SOCIAL SCIENCE

Standard Six

Term I
Inian, a student of standard six was reading the newspaper. He was astonished. An amazing discovery! An animal called Dinosaur lived many million years ago. The eggs of the Dinosaur were excavated near Ariyalur. They belonged to the prehistoric period. What is ‘prehistoric period’?

Can you tell us the history of your family?

1. What is your father's name?
2. What is your grandfather's name?
3. What is your great grandfather's name?
4. What is your grandfather's grandfather's name?
5. What is your grandfather's grandfather's father's name?

You can answer the first two questions only. But we don’t know the answers to questions such as the names of our grandfather’s father and grandfather's grandfather. If this is the case, what are the evidences to find about the people who lived hundred, two hundred, five hundred and thousand years ago. The sources about these are known as History. What is History? History tells about the people who lived in the past with evidences according to the ages.

The written and archaeological evidences that tell us about the period in which people lived, events, food habits, customs, culture, forms of government and literature are known as historical evidences. History can be divided into pre-history and historical period. Historical period has proof of written evidences and other evidences. The written evidences are literary work, historical notes, stone edicts, copper plates and palm leaves.
Evidences to know about pre-historic period:

To know about the pre-historic period, there are evidences such as the things that belonged to that period, ruins, fossils, horns and bones of animals, tools made of stones, skulls and deposits (impressions) which are found in different places around the world as well as in India. With the help of all these we know about the pre-historic period of India.

The Pre-historic period can be classified as:

- **Palaeolithic Age** - Old Stone Age (BC 10000 years ago)
- **Neolithic Age** - New Stone Age (BC 10000 - BC 4000)
- **Chalcolithic Age** - Copper Stone Age (BC 3000-BC 1500)
- **Iron Age** - Iron Age (BC 1500 – BC 600)

With the help of the tools used by early man, we can divide the stone age into Old stone age and New stone age.

1. **Old Stone Age:** (Palaeolithic Age)

He was a nomad. He lived in the jungle. He took shelter on the branches of trees, in holes and caves. He discovered fire by using the flint stone. The primitive man was scared of thunder and lightning and worshipped them.

He had to protect himself from cold, Sun and rain. He wore dresses made out of leaves, skin of animals and barks of trees. He used stones, branches of trees, bones and horns of the animals as weapons.

He ate vegetables, fruits, roots and meat of animals which he gathered from the jungle. Since he could not find food in one place he went from place to place in search of food.

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**Early men - Making Tools**

Words giving the same meaning with little difference:

some years ago, many years ago, ancient, long long ago, from time immemorial, primitive.

**Era of some important events**

- Beginning of the Earth - 4.6 Billion years ago
- Appearance of man - 4000 years ago (Homosepians)
- Beginning of agriculture-8000 years ago
- Beginning of the cities - 4700 years ago

<table>
<thead>
<tr>
<th>BC</th>
<th>- Before Christ</th>
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<tbody>
<tr>
<td>AD</td>
<td>- Anno Domini</td>
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<tr>
<td>CE</td>
<td>- Common Era</td>
</tr>
<tr>
<td>BCE</td>
<td>- Before Common Era</td>
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<tr>
<td>BC 31</td>
<td>- Birth of Thiruvalluvar</td>
</tr>
<tr>
<td>BT</td>
<td>- Before Thiruvalluvar</td>
</tr>
<tr>
<td>AT</td>
<td>- After Thiruvalluvar</td>
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</table>
Prehistoric Period

When he did not find vegetables, fruits and roots, he hunted animals. He used stones, branches, bones, horns of animals etc. to hunt animals. In the beginning he hunted small animals all alone. Then they hunted in groups. Both men and women involved in hunting.

In the Pimpet Ca cave in Madhya Pradesh we see a painting. This depicts a woman with her child tied to her waist throwing an arrow. From this we know that women were also involved in hunting.

**2. New Stone Age: (Neolithic Age)**

Old stone age man went from place to place in search of food and for hunting animals. Then he learnt to produce his food. He domesticated animals like goat, cow and hen.

The first animal he tamed was dog, which helped him in hunting. He reared goats and cows and had milk as his food. The next stage in the evolution of man is known as New Stone Age.

