. He is known as the 'Father of Indian Renaissance'.



Swami Dayananda Saraswati

Swami Dayananda Saraswati was the leader of Indian renaissance who attacked caste system and condemned idol worship. To disseminate his ideology, he founded 'Arya Samaj'. He gave the call, 'go back to Vedas'.



Jyotirao Phule

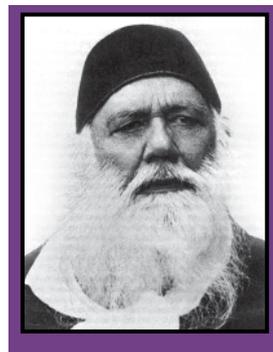
Jyotirao Phule condemned caste system and promoted widow remarriage. He argued that free and compulsory education should be provided to children up to twelve years and gave primary concern to the education of the weaker section and women. For these purposes he founded the 'Satya Shodak Samaj'.

Pandita Rama Bhai

Pandita RamaBhai founded Arya Mahila Sabha, an organization for the uplift of women. She fought against the social inequalities faced by women and worked tirelessly for women's education and the empowerment of widows.

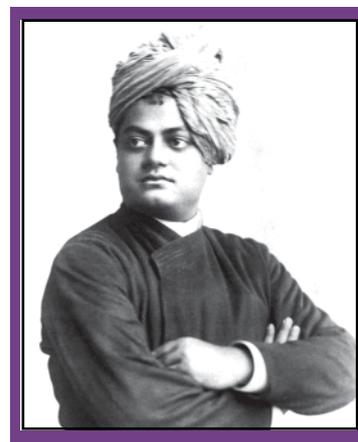
Sir Syed Ahmad Khan

Sir Syed Ahmad Khan led the movement for the spread of modern education among Muslims. He established Mohammedan Anglo-Oriental College at Aligarh that later became the famous Aligarh Muslim University. One of his remarks on the Hindu-Muslim unity is given below: 'Both Hindus and Muslims breath the air of India, drink the water of Ganga and Yamuna. We both feed upon the products of the Indian soil. We are together in life and death.'



Swami Vivekananda

Swami Vivekananda fought against the caste inequalities and promoted education among women. He gave emphasis to the 'Universal Brotherhood' and remarked - "For our own mother land a junction of the two great systems, Hinduism and Islam, is the only hope". He was the disciple of Sri Ramakrishna Paramahansa. He founded the Ramakrishna Mission to propagate the teachings of his master. The Mission established several educational institutions all over India. He played an important role in awakening the nationalistic feeling and self respect among Indians.



Complete the table.

Leaders of Indian Renaissance	Organizations	Major activities



Draft a note on your response to the evil customs that prevailed in India.

Discuss the role of social reformers in creating a social consciousness beyond the religious boundaries.

The Changing People

The leaders of the social reform movements contributed to develop a vision emphasizing the universal brotherhood based on humanism that stood beyond caste and religion.

All the reformers gave emphasis to the importance of education and established educational institutions. This in turn accelerated the progress of education in India. They reminded Indians of their rich cultural heritage and thereby developed self respect and national pride. Thus the social reformers played a major role in awakening the Indians.

Emergence of Nationalism

The different social reform movements and their leaders, whom we discussed instilled a new spirit among the Indians. We have also discussed the political and economic conditions of the period in the previous chapters.

Can you recollect them?

- The British conquered princely states and unified India politically.
- The economic exploitation of the British government created an anti-British attitude among Indians.
- The spread of English education and the development in transport and communication brought the people together.
- The strategies adopted by the British to suppress the First War of Indian Independence created a national consciousness and made people think that they belong to the same country.

These factors helped to develop a sense of unity among the Indians. Indian Nationalism is the sense of oneness beyond religious, linguistic and regional diversities.



"The mountains and rivers of India, and the forests and the broad fields, which gave us food, were all dear to us, but what counted ultimately were the people of India, people like them and me, who were spread out all over this vast land. Bharat Mata, Mother India, was essentially these millions of people, and victory to her meant victory to these people. You are parts of this Bharat Mata, I told them, you are in a manner yourselves, Bharat Mata, and as this idea slowly soaked into their brains, their eyes would light up as if they had made a great discovery.

- Jawaharlal Nehru 'The Discovery of India'



What were the factors responsible for the development of nationalism among Indians?

The development of nationalism accelerated the Indians' efforts to liberate from the British. This enhanced the relevance of various movements for independence.

Formation of Associations

A number of regional organizations came into existence at various parts of India as a result of this growing awakening. Madras Native Association, Poona Sarvajanik Sabha and Indian Association were a few among them. All these organizations gave priority to the regional problems. This necessitated forming of a national organization.

Formation of the Indian National Congress

Seventy two representatives of various organizations across India assembled in the vast auditorium of Tejpal Sanskrit College, Bombay, on 28th December 1885. They were of diverse attire, religion and language. W.C. Bannerjee presided

The writers instrumental in the development of Nationalism



- Bankim Chandra Chatterjee
- Rabindranath Tagore
- Mohammad Iqbal
- Lakshmi Nath Besbarua
- Althaf Hussain



over this meeting initiated by the former British civil servant A.O. Hume. The Indian National Congress was formed in this meeting.

From the speech at the first meeting

"We desire that the administration of India should be further modernised and we be made a part of it."

W.C. Banerjee



Delegates of the first session of the Indian National Congress

The major aims of the Indian National Congress were:

- To promote fellow feeling among the volunteers from different parts of the country
- To develop a national spirit beyond the religious, caste and regional loyalties
- To bring the problems of Indians to the notice of authorities

With the formation of the Indian National Congress the agitations against the British attained an organised nature. Such organised agitations against the British power can be called the National Movement. Based on the style and strategies of the agitations, the National Movement can be divided into three phases:

- The period of moderate nationalism
- The period of extreme nationalism
- Gandhian Era

The period from 1885 to 1905 was of moderate nationalism. The leaders of this period were English educated. The prominent among them were Dadabhai Naoroji, Gopal Krishna Gokhale, Badruddin Tyabji and Pheroze Shah Mehta. Their policy was to bring the common problems and demands to the notice of the British Government by means of petitions, resolutions and protests. Unfortunately the British officials did not properly consider them.



Gopal Krishna Gokhale



Badruddin Tyabji



Pheroze Shah Mehta

These leaders studied the root causes of the poverty in British India and these studies formed the ideological base for the national movement.



DRAIN THEORY



Dadabhai Naoroji

Drain theory is the major contribution of Dadabhai Naoroji. There was a drain of wealth from India to England during colonial rule. It was mainly in the form of salary, taxes and gifts. He proved that the economic drain under the British rule is the root cause of poverty in India.



Evaluate the role of moderates in pointing out the British policies.

Partition of Bengal

The seat of the British government in India was Bengal. People of Bengal had been living like brothers. They had been carrying out various activities against the policies of the British government.

In 1904, the secretary of Home Affairs, Risley, observed, 'Bengal united is power, Bengal divided, will pull several different ways. ... one of our main objectives is to split up and thereby weaken a solid body of opponents to our rule'. The British officials treated Bengal as a growing power against the British rule. In this background the Viceroy Lord Curzon divided Bengal in 1905.

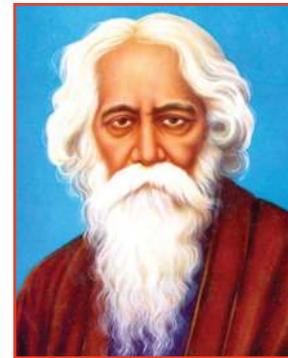


The map of divided Bengal in 1905



What were the factors that led the British to divide Bengal?

National dailies, poets and social leaders strongly opposed the partition. The great poet Rabindranath Tagore made his stand on the partition explicit. He stated 'the East and West Bengal are the two chambers of the same heart which is made fertile by the Ganga and the Brahmaputra. It is the warm blood originating from these vessels that flows through the arteries of the Bengalis'.



Rabindranath Tagore

Make a poster against the partition of Bengal.

Bengal Burns

The agitations against the partition stirred Bengal. How did the people of Bengal protest against the partition?

- Organized protest meetings.
- Picketed shops that sold foreign goods.
- Burned foreign clothes.
- Promoted the use of Indian products.
- Organized marches and public meetings against the British.



Ban on Sugar

'Boycott foreign goods and use swadeshi products' was the main slogan of the agitations against the partition of Bengal. The people were exhorted to boycott even wedding tea parties where foreign - made sugar was used. The nationalists promoted jaggery instead of sugar.

Considering the intensity of the agitations the British government was compelled to withdraw the partition.

Prepare a news bulletin on the partition of Bengal and related agitations.



In what ways are the agitations against the partition of Bengal different from the protests of moderate phase?