During this age, he used polished, carved, sharp stone weapons. In this period, he started to produce food. Wheel was invented. As a result of this, he was able to transport things from one place to another easily. With the help of wheels he made pots. He sharpened the crude weapons and attached them with handles made up of wood and bones. Metal was in use. Copper was the first metal used by him.
• They built mud houses with thatched roofs and began to live in groups in small villages.
• The houses were round or oval shaped. They were built below the ground level and thatched with wooden planks.
• Agriculture was their main occupation.
• They domesticated and reared animals.
• Axes, handles made out of bones, fishing hooks, needle and chopper were in use.
• During the New stone age they had the practice of burying the dead. Urns were used to bury along with their tamed animals in the frontyard of their houses.

the pots they used. The Harappan culture belonged to this age. Let us learn in detail about this in the next lesson.

4. Iron Age:

The period when the tools were made up of iron was called Iron Age. Household articles and agricultural implements were made out of iron. They learnt to melt the metal and make weapons. They were creative. Vedic period belonged to the Iron Age.

List the tools made out of iron which are in use now. Compare them with the tools used before.

Important words from the lesson:
• Archaeology
• Primitive
• Copper Age
• Historical evidences
• Million
• Excavation
• Stone Age
• Iron Age
• Deposits
• Bronze
Evaluation:

I. Choose the correct answer:
1. Pre-history means
   a) period having written evidences
   b) period having no written evidences
   c) period which have all the 3 evidences like time, place and events
2. Old stone age people
   a) wore cotton clothes
   b) wore leaves, barks of trees and skin of animals
   c) wore woollen clothes
3. The first animal tamed by primitive man was
   a) cow
   b) horse
   c) dog

II. Fill in the blanks:
1. The early man ___________ depending on nature.
2. To know the truths of ancient period, we must read ____________
3. The Old stone age man used ___________ stones.
4. The primitive age is ___________ than the ancient period.
5. We must read ____________ to know about the primitive age.
6. The period when the tools were made up of Iron was called ____________
7. New stone age man used ____________ to make pots.

III. Match the following:
1. Tamil Nadu - Luni valley
2. Andra Pradesh - Attirampakkam
3. Madhya Pradesh - Kurnool
4. Karnataka - Pimpet Ca
5. Rajasthan - Pagalkhat
IV. Answer the following:

1. What is history?
2. List the evidences to know about history.
3. What do you mean by pre-historic period?
4. What are the four classifications of the pre-historic period?
5. What were the dresses of the early man?
6. Draw and compare any four tools of Old stone age and New stone age.
7. Write a short note on new stone age.

Prepare a table of details from the informations you have gathered from this lesson.

<table>
<thead>
<tr>
<th>Period</th>
<th>Stages of man/occupation</th>
<th>Tools used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old stone age</td>
<td>Primitive man – Gathering food, Hunting</td>
<td>Crude stones</td>
</tr>
<tr>
<td>New stone age</td>
<td>Stone age man – Rearing of animals, Agriculture</td>
<td>Polished and carved stones</td>
</tr>
<tr>
<td>Copper age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iron age</td>
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</tbody>
</table>

Write the names of your family members

<table>
<thead>
<tr>
<th>Write the name</th>
<th>Write the name</th>
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</thead>
<tbody>
<tr>
<td>1. Father : ____________</td>
<td>Mother : ____________</td>
</tr>
<tr>
<td>2. Father's father : (Grandfather)____</td>
<td>Mother's father : (Grandfather)____</td>
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<tr>
<td>Father's mother : (Grandmother)____</td>
<td>Mother's mother : (Grandmother)____</td>
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<tr>
<td>3. Grand father's father : ____________</td>
<td>Grandmother's mother : ____________</td>
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<td>(Great grandfather) : ____________</td>
<td>Grandmother's father : ____________</td>
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<tr>
<td>Grand father's mother : ____________</td>
<td></td>
</tr>
<tr>
<td>(Great grandmother) : ____________</td>
<td></td>
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</tbody>
</table>
1. Find out whether there are any inscriptions and monuments in your area and collect information about them.
2. Are stones still used as tools? List them.
3. Collect information and photos from the newspaper about the excavations.
4. How do you feel about that ancient man got the idea to invent the wheel.
5. Visit the nearest place where the storage instruments are found.
6. Mark the places in the India map, from where the stone age instruments were discovered.
2. INDUS VALLEY CIVILIZATION

Why do we call the modern age as Computer age? After the invention of electricity, computer is regarded as the most important one and so it is called Computer age.

In the previous lesson, we studied about the early man. The period when early man used stone was known as stone age. The first metal known to man was copper. So he used both copper and stone. That age was known as Copper Stone Age. During that period there existed an ancient civilization in India which was the Indus Valley Civilization. (Harappa)

This is the beginning of the Indian civilization.