Swaraj is My Birth Right

The period of agitations followed by the partition of Bengal brought a new turn in the National Movement and it was known as the period of extreme nationalism. The main leaders of this phase were Bal Gangadhar Tilak, Bipin Chandra Pal and Lala Lajpat Ray. They were jointly known as 'Lal Bal Pal'.

The activities of these leaders won country wide attention and inspired the mass. Bal Gangadhar Thilak was the chief spokesman of the extreme nationalism. He was revered as 'Lokamanya'. The two newspapers he started were 'Maratha' and 'Kesari'. He made the famous slogan 'Swaraj is my birth right and I must have it'.



Lala Lajpat Ray, Bal Gangadhar Tilak, Bipin Chandra Pal

Complete the table given below:

Moderate Leaders	Extremist Leaders
Gopal Krishna Gokhale	Bal Gangadhar Tilak



Compare the strategies adopted by the Moderates and the Extremists.

All India Muslim League

The All India Muslim League was formed by Aga Khan and Nawab Salimullah Khan in Dhaka in 1906 during the movement against 'the partition of Bengal'.

Surat Split

The national movement became stronger with the agitations against the partition of Bengal. In this period, there was growing difference of opinion between the moderates and the extremists. It led to the split in the Congress at its All India Session at Surat in 1907. It temporarily weakened the activities of the national movement.

Home Rule Movements

The Congress supported Britain in the First World War with the hope that India would be granted autonomy after the war. During this time the Home Rule movements led by Annie Besant and Bal Gangadhar Tilak kept the national movement alive.



Annie Besant

The Irish lady who was attracted to the Indian culture and took Indian citizenship in 1893. She started Home Rule Movement in 1916.

Lucknow Pact

The Lucknow session of the Indian National Congress was held in 1916 when the Home Rule movements were active. The moderates and extremists who split in the Surat session decided to give up their difference of opinion and joined together. They also decided to cooperate with the All India Muslim League in the anti-British agitations.

- Prepare a seminar paper on 'The influence of the partition of Bengal on the Indian National Movement.'

Sub topics

- The growth of extreme nationalism
- The agitations against the Partition of Bengal



Summary

- A lot of social evils prevailed in India.
- Raja Rammohan Roy, Swami Dayanada Saraswati, Jyothirao Phule, Sir Syed Ahmad Khan, Pandita Rama Bhai and Swami Vivekananda were the leaders of the Indian Renaissance.
- It was after the First War of Independence in 1857, that the nationalism began to develop in India.
- The partition of Bengal was the consequence of the British policy of 'divide and rule'.
- Home Rule Movement inspired the National Movement.



Significant learning outcomes

- Finds out that a lot of evil customs prevailed in India.
- Explains the social reform movements led by Raja Rammohan Roy, Swami Dayanada Saraswati, Jyothirao Phule, Sir Syed Ahmad Khan, Pandita Rama Bhai and Swami Vivekananda.
- Evaluates the role of the reformers and the social movements in fighting against the social evils.
- Develops an attitude to respond to the existing social evils.
- Lists out the factors instrumental in the development of Indian nationalism.
- Evaluates that the partition of Bengal was the consequence of the British policy of 'divide and rule'.



Let us assess

1. Prepare a note on the role of the leaders of Indian Renaissance in eliminating the social evils in India.

2. Match column A with column B.

A	B
Brahma Samaj	Swami Vivekanada
Arya Samaj	Raja Ram Mohan Roy
Arya Mahila Sabha	Swami Dayanad Saraswati
Rama Krishna Mission	Pandita Rama Bhai

3. Complete the table

1	Gopal Krishna Gokhale	Moderate Nationalism
2	Bal Gangadhar Tilak
3	Home Rule Movement
4	Agha Khan

4. Prepare notes on the following

- Swadeshi Movement
- Home Rule Movement



Extended activities

- Prepare an album of the leaders of the Indian Renaissance.
- Does any social evil exist in our state? Conduct a discussion in your class.
- Identify the literary works that convey the messages against social evils.
- Collect poems that inspire patriotism.

5

Economic Sources

You might have heard of the project, 'Sampoorna' which collects and records all details related to every student of a school. Given below is a sample of the details of parent's occupation, recorded by a teacher as part of 'Sampoorna'.



Occupation

- Farming
- Employed at hotels
- Teaching
- Employed in factories
- Government service
- Medical field



Table - 1



You may be familiar with all these occupations. These are called economic activities because they generate income. There may be many such economic activities around you. Identify these and add to table 1.

Among these, some are related to agricultural sector. Analysing the table, can you identify other sectors to which these activities are related?

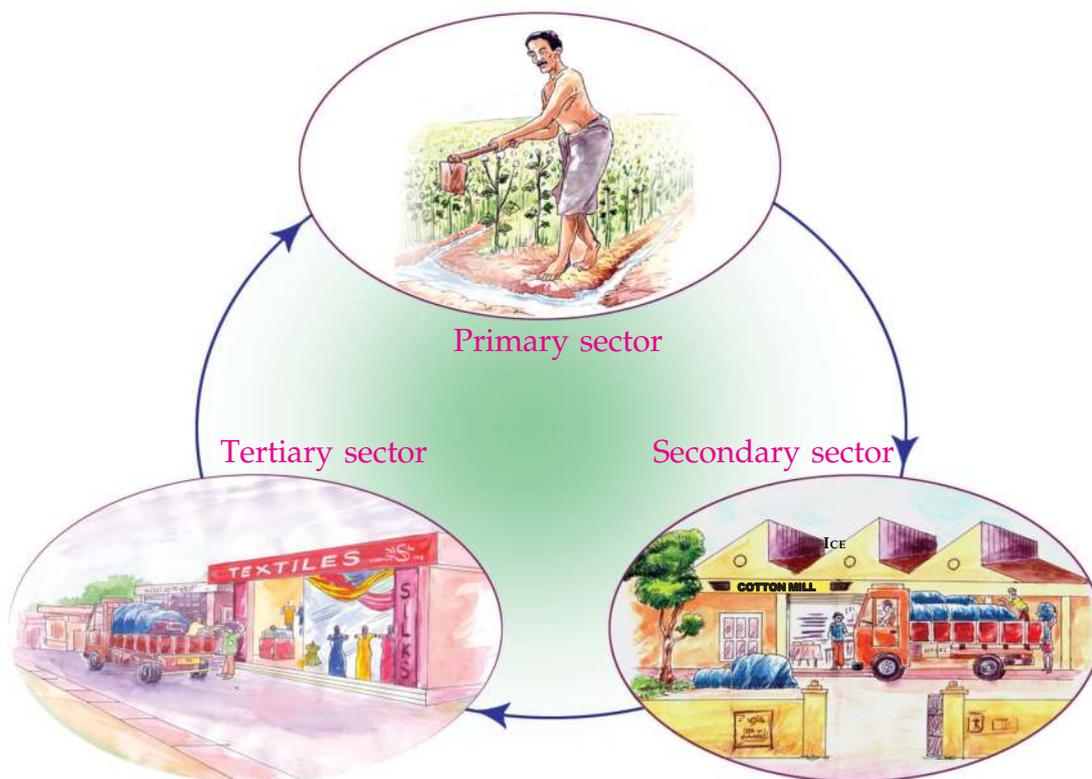
- Industry
- Services

The sector involving activities making direct use of natural resources is called primary sector. As activities related to agriculture form a major part of it, this sector is also called agricultural sector. There are economic activities that manufacture goods making use of the products of primary sector as the raw materials. Such activities fall under the secondary sector. As it gives more importance to industrial activities, it is also called industrial sector. Service sector collects and distributes products of primary and secondary sectors. In addition to this, service sector includes education, transport, banking, IT etc. Tertiary sector includes all services. It is also called service sector.

Is there any economic activity that does not fall under the primary, secondary or tertiary sectors? Discuss.

Economic growth takes place when primary, secondary and tertiary sectors function as a whole. For example, raw cotton, a product of primary sector, is a raw material to the textile industry. The services of transport and communication are essential for supplying these products to the customers. All these are services of tertiary sector.

Look at the picture depicting the interrelation among these sectors. Can you elicit from the picture how they are inter related.



You may find out another example showing the interrelationship between these sectors.

Central Statistical Office (CSO) has classified the economic activities included in the primary, secondary and tertiary sectors. This is given in the following table.

Primary sector	Secondary Sector	Tertiary sector
<ul style="list-style-type: none"> • Agriculture and allied activities • Forestry • Fishing • Mining 	<ul style="list-style-type: none"> • Industry • Generation of electricity • Building construction 	<ul style="list-style-type: none"> • Trade • Transport • Hotel • Communication • Procurement • Banking • Insurance • Business • Real estate • Social services



Central Statistical Office (CSO)

An institution that works under the Ministry of Statistics and Programme Implementation (MOSPI).