Harappa:

In 1856, when the British ruled India, they laid railway lines on the banks of River Ravi, a branch of Indus river. They found a mound of sand. There they saw well-burnt bricks and ruins. They took those bricks and constructed the railway lines. So they destroyed many such walls of the buildings.

In 1921, archaeologists found out that it was the ancient city of India. Harappa in Sindhi means 'Buried City'. The cities discovered after the Indus Valley Civilization were named as Harappan Civilization.

This civilization flourished in India about 4700 years ago. Likewise, the ruins of the cities were found in Mohenjo-daro, Chanhu-daro, Kalibangan and Lothal.

The Great Bath:

The most important structure found in the citadel was the Great Bath. It was built of kiln-fired bricks and sealed with a lining of bitumen.
There were steps on both the sides of the pool. There were rooms on all the sides of the pool for changing clothes. It was fed by water from a well and the dirty water was emptied by a huge drain.

Buildings:

Houses were built in grid system. There were houses which had two rooms and multistoried houses, public hall, granary and public buildings built out of bricks. There were no windows in the houses. Every house had a well and a bathroom. There were dustbins in front of the houses.

Town planning:

The Indus valley cities were well planned. The northern part of the town was narrow and elevated. The excavators considered that those were constructed on security basis. The eastern side was broad and lowered. We get more information from this town planning.

Mohenjo – daro in Sindhi means ‘Mound of Dead’

The town was built with experts who were well versed in the art of town planning.

There would have been an administrative committee in the city to administer it.
Houses were built on both the sides of the broad streets in systematic order. The houses had flat roofs and were many storied.

Administration:

The public drainage system, the Great Bath, the public hall, street lights and the provision of dustbins show that the administrative system was well organized.

Drainage system:

The drains from the houses were covered. They ran along the sides of the streets which were connected to the street drains. They had manholes at regular intervals for cleaning.

Applied Science:

The science and technology such as construction, selections of lands, measurement of plots, foundation, selection of quality building materials and geometrical figures were in use.

We have an idea about ancient man from the archaeological evidences. This is the place where you can write your ideas.

List the similarities and the differences between the Great Bath of the Indus Valley and the ponds that are seen in the temples of Tamil Nadu. What types of machinery would they have used to fill the ponds?

Life style of Indus Valley people:

Row houses were built for the employers of town administration. People exported and imported things like metals, precious stones, ornaments and various useful products.

Drainage system - Mohenjo-daro

Statue of a man with beard made of limestone
**Indus Valley Civilization**

**Bullock cart driven by man**

**Dancing girl**

**Pasupathi**

**Pieces of broken pots excavated from Harappa**

**Pots:** They made pots with the help of potter’s wheel. They were polished and coloured.
Handicrafts:

There would have been workers like document writers, seal makers, carpenters, doll makers, masons and other artisans.

They also found out dolls made out of terracotta and other playing articles out of shells, brass, copper, silver and gold.

They used copper and bronze to make weapons, household articles and tools. Gold and silver were used to make ornaments. Weights were made out of a kind of stone.

Terracotta seals:

Hundreds of rectangular seals were discovered here. Pictographic writings were written on them. The script had not been deciphered yet. On the terracotta seals, bulls, cart, dove, boats and a figure of a human meditating are seen.

Script:

The terracotta planks discovered here were engraved with letters. The figures that were engraved on the seals and the pictorial writing showed their skill of writing. They were pictographic writing.

Each picture depicts a specific meaning. Each page was written from right to left and left to right.

These writings are related with the ancient Tamil writings. There are varied opinions regarding this.
Occupation:
In the Indus Valley there were agriculturists, artisans, traders, weavers, potters and blacksmiths. Agriculture was their main occupation. They cultivated wheat and barley. They stored the surplus grains in the granary.

1. List the various occupations in your area.
2. Do we store grains? If yes, where and how?
3. Gather evidences to prove that Indus Valley people traded by sea.

Dress:
People wore cotton and woollen dresses. Men wore a garment similar to the 'dhoti' as lower garment and a shawl as upper garment.

Ornaments:
To make ornaments they used gold, silver, ivory, and precious stones. Poor people wore ornaments made out of shells and copper. Both men and women wore many ornaments.

Art:
They were experts in making pots out of terracotta. The figures of birds, animals, images of male and female, bullock cart driven by a man, pots and bowls were discovered.

Sculpture:
The statue of a dancing girl made out of bronze found in Mohenjodaro and the statue of a man with beard made out of limestone are examples of the excellent sculptures.

Religion:
The articles excavated in Mohenjo-daro tell us about their religious practices and the love towards their religion. They worshipped Lord Shiva represented as Pasupathi, Mother Goddess, Lingam, Trident and trees.

They buried the dead in urns along with food and ornaments.

Causes for the decline of the towns:
1. Wooden articles would have got destroyed by fire.

2. Rivalry because of the civil war.

3. Natural calamities and the change in the course of River Indus would have buried things.

4. The Aryans would have destroyed these towns in order to succeed.

5. The heap of bones discovered in Mohenjo-daro is evidence of the invasion of the foreigners. (Aryans)
Evaluation:

I. Choose the correct answer:
   1. Which of these help you to know about Indus Valley Civilization?
      a. stone inscriptions  b. archaeological evidences  c. copper plates
   2. Mohenjo-daro means
      a. Garden city  b. Port city  c. Mound of Dead
   3. Port Lothal of the Copper Stone Age is in
      a. Punjab  b. Sindu  c. Gujarat
   4. Harappan Civilization was
   5. The metal unknown to Indus Valley people
      a. gold  b. iron  c. copper
   6. Harappa in Sindhi means ________________
      a. Buried City  b. City of Fort  c. City of Rivers

II. Fill in the blanks:
   1. The main God of the Harappans was ____________.
   2. The excavation of the Indus Valley Civilization was done in ____________.
   3. The Great Bath is situated at ____________.
   4. ________________ was the writing used by the Indus Valley people.

III. Match the following:
   1. Great Bath    - pots
   2. Excavation    - burnt clay
   3. Wheel         - Ravi
   4. Terracotta    - Mohenjo-daro
   5. Punjab        - 1921

IV. Answer the following:
   1. List the occupation of the Harappans.
   2. Write about the Great Bath.
   3. What were the causes for the decline of the Indus Valley Civilization?
   4. Explain the writings of the Indus Valley people.
Formative Assessment

1. Why did civilization originate at the riverbanks – Discuss.
2. How to you know the cities are planned and constructed?
3. Visit the nearest museum.
4. Mark the following places in the outline map of India. Lothal, Kalibankan, Rupar, Harappa, Mohenjo – daro.
3. ANCIENT TAMIL NADU

The land mass between the Himalayas and Cape Comorin is hailed as our Grand Old Country of Bharath by Bharathiyar in his “Ode to Child”. (Pappa Pattu) Historians conclude that the land to the south of the Vindhyan Range is the most ancient in the world.

In the southern state there are people who speak different languages like Tamil, Telugu, Kannada, Malayalam and Tulu. The people who live in the south of Tirupathi speak Tamil.

Bavanandhi Munnivar, the author of Nannoool describes Tamil Nadu as follows.

Venkata hills on the North, Cape Comorin on South and the land between these two is Tamil Nadu.

During the British rule, most of the parts of south India was called 'Madras Presidency'. After independence, the state which had Tamil as its language was separated. Arignar Anna, the then Chief Minister in 1967 named the state as Tamil Nadu.

The Tamil we speak can be appreciated as Senthamizh, Paeynthamizh and Muthamizh. The National poet Subramania Bharathiyar sang

“Senthmizh naadenum poothinilae-inba
Thean vandhu paayuthu kathinelae-yengal
Thanthaiyar naadenum poothinilae-oru
Sakthi pirakuthu moochinilae.”

Tamil Nadu was ruled by the descendants of Chera, Chola and Pandya who were called Mooventhalars during the ancient time. The southern part of south India was ruled by Pandyas, west by Cheras and north-east by Cholas.

The Prehistoric Tamil Nadu:

Before prehistoric period, the Indian Ocean on the south of Cape Comorin was a land mass. It was called as 'Kumari Kandam'. The river Fahruli ran on this land mass which was eight to ten times bigger than South India. There were wide ranges of mountains. It was said that the land had sufficient rain, dense forest, civilized people and efficient kingdom. That kingdom would have been the ancient Pandyan Kingdom.
Three Sangams:

The capital of Pandyas was Thenmadurai. Tamizhvalarththa Thalai Sangam assembled there. The Pandyas ruled over the land with Kapadapuram as its capital. This place was left over after the tsunami in which Thenmadurai was taken away by the sea. In Kapadapuram the poets gathered and had the Second Sangam. That city also became a prey to tsunami later.