Important Functions

- Coordinate and analyse data.
- Collect data of all sectors and process it for planning purpose.
- Estimate national income using data.

Classify the economic activities of revised Table No. 1 in the following table.

Primary Sector	Secondary Sector	Tertiary Sector

Sectors and Related Employment Opportunities

Every occupation in our country falls under the primary, secondary and tertiary sector. In India, the availability of employment in primary, secondary and tertiary sectors varies. You can find an increased access to employment in some sectors while it is not so in the other sectors. Examine the table

showing the percentage of employment availability in different sectors from 1993 to 2011.

Percentage of employment availability in each sector

sectors	1993	2005	2011
Primary sector	64.9	56.5	53.2
Secondary sector	14.2	18.7	21.5
Tertiary sector	20.9	24.8	25.3
Total	100	100	100

Table 2 (Source - Economic Survey 2012 - 13)

Write your findings after analysing table 2 based on the following indicators.

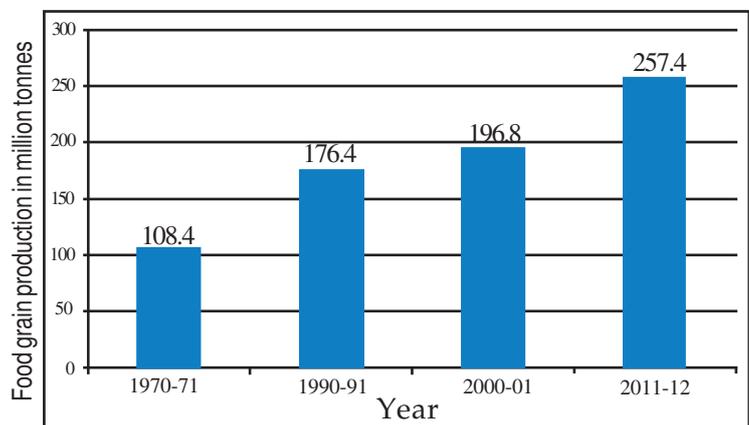
Indicators

- Which sector shows an increased trend in the availability of employment?
- Which sector shows highest availability of employment in all periods?
- How much is the employment availability in primary sector greater than that of the other two sectors, in 2011?

You have seen that primary sector has more employment opportunities than the other sectors. Here, agriculture and allied activities provide more employment opportunities. The food requirement of our country is met by primary sector.

Food Grain Production

India has been giving importance to the development of primary sector since independence. Well planned activities have brought about much improvement in food grain production. There has been noticeable increase not only in employment opportunities, but in food grain production as well.



Source - Economic Survey 2012-13

This is a graphical representation of the trend in food grain production in India during different periods.



Poverty

As per the recommendation of the Planning Commission, the people in urban areas whose intake of nutritious food is less than 2100 calories and those in rural areas whose intake of nutritious food is less than 2400 calories experience poverty. The Economic Survey 2011-12 states that the percentage of poverty in India is 29.8 - Bihar with the highest of 53.5%, Himachal Pradesh with the lowest of 9.5%. Kerala has a poverty rate of 12%.

What type of change does the diagram indicate?

The diagram states that there is a steady progress in food production in India. But poverty still persists in various parts of India even after the increased food production. What may be the reasons?

- Defects in distribution.
- Low potential of individuals to purchase goods.

Food security is attained when there is adequate availability of food to the needy. Food security exists when all people at all times have physical and economic access to sufficient, nutritious food to meet the dietary needs and food preference for active and healthy life.

By analysing the definition of food security what conclusion do you arrive at?

- All people should get food.
- Food should be made available at all times.
-
-



Self sufficiency in food

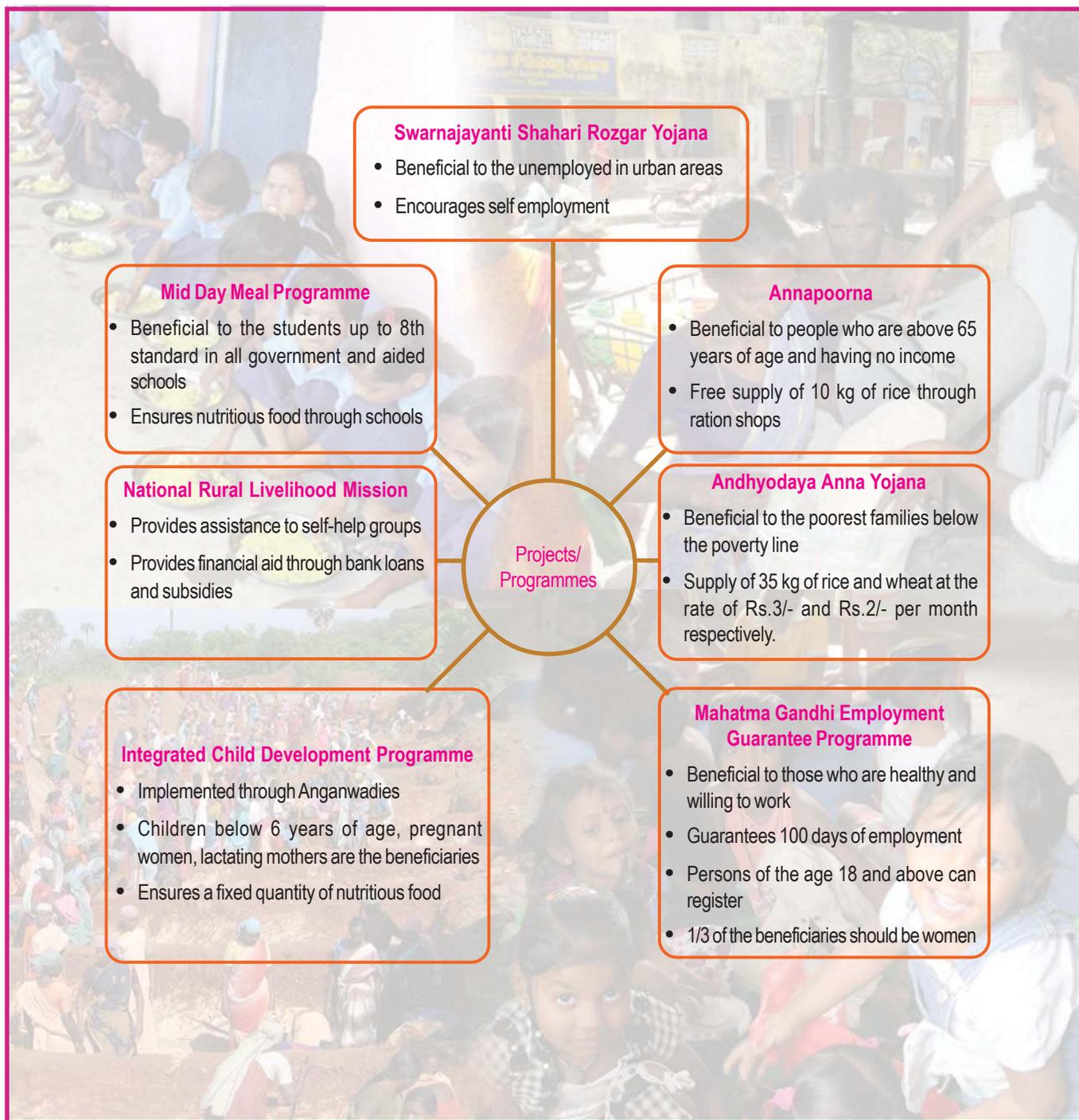
If a country is able to produce sufficient food to meet with the requirements of its people, it can be considered as self sufficient in food.

Poverty Alleviation Programmes

Governments are trying to ensure food security by strengthening the public distribution system and implementing various poverty alleviation programmes. Have a look at the projects and programmes being implemented by the governments.

Government projects	Government programmes
• Annapoorna	Integrated Child Development Programme
• Andhyodaya Annayojana	Mid-Day Meal Programme at schools
• Mahatma Gandhi Rural Employment Guarantee Programme	National Rural Livelihood Mission
• Swarna Jayanti Shahari Rosgar Yojana	

See the word web depicting the objectives of projects/programmes being implemented at the government level.



Source : India 2013

You have seen how different projects and programmes help to eradicate poverty and ensure food security.

Enquire about the benefits of these programmes in your locality.

Kerala and the Public Distribution System



Kerala is not self sufficient in food. So we depend on other states for food. Kerala has a strong public distribution system to ensure food security. The public distribution outlets in Kerala supply rice, food products and other essential commodities to the needy at fair price. There are many agencies functioning with the objective of providing essential commodities to people at fair price. Let us see some of them.

Public Distribution System (PDS)

Public Distribution System provides food items and other essential commodities to people at reasonable prices and the entire chain of such organisations are controlled by the government.

Agencies	Commodities available
Civil Supplies Outlet	Rice, wheat, sugar, kerosene
Hortcorp	Vegetables
Supplyco Super Market	All essential commodities
Nanma Store	
Neethi Store	
Labham Supplyco Market	
Maveli store	
Triveni Super Market	
Triveni Floating Super Market	

You may visit one such agency in your locality and find out whether commodities are sold at fair price.

Challenges to Food Production

Though the production and distribution of food are effectively managed by the Public Distribution System, our food production sector still faces certain challenges. Let us have a look at these challenges.

Look at the collage given below.

Food Security Act



The Parliament passed the bill in 2013.

Features

- Food security is the legal obligation of the government
- Ensure adequate, nutritious and high quality food items at fair price to all people.
- Availability of food is a legal right of citizens.

Subsidy cut short-
Farmers in crisis

Misuse of farm lands:
steep downfall in food
production.

Natural calamity - Fall in
food grain production.

Economic crisis - meagre
mechanisation possible

The news collage given above displays some of the challenges faced by the food production sector. List out the challenges:

- Crop failures due to natural calamities.
- Using agricultural land for non-agricultural purposes.
- Reducing the rate of subsidies.
- Unable to purchase agricultural machines.
- Climate changes.
- Unable to ensure crop insurance.
- Excessive use of fertilizers, reducing soil fertility.

It is essential that these issues and challenges be addressed to ensure food security by improving food production and distribution.



Summary

- The inter relationship of primary, secondary and tertiary sectors is the base of economic growth.
- Among the three sectors of the economy, the agricultural sector still provides more employment opportunities.
- Indian economy witnesses a trend of increasing employment opportunities in the secondary and tertiary sectors and decreasing employment opportunities in the primary sector.
- Even after enhanced food production, India has to go a long way to attain food security.
- An efficient public distribution system and welfare activities of governments help to attain food security.



Significant learning outcomes

- Classifies the economic activities into primary, secondary and tertiary sectors.
- Statistically represents the details of employment opportunities in each sector.
- Explains the changes in the field of food production.
- Describes the circumstances that lead to food security.
- Evaluates the features of different poverty alleviation projects and programmes implemented by the government.
- Finds out the necessity of public distribution system.
- Describes the challenges faced by the food production sector and suggests measures to address them.



Let us assess

1. Give an example to show the inter relationship of primary, secondary and tertiary sectors.
2. Classify the economic activities given below into different sectors.
 - Fishing
 - Teaching
 - Banking
 - Factory work
 - Mining
 - Building
 - Real estate
 - Electricity generation
 - construction
3. Tertiary sector attains prominence now-a-days. Elucidate.
4. Which are the agencies supplying essential commodities at fair price in Kerala?
5. Even now agricultural sector has its own importance in India. Examine this statement based on production and employment opportunities.
6. Which of the government programmes demands the condition that $\frac{1}{3}$ of the beneficiaries should be women?
 - Andhyodaya Annayojana
 - Annapoorna
 - Mahatma Gandhi Rural Employment Guarantee Programme
 - Swarnajayanti Shahari Rozgar Yojana
7. Public distribution system helps to attain food security. Evaluate the statement.
8. Civil supplies outlet stands for common man. Justify.
9. Food production is facing a lot of challenges. Substantiate this statement.
10. Prepare a note on any one of the poverty alleviation projects of the central government.



Extended activities

- Find out the challenges faced by the food production sector in your locality and suggest measures to overcome them.
- Conduct an enquiry and find out the sector providing more employment opportunities in your locality.



6

Understanding of Maps

Following are the accounts of sea voyages of some eminent travellers of different periods. Read carefully.



CHRISTOPHER COLUMBUS



Christopher Columbus was born in the Republic of Janova (Presently North-Western Italy) in the fifteenth century. He was a well-known sailor and explorer. He came to know about the natural resources of India, and

started his first voyage in search of India through the Atlantic Ocean in 1492 A.D. In order to know the route, Columbus and his team travelled with a large leather-wrapped globe on which places were marked. They also used another such sphere to mark the location of stars. But Columbus lost his route and reached some islands near the North American continent. This was because of the lack of accurate maps and other navigational aids...



FERDINAND MAGELLAN



Ferdinand Magellan was born in the sixteenth century in Northern Portugal in Europe. With an unquenchable quest to travel around the world, the Portuguese explorer Magellan and his team started their voyage from Europe in September 1519. Their aim was to travel through the Atlantic Ocean and the Pacific Ocean and to return to Europe. They used maps prepared in the sixteenth century to know the exact location of continents. When the journey prolonged for years, discontent arose among them. When they reached the Philippines Islands in the Pacific Ocean, they had a war with the inhabitants of Mactan Island and Magellan was killed in the war. Those who survived, returned to Europe in September 1522. In an age when there were no detailed maps or other facilities to know the exact route, it took three years for them to travel around the world...

Lt. COMMANDER ABHILASH TOMY



The Indian sailor Abhilash Tomy was born at Thripunithura in the Ernakulam district of Kerala. He set out on a sea voyage around the world from Mumbai in November 2012. Overcoming many challenges enroute, he travelled around the world and returned to the shores of Mumbai on 31 March 2013. It was with the help of accurate maps and other modern instruments that he could complete his journey around the world in about 150 days without losing his way.



It is astonishing to note that Columbus and Magellan made prolonged voyages, when there were no maps or other sophisticated equipments to help them in navigation. It should be clear to you that with the help of accurate and detailed maps and modern technology one can travel around the world without losing the way.

Importance of Maps

Maps are important tools for geographers. You can illustrate your class room, school and its premises and your locality on a paper. Similarly any place on the earth can be illustrated on a paper. True representation of the features of earth's surface on a two dimensional plain is called a map. It is believed that maps were in use for centuries. But they were not as accurate as modern maps.

Maps showing the detailed information about the earth's features have become inevitable in the modern world. Today, different types of maps are used in different fields.

Can you identify the fields where maps are used?

- Learning Geography
- Defence
- Tourism
- Administration
- Transport

In order to learn various concepts, different types of maps are used in your textbooks. Try to identify them.

Let us examine who else, other than students and teachers, use maps.

- Industrialists
- Historians
- Pilots
- Captains of ships
-

For what purpose do they use maps? Do they use the same map for different purposes? Discuss.

Different types of maps are prepared for various purposes.

Let us have a look at maps and their importance.

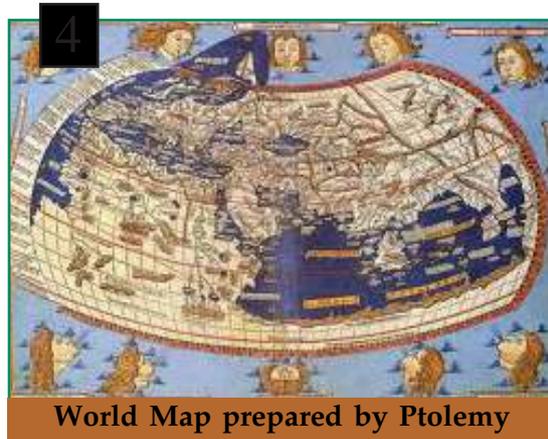
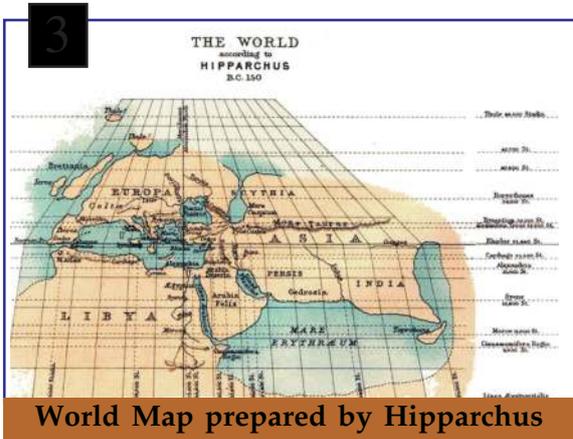
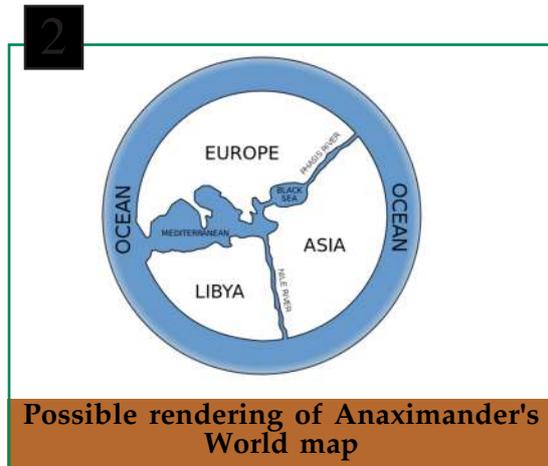
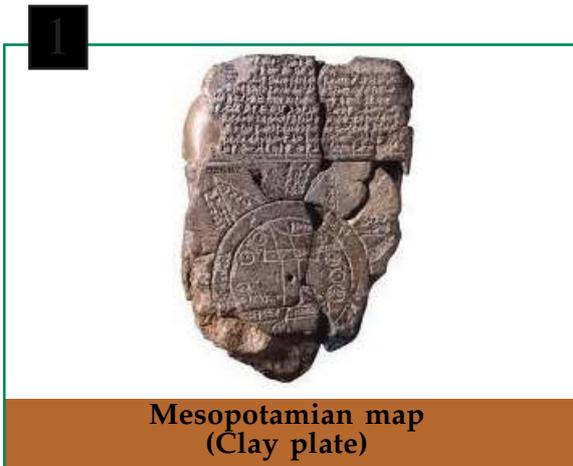
History of Maps

Maps of fifteenth and sixteenth centuries were not accurate and hence the journeys of Columbus and Magellan were long and they lost their way as well.