Then the Pandyas ruled with Madurai as their capital. The last Sangam was held in Madurai Muthoor. It was known as Kudal as the Pandya kings patronized the poets and held research on Tamil. It was believed that the First, Second and Third Sangam helped in the development of literature and Tamil flourished under the leadership of Pandyan Kings. These Sangams would have been for a long time.

The Continent Lemuria:

The conditions were favourable for the growth of living organisms only at Cape Comorin which was submerged after the tsunami. Because of this the evolution of man would have taken place then. The language spoken by those people was the basic of Tamil language. The researchers believed that those were the ancient Tamilians. People who lived on the southern part of the land mass are considered as the ancestors of the people of Cape Comorin. There was a big land mass connecting Africa and Australia, which was called Lemuria after the name of the monkey Lemur.

It was believed that human beings evolved from the Lemurs. The language of the people was ancient Tamil. The land where their descendants lived was called Tamil Nadu.

Historic period:

The historic period of Tamil Nadu began from the Sangam age. Sangam age is the period during which the poets of the Third Sangam joined together and did research on Tamil. This period lasted for 400 years from BT 200 – AT 200. Some consider that it was between BT 300 – AT 300.

Note: BT – AT was calculated based on the birth year of Thiruvalluvar ie 31 B.C. According to the decision taken by Tamil scholars that time can be calculated considering that Thiruvalluvar was born 31 years before Christ. This was accepted and announced by the Government of Tamil Nadu.

The Sangam literatures, what we got now are Etuthogai and Pathupattu. The poem in these literature were written by Kapilar, Paranar, Avvayar, Nakkeerar,
and hundreds of poets. With the help of these we can understand the civilization, customs, culture and political life of Tamilians.

Tolkappium which was a pride to Tamil literature originated before the Third Sangam. Tamil literature would have developed a few thousand years ago. It was a pride to Tamil, that Tirukkural which was hailed by all the religions originated during the Sangam age.

Our mother tongue Tamil which is adoptive to grammatical norms and is called Senthamizh. Scholars call Tamil a classical language, because it had developed without the help of other languages.

Activity:

Identify the type of land division that you live in. Write down.

The people who lived in the south which was surrounded by water on three sides were good sea traders before the Sangam age as per the proverb, “Tiraikadal oodiyum thiraviyam theddu”. The language Tamil is abundant with words like Navai, Kalam, Kappal, Thoni, Odam, Padagu, Theppam and Katamaram which are used to denote the mode of travel at sea.

This shows their interest in sea trade. There were many ports like Puhar, (Kaverippomattinam), Korkai, Musiri, Thondi and Vanchi. They had trade contacts with Egypt, Yavanam, Rome, China and other eastern countries. They followed the barter system.

Mohenjo-daro and Harappa excavated in the Northern hemisphere were examples of town civilization. They
examined thousands of things found there. It was proved that it had connection with the Southern Tamilians for more than four—five thousand years ago. This showed that in those days Tamilians were not only in the south but also in the north.

During the Sangam, the poets divided the lands into five physical divisions. The mountainous region was called Kurinchi, the forested region was referred to as Mullai, the coastal area was Neidil and the sandy regions which suffered drought were called Palai. The occupation of the people depended on the region where they lived.

In those days, the most important duty of the kings was protecting their subjects. Apart from the kings there were chieftains and patrons who ruled smaller regions. Conditions were favourable for the poets, pannar, koothar, viraliyar, traders, idayars, uzhavars, maravars to lead a comfortable life.

Agriculture was honored as it provided food to all. Next to agriculture weaving was given importance.

The Ancient Three Tamil Kingdoms:
The Chera Kingdom:
Chera kingdom included the whole of present Kerala and North West - of Tamilnadu.

The famous Chera kings Imayavaramban Neduncheralathan and Sillambu Pugazh Cheran Senguttuvan reached the Himalayas and hoisted the Chera flag. Their capital was Vanchi (Karur), the ports were Thondi and Musiri and their emblem was Bow and Arrow.

The Chola Kingdom:

The Chola kingdom included present Trichy, Thanjavur, Pudukkottai, Nagapattinam and some parts of the South Arcot. The famous Chola kings were Karikal Cholan and Killivalavan.

Karikalan who ruled over two thousand years ago conquered Eelam. He built Kallanai on the banks of river Cauvery with the help of captives which is still in use. He was called Karikal Peruvalathan.
The Pandya Kingdom:

The Pandya kingdom included the places from Kanyakumari to Madurai. The Pandyan king Mudathirumaran and Thalaiyalanganathu Cheruvendra Neduncheziyan who defeated the combined forces of seven chieftains, lived in the Pandya kingdom. The one who played an important role in Silapathigaram by saying, “Yano Arasan; Yanae Kalvan” (I am not a king, I am the culprit) and established truth was also a renowned Pandya king. Their capital was Madurai, their port was Korkai (Tuticorin) and their emblem was Fish.