Were maps prepared prior to this period?

Were maps of those days as accurate and clear as the present day maps?

Changes of maps during different periods are shown in figures 1 to 6.



5



World Map prepared by Mercator

6



World Map prepared by Ortelius

Have you noticed the pictures? Compare these with the world map in your social science lab. What changes can be identified?

Let us examine the changes that have taken place to maps over centuries. It is believed that the history of maps are as old as human civilization. The Mesopotamian plates prepared on baked clay plates about 5000 years ago, are considered the oldest maps. On these plates, there were specific lines and symbols that help to depict the peculiarities of even small places.

Maps were prepared on leather and bronze plates during the period of the Greek philosopher Anaximander, who is believed to have prepared the first map. The inventions of the Greek mathematician Erasthotes and the contributions of astronomers like Hipparchus and Ptolemy helped more in preparing maps. The voyage by sailors and explorers like Columbus and Magellan led to the preparation of more accurate maps.

Mercator, who is known as the Father of Modern Cartography and Abraham Ortelius, who prepared an atlas by combining many maps, gave new insights into the making of modern maps. The contributions of Greek, Roman, Arab and Indian geographers to the development of modern cartography

The first map



It is believed that the first map was prepared by the Greek Philosopher Anaximander. He was born in Miletus of Asia Minor in 610 B.C.



are significant.

The history of maps started with clay plates. With the advancement of technology, it has now reached the level of computer - aided maps. In this fast developing world, maps have also changed with the times. With the help of computers, map making has reached a stage where exact location details about a place and three dimensional views are possible on a mouse click.

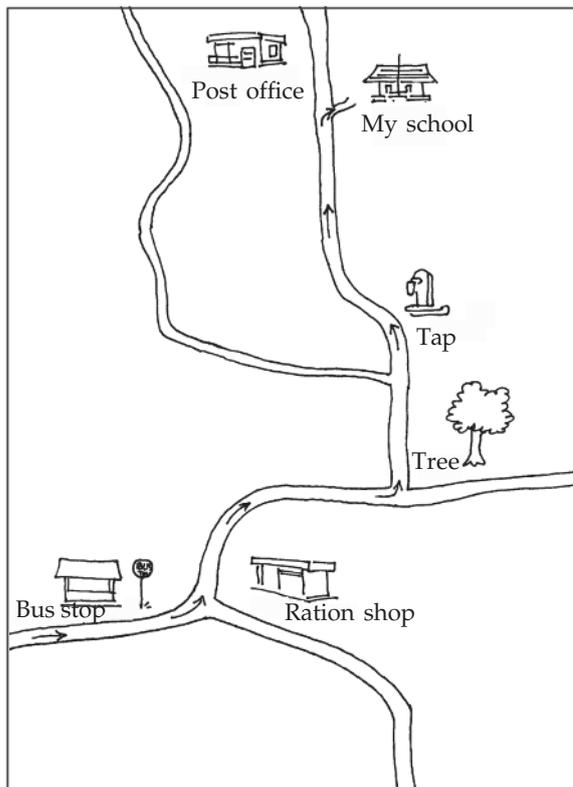


Cartography

The term 'cartography' was derived from the French words 'Carte' and 'Graphic'. 'Carte' means map and 'graphic' means drawing. Cartography is the science of map making. One who prepares maps is known as Cartographer.

Sketch and Plan

Observe the pictures given below.



Picture A



Picture B

Two pictures of the same locality are given above. What differences that can you observe?

- Arrow marks to reach the destination are given in Picture A, while they are absent in Picture B.
- Picture B has a scale and symbol showing the North direction, while they are absent in Picture A.
- In Picture A the details required to reach the destination alone are given, while Picture B shows all the details of that place.
-

Picture A gives the sketch showing the way to Ramu's school. Ramu has marked in the sketch the way to his school, to enable his friend Gopu, a student of another school, to reach his school. There are no symbols to show the direction or to measure the distance in Picture A, as shown in Picture B. But still Ramu succeeds in guiding his friend Gopu to his school. Sketches are drawings having limited information about a place, drawn from one's own memory or by observing that place.

You can also prepare a sketch as prepared by Ramu.

Prepare a sketch showing the way to your school from your nearby bus stop or railway station and exhibit it in your classroom.

Plans are prepared based on exact measurements, location details, scales and direction. Picture B shows the plan of the place where Ramu's school is located. You might have noticed the layout plans exhibited in front of some establishments.

Shall we prepare a plan? Measure your classroom with the help of your teacher and prepare a plan.

Maps are clear and accurate illustration of comparatively larger areas. Let us understand more about this.

Essential Elements of Maps

Observe the map given below (Fig. 6.1).

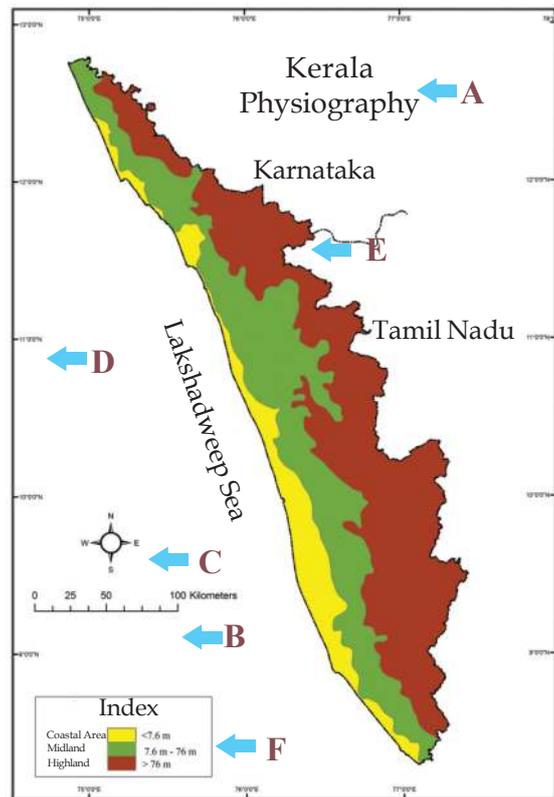


Fig. 6.1

In the above map of Kerala, A, B, C, D, E and F indicate all the essential elements of a map. With the help of the map (Fig. 6.1) and the table (Table 6.1) the essential elements of a map can be identified easily.

Letters	Essential Elements of a Map
A	Title
B	Scale
C	Direction
D	Latitude and Longitude
E	Conventional symbols and colours
F	Index

Table 6.1

Let us examine the importance of each one of them.

Title

'Title' indicates the area depicted and the content of the map. It is usually given at the top of the map.

Observe the maps in the social science lab of your school and prepare a table after classifying them.

Scale

Shall we draw the plan of our school building? First we have to measure the length and breadth of the building using a measuring tape. Assume that the length is 30 metres and breadth is 10 metres. Can you draw a plan of the school using these measurements? Let us do this in the following steps.

Step 1

Try to draw the length and breadth of the building as such on a paper. You will find that it is not possible.

Step 2

Shall we draw 30 metres as 30 centimetres? Now it is possible to draw this on a large sheet of paper. If we adopt this method, what would be the breadth of the building when scaled in centimetres? You must have understood that it is to be 10 centimetres.

Step 3

Draw the length and breadth of the building.



You have selected the ratio of one centimetre to each metre. Scale is the technique that we have adopted to draw length and breadth conveniently. Here, length and breadth are represented on a scale of 1 cm to 1 metre. Scale is the relative distance used to represent the distance between two places on the earth. Scale should be maintained while

preparing maps. Through this, large areas can be drawn on a paper with accuracy. Moreover, scale can be used to measure the actual distance between places on a map.

Different maps with different scales

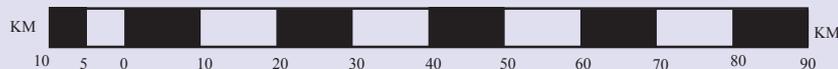


Scale can be depicted in three ways: Statement method, representative fraction method and graphical method.

Statement method - Example: 1 cm to 10 km

Representative Fraction method - Example: 1 : 10,00,000

Graphical Scale - Example:

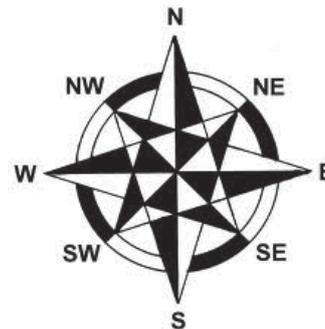


Direction

Direction is another major element of a map. North, South, East and West are the four major directions. Magnetic compass (Fig. 6.2) is an instrument to find out directions. Major directions can be divided into four subdivisions as North-East, South-East, South-West, North-West. Observe the following figure (Fig. 6.3) and identify them.



Magnetic Compass
(Fig. 6.2)



Directions
(Fig. 6.3)

Directions are essential to understand the exact location of places on a map.

Latitudes and Longitudes

Observe Figure 6.4. Have you seen the lines drawn lengthwise and breadthwise? Examine the globes and maps in the social science lab. Are you able to see such lines on it? Such lines drawn horizontally

across the globe and maps are called the latitudes. They are shown in degrees. The horizontal line drawn exactly at the centre of the globe is the equator. It is the 0° latitude. Latitudes are marked North and South of the equator up to 90° . 90° North latitude is known as the North Pole and 90° South latitude is known as the South Pole.

Imaginary circles drawn parallel to the Equator are called latitudes.

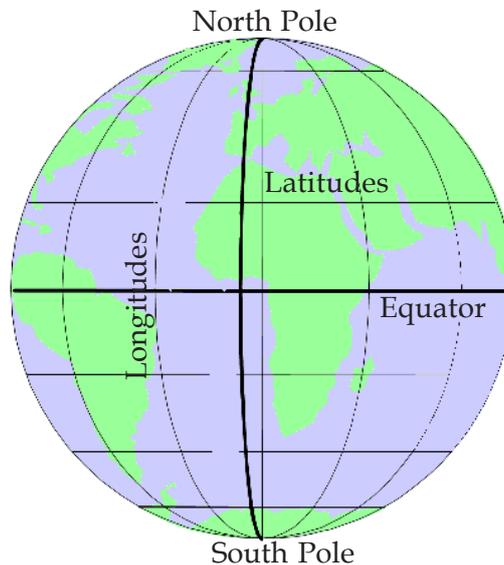


Fig. 6.4

Observe the globe and identify major latitudes and their values in degrees.

Have you noticed the lines drawn perpendicular to latitudes and joining the North and the South Poles? These lines are called longitudes. They are also shown in degrees.

Imaginary semicircle that join North and South Poles are called longitudes.

Observe the globe and identify the major longitudes such as 0° and 180° .

A place on maps and globe is located on the basis of latitudes and longitudes.

Observe the world map and a globe and identify the latitudes and longitudes between which India is located.

Conventional Signs and Symbols

Features of the Earth's surface like mountains, plateaus, plains, water bodies, routes, settlements, agricultural lands etc. are depicted on maps using internationally accepted colours, signs and symbols.

Observe the maps in your social science lab and identify the colours and signs used.

Index

Index is the key to map reading. Index represents the colours and signs on a map. Characteristics of a map is understood using the index.

Analyse the index of maps in your social science lab and understand its features.

Maps prepared using the above elements are accurate and clear.

We have discussed in this chapter the history of maps, its uses and essential elements. You can utilize this information in your day-to-day life.



Summary

- Maps have great importance in the modern era.
- Various types of maps are used in different fields.
- Map-making has reached the present stage after passing through various stages of development. The history of map making is as old as civilization.
- Title, scale, direction, latitudes and longitudes, conventional signs and symbols and index are the essential elements of a map.



Significant learning outcomes

- Finds out the history of maps and the importance of maps.
- Identifies and differentiates the features of sketch, plan and map.

- Prepares the sketch and plan of his/her locality based on the knowledge acquired in the classroom.
- Explains the essential elements of maps.



Let us assess

1. Students and teachers are not the only persons who make use of maps. Justify the statement.
2. Explain the essential elements of a map.
3. Differentiate between a sketch and a plan.
4. The scale of a map is 1 cm to 15 km. Assume the distance between two places on the map is 10 cm. Find out the actual distance between these two places on the earth.



Extended activities

1. Given below is the description of the ward, where Ramu's house is situated. Based on the information, prepare a plan of the locality.
 - Length of the ward is 7 kilometres and the breadth is 4 kilometres.
 - A small river flows from North to South through this ward.
 - There is a large agricultural land on the West and the North West of the region.
 - Settlement that includes Ramu's house is situated in between the agricultural land and the river.
 - There is a metalled road parallel to the river from the settlement where Ramu lives.
 - On the South West of this ward, a temple and a well nearby could be seen.

Make use of the colours and signs given below:

	Settlements
	Metalled road
	River
	Temple
	Well
Yellow colour	Agricultural land

2. Draw an outline map of India on a chart paper, mark the directions and exhibit it in your classroom.



7

Earth and Biosphere

This incident took place about 4500 million years ago... A part of the Sun got separated and exploded. The resultant pieces of the explosion became eight planets including the Earth and their satellites. Due to the continuous boiling, heavier materials were concentrated around the centre of the Earth and lighter materials got themselves arranged above this layer. The gases that emanated gradually formed an outer layer enveloping the Earth. This process continued for millions of years. Still the earth's surface remained very hot.

Water vapour and other gases came out from the interior of the earth through continuous and extensive volcanic eruptions. This water vapour cooled down to form clouds and led to rains that lasted for many years. Low lying areas on the surface of the Earth were flooded. Thus oceans were formed. It took several thousands of years for any form of life to appear on Earth. Gradually thousands of species of plants and animals that we see today evolved and finally the human beings.



Fig. 7.1

You have now read the scientific explanation regarding the evolution of land, water, air and life forms on the Earth. Earth's lithosphere, atmosphere and hydrosphere are the basis for the existence of biosphere. Don't you wish to know more about these spheres?

Lithosphere

Huge mountains, broad plateaus, expansive plains, coastal areas, deserts, islands and various landforms under oceans... Earth's surface is very much diverse! This solid portion of the earth which contains all the landforms, rocks and soil is called the lithosphere. The highest peak, Mt. Everest and the deepest trench, the Challenger Deep of Pacific Ocean are all parts of the lithosphere.

Let us examine the major landforms of lithosphere. (Fig. 7.2)

Major Landforms

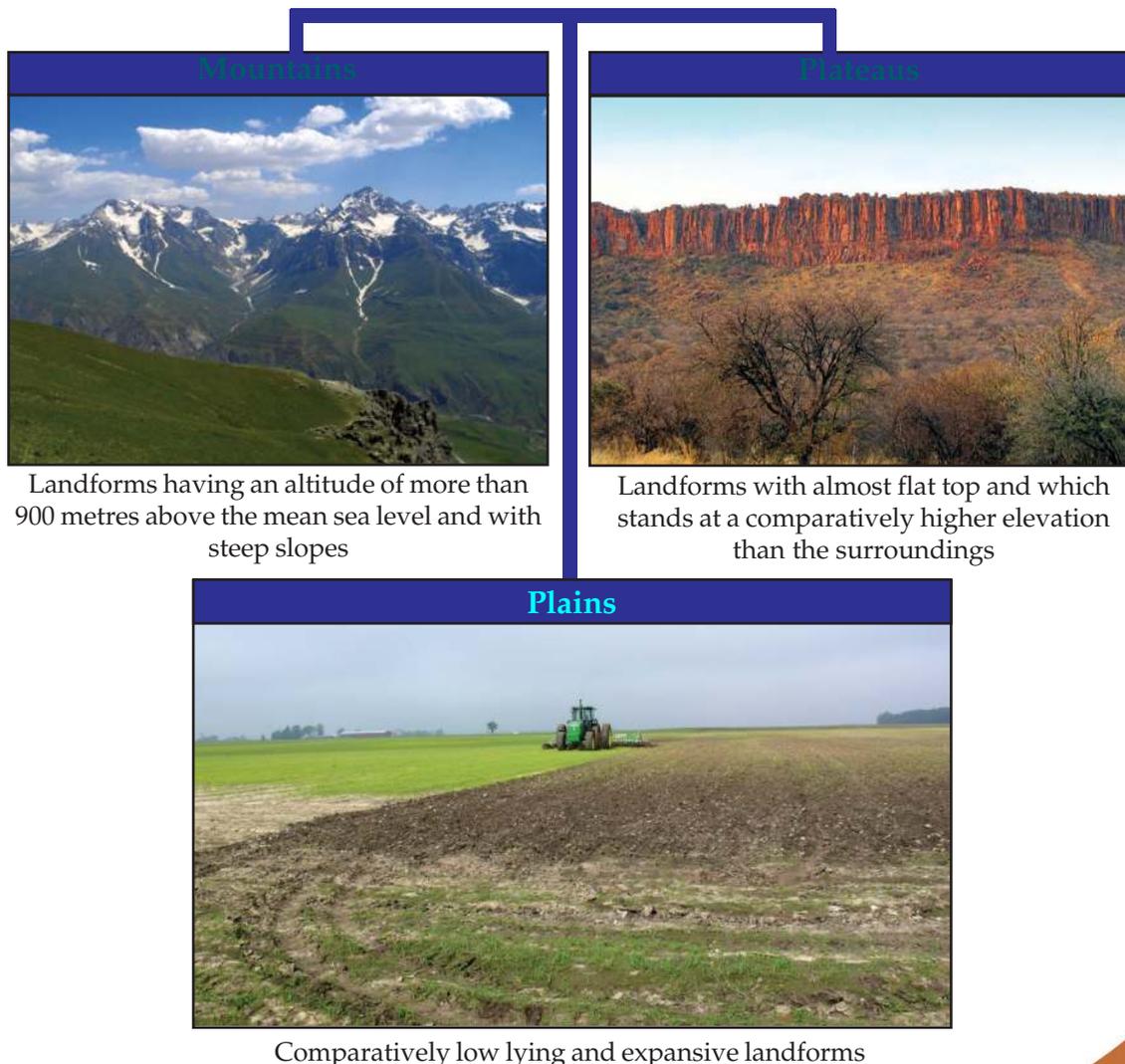


Fig. 7.2

Mountains, plains, trenches and volcanoes, as seen on the land, are also found under the oceans.

Observe Figure 7.3.



Fig. 7.3

The examples given above shows how the lithosphere is useful to man. Will you find out other uses of the lithosphere?

You have now understood that the lithosphere is made up of rocks and soil. Soil is essential for the survival of man, plants and animals.

Knowing the soil

Rocks exposed to sunlight, rain and snow for many years begin to disintegrate. Sometimes chemical changes also occur in them. When the dead remains of plants and animals decay, it adds humus content to the soil. Soil is formed through such processes that take place constantly over thousands of years. It contains a fixed amount of water, air, humus and micro organisms. Soil often loses its fertility because of man's unscrupulous activities.

Can you name a few activities that adversely affect soil fertility?

- Excessive use of fertilizers.
- Excessive use of pesticides.
-

Invite the agricultural officer of your locality to your school. Ask him your doubts about soil conservation. Questions for this can be discussed and prepared in the class.

Soil, which is formed due to hundreds of years of activities, is either lost or destroyed due to man's indiscrete actions. They affect not just the soil but also the lithosphere. Some examples are given below.



It takes more than one thousand years to form one inch of soil.

The Disappearing Paddy Fields

Vast paddy fields were once Kerala's unique feature. But now our paddy field and other wetlands undergo reclamation by being filled up with soil for human purposes. By doing this we are causing permanent damage to these natural sites of rain water percolation. In some places the clay in the paddy fields are mined and baked in the kilns for making bricks. Clay stores water in paddy fields. If there is no clay there will be no paddy field.

In some places the sand below the clay is mined after removing the clay from the paddy field.

Sand Mining in Rivers

The water level of many of our rivers, which were once rich, drops drastically after the rainy season. This is because of the increase in the depth of river bed due to sand mining from rivers. It also leads to lowering of the water level in the nearby wells and ultimately to water scarcity. Many rivers, due to the increase in depth, have almost reached the bedrock level. This leads to bank shelving. Man



Fig. 7.4

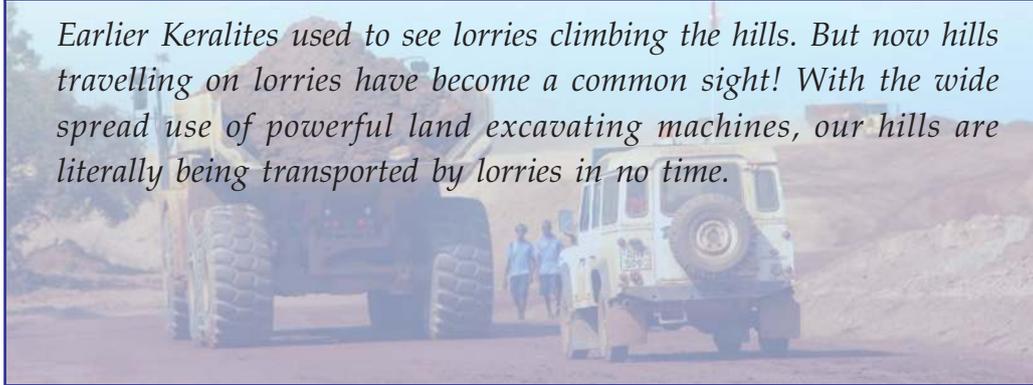
extensively shelves river banks for sand. Shelving of fertile banks results in loss of life and property.

Destruction of Hills



Travelling Hills

Earlier Keralites used to see lorries climbing the hills. But now hills travelling on lorries have become a common sight! With the wide spread use of powerful land excavating machines, our hills are literally being transported by lorries in no time.



Destruction of hills is common in Kerala now. Hills are nature's water reservoirs. How will hill mining affect the water availability? Discuss.

Unscientific construction activities in steep slopes increase the possibility of landslides.

What are the other activities that destroy soil?

- Deforestation
- Unscientific agricultural practices
-



Fig. 7.5

Destruction of hills and unscientific construction activities

Do such activities happen in your locality or near your school? If yes, visit that place with your teacher. Prepare a report of your visit.

Seeking Alternatives

Natural resources are for our use. But their unrestrained exploitation will

lead to imbalance in nature. It is essential to find alternatives to reduce the damages caused to nature by the over exploitation of resources.

Technology of making bricks out of waste from clay factories and plastics is available now. It could be used as an alternative to bricks made from the top soil of paddy fields. Don't you think it would be helpful to reduce environmental pollution as well? Why can't we use such models?

Use of rock debris for construction purposes instead of river sand is noteworthy. It is proven that rock debris is as strong and as durable as river sand.

Is it not necessary to find an alternative to rock as a construction material?

Uncontrolled exploitation of lithosphere is detrimental to the very existence of life on earth.

Hydrosphere

You have already understood that two thirds of the surface of the earth is water. Water, in liquid state, is found in oceans, rivers, lakes and streams, on the earth's surface and below it as well. While water is found in solid state in polar regions and atop high mountains, it exists as water vapour and water droplets in the atmosphere. Water found on the earth in the said forms is called the hydrosphere.

Precious Fresh Water

Fresh water is integral to the existence of life. Even though two thirds of the surface of the earth is water, only three percentage of it is fresh water. Do you know that less than one percentage of fresh water is available for human consumption? This scarce quantity of water is obtained from rivers, ponds, lakes, wells etc. Rest of the water is found in solid state in polar regions and atop mountains. (Fig. 7.6).



Fig. 7.6

There are many limitations in using underground water.

Water Scarcity

You have understood that man's indiscrete interventions on nature leads to water scarcity. There is already a shortage of fresh water. Man's unscientific interventions make it all the more scarce.

Are the fresh water sources of your locality being polluted? Don't you want to know how these are polluted? Let us have a study on that. The project should include:

- Major sources of fresh water in the region.
- Sources of pollution.
- Effects of pollution on man and other animals.
- Solutions.

Protection of fresh water sources is highly essential for the existence of all life forms including man.

Let us create awareness among the public regarding the need for protecting fresh water sources. Organize a march on water conservation under the leadership of your teacher.

Scientific modes of Water Management

- Promote terraced farming
- Cultivate fruit bearing trees, instead of crops like coconut and arecnut that have fibrous roots, along the rocky hill slopes with shallow soil.

The rain water that runs off

It is estimated that the a major chunk of rain water falling on the Western Ghats reaches the sea within two days.



Fig. 7.7 Terraced Farming



Quenching the Thirst of Soil

Most houses have concrete courtyards. Some pave their courtyards with tiles. They are permanently blocking the chances of water to percolate underground. Instead of this, lay rock pieces. Grass can be grown in the spaces between the rock pieces. It will be pleasing to the eyes and there will be no hindrance for water to percolate.



- Instead of concrete, use locally available rocks and wood to create check dam along hill slopes.
- Construct earthen walls for soil conservation.
- Avoid construction activities and cultivation of crops like tapioca, yam etc. on steep slopes since these crops require frequent tilling.
- Plant trees on barren land.
- Do not dump household and industrial waste into waterbodies.
- Protect paddy fields, ponds, lakes and river banks from reclamation.

You must be wondering whether the above said activities are possible in our country. We have before us the example of Ralegansiddhi of Maharashtra, a village with low rainfall which was made habitable by the activities of villagers.



Success Story of Ralegansidhi

Ralegansidhi is a small village in the Ahmednagar District of Maharashtra. It has an average annual rainfall of less than 50 cm and that too is irregular. Ground-water level more than 20 m below the surface, wells that start drying when the summer begins, severe water scarcity, high rate of soil erosion, lack of vegetative cover, unstable agricultural production due to the dependence on rainfall, unemployment and poverty were the story of Ralegansidhi till 1975.

Sri. Babu Rao Hazare, who retired from military services in 1975, organised the village youth for the development of Ralegansidhi. He created public awareness on various agricultural development projects of the government. He searched for better agricultural practices and tried discussing them with the villagers.

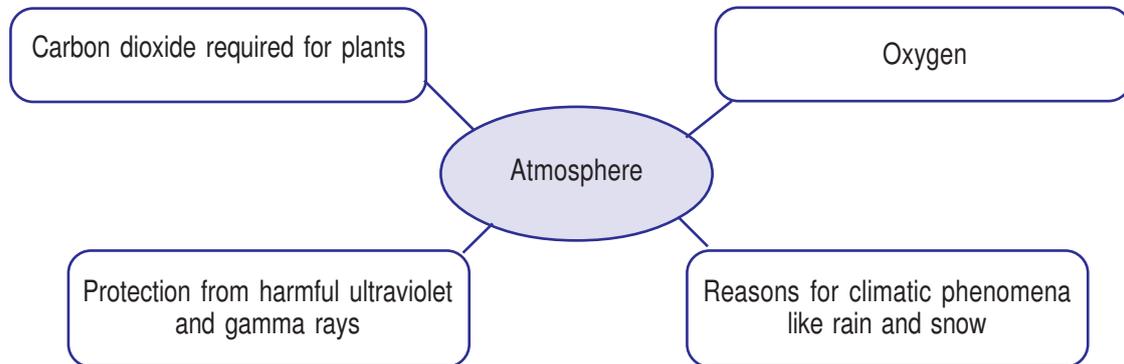
It was then decided to cultivate onions instead of sugarcane which require more water. They discouraged the construction of private wells; instead importance was given to public wells. Today the village has 7 public wells and plenty of water. They have minor irrigation projects to supply water all over the village. People planted lot of trees throughout the village.

Soil conservation has become a part of their life. Today the village has an intermediate college, schools, cooperative societies and other facilities.

Now, Ralegansidhi is a story of success.

Atmosphere

Atmosphere is a layer of air which protects the Earth like a blanket. In addition to gases like nitrogen and oxygen, atmosphere also contains dust particles and water vapour. Anything that brings changes to the natural composition of air is a pollutant. Air is essential for the existence of life on the Earth. From the diagram given below, understand the different ways by which the atmosphere is useful to us.



You have understood the importance of atmosphere. Can you name some activities of man that lead to air pollution?

- Gases used in refrigerators.
-

Many harmful gases and chemicals reach the atmosphere from industries and vehicles. Such activities which change the natural composition of the atmosphere will affect the very existence of man.



Oxygen Parlours!

For many years, this facility has been in existence in Japan. Those who enter this parlour can breathe clean fresh air. Delhi city has huge machines which pump fresh air into the atmosphere. Why does the urban administration take such measures?

Collect information regarding various methods to reduce atmospheric pollution. Using this information conduct a seminar in the class.

Biosphere

Biosphere includes all living things on the Earth. Biosphere exists because of the interaction of lithosphere, hydrosphere and atmosphere. Observe Fig. 7.9.

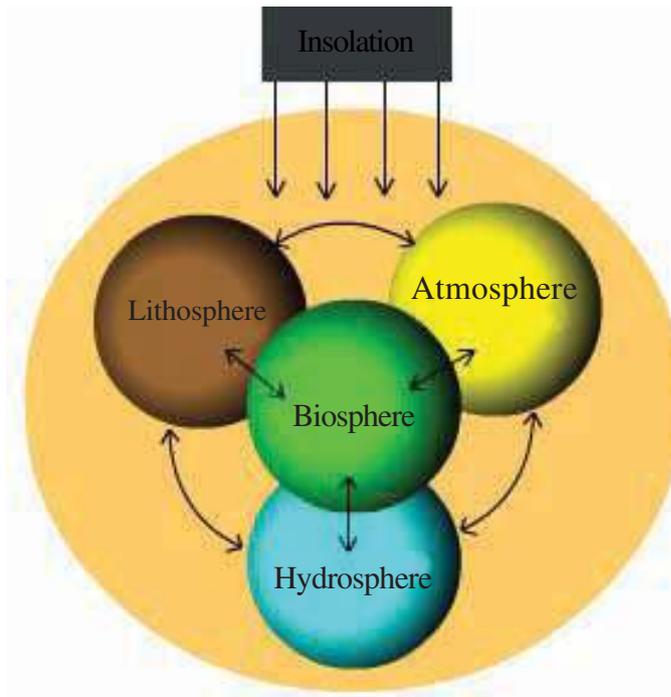


Fig. 7.9

The very existence of man, plants and animals is possible because of the presence of lithosphere, hydrosphere and atmosphere. You must have understood that even small changes in the lithosphere, hydrosphere and atmosphere will have huge impacts on human life.

Carbon dioxide, water and minerals are essential for the existence of plants. Among these, carbon dioxide is obtained from the atmosphere, minerals from the lithosphere and water from the hydrosphere. If any one of these factors was excluded, would plant life have existed on earth? Is it possible to imagine a world without plants?

Man's indiscrete actions will have serious impacts on lithosphere, hydrosphere, atmosphere and biosphere.

Natural Disasters

Natural disasters are one such impact. Natural disasters are phenomena that occur naturally and result in heavy loss to life and property of man.

It is always better to take precautionary steps than organizing rescue operations and rehabilitation after the occurrence of a natural disaster.

Let us take a look at some of the natural disasters that occur in our state and the measures to be taken on such occasions.



Government Departments and systems for the prevention and risk reduction of natural disasters

- Kerala Revenue - Disaster Management Department
- State Disaster Management Authority
- Hazard Vulnerability and Risk Assessment Cell
- Land and Disaster Management Institute

Landslide

Landslide is the fast down-slope movement of rocks, soil and mud along the steep slopes (Fig. 7.10).



Fig. 7.10 Landslide

When Soil loses its hold...



Amboori in Thiruvananthapuram district (2001), Venniyani in Idukki district (2001), Cheeyapara in Kozhikode district (2013), Pulloorampara in Kozhikode district (2012)... landslides have become a common occurrence in the Western Ghats. Most of these occur as a result of man's unscientific exploitation of nature.

When land slides...

- move to safer places as early as possible
- give priority to small children, aged people and persons with physical disability during rescue operation.
- give first aid to injured people.
- be cautious of the possibility of recurrence of landslide.
- contact police, ambulance services etc.
- take precautions to avoid electric shock.

Flood

Surplus water during the monsoons causes overflowing of rivers leading to floods.

To Tackle floods

- Do not construct houses very close to rivers
- Do not venture into rivers during rainy season.
- Paddy fields are places for percolation of rain water. Avoid reclamation.
- People residing in coastal areas should be more careful during rainy season. Valuables should be shifted to elevated places.
- Cut off the electric connections if the water level rises.

Negative impact on any one of the three spheres will affect seriously the others as well. Man's intervention on these spheres should be made very carefully. Otherwise, this beautiful world with such diverse life forms, would become uninhabitable. Each one of us should be aware of this.



Summary

- Lithosphere is the solid part of the surface of the Earth.
- Atmosphere is the blanket of air that envelopes the Earth.
- Hydrosphere includes the water in oceans, land and atmosphere.
- The existence of biosphere depends on lithosphere, hydrosphere and atmosphere.
- Man's unscientific activities and interventions affect all the spheres of Earth.
- Scientific use of natural resources is essential for the sustainability of life.
- Different measures are available to combat natural disasters.



Significant learning outcomes

- Describes the existence of biosphere depends on lithosphere, hydrosphere and atmosphere.
- Finds out the presence and the extent of biosphere.
- Evaluates the delicate balance of nature is the basis of man's existence.
- Develops a positive attitude towards environmental conservation activities.
- Explains natural disaster management.



Let us assess

- Man's unscientific interventions adversely affect the lithosphere. Explain with suitable examples.
- Scientific interventions are essential for the existence of a healthy biosphere. Identify and write down three activities needed for this.
- How are the fresh water sources of your place getting polluted?
- Hydrosphere exists in three forms. Identify where and in what forms do they exist.
- What are the things that you can do to reduce the air pollution? Prepare a note.