According to the Thirukkural mentioned above there was a society without any discrimination.

There were discrimination according to their occupations. There was sect system but they were not discriminated according to their birth. Untouchability was not in practice. In due course, caste discrimination and untouchability came into force.

Women had the privilege of choosing their life partners. Parents agreed to that. The rituals, raising of holy fire and chanting of mantras were not in vogue. Women were not treated as per the Vedas.

As building of temples was not in practice, the Sangam people worshipped the stones erected in memory of the dead soldiers which were known as Hero Stones or Nadukkal and their ancestors.

They celebrated harvest festival, Pongal festival and the festival of Spring season. In the capital they celebrated Indiravizha. They did not know about the festivals of the Puranas.

Social Life:

“Pirrapokkum ella uirukkum -chirappova Cheithozhil vetrumai yan”

Their capital was Uraiyur, their port was Kaviripoompattinam and their emblem was Tiger.

The famous kings of the medieval period were Rajaraja Chola and Rajendra Chola. They conquered not only the North but also Java and Kadaram.
Evaluation:

I. Choose the correct answer:

1. The area that was considered as the most ancient one in the world
   a) Ganges Valley
   b) the area in the south of Vindhyas
   c) north west valley

2. The land mass on the South Kanyakumari during pre-historic period
   a) Continent of Kumari
   b) Continent of Bharath
   c) Continent of Africa

3. The place where evolution of man began
   a) Mediterranean countries
   b) Asyria
   c) Lemuria

4. Which year is considered as the birth year of Thiruvalluvar
   a) AD 31
   b) BC 31
   c) AD 13

5. The city where the Second Sangam was held
   a) Thenmadurai
   b) Kapadapuram
   c) Koodal Nagar

II. Fill in the blanks:

1. ____________ was the organisation where the Tamil poets assembled and did the literary research in Tamil.

2. The ____________ were the ancestors of the people of Cape Comorin.

3. The historical period of the Tamil began from ________________ age.


5. ________________ was the most important occupation of the Sangam age.
III. Match the following:

1. Tolkappiam - Yano Arrasan; Yanae Kalvan
2. Mullai - Hero Stones
3. Pandiyar Neduncheziyan - Mountainous region
4. Heroic death - coastal area
5. Kurinchi - book before Tamil Sangam
6. Neithel - forest area

IV. Answer the following:

1. Why is Tamil known as classical language?
2. Name the Tamil words which are used to denote the mode of travel at sea.
3. Why is Madurai known as Kudal?
4. What are the countries with whom the Tamilians had trade?
5. Mention the physical divisions of the land during the Sangam age.
6. Name the famous Pandya kings.
7. Name the important Chera kings.
8. Write notes on Karikal Peruvallathan.
9. Name the Kadaiyelu Vallalgal.
10. Mention the social status of women during the Sangam age.

V. Answer in detail:

1. Write the characteristic features of the ancient Tamil.
2. Describe the First, Second and Third Sangam.
3. Write about the sea trade of the Sangam Age.
1. Prepare and display the models of 5 types of lands.

2. Prepare a tabular column based on the trees, flags and flowers of the three Tamil kingdoms.

3. Do the festivals of the present time give only happiness? Discuss.

4. **Who am I?**
   - Land and areas around the land. Who am I?
   - Mountain and areas around the mountains. Who am I?
   - Forests and areas around the forests. Who am I?
   - Sea and areas around the sea. Who am I?
   - Draught-striken area- Who am I?
The bright and beautiful evening gradually faded away. The setting Sun soon sank into the western horizon and went out of sight. Slowly darkness began to envelope the sky, as night was setting in stars began to appear like little lamps in the sky. Soon in the total darkness of night, millions of stars appeared twinkling like diamond studded in the canopy of deep blue sky. What a glorious sight!

A keen observation of the enchanting night sky would reveal amazing realities.

It appears that the Sun rises in the east and sets in the west. When the Sun rises, the stars become invisible. But when the Sun sets in the west stars shine are visible.

Among thousands of twinkling stars in the night sky, it is the moon that instantly captures our attention. We come to know a lot of amazing information if we observe the moon.

First, the shape of the moon keeps changing everyday. The shape of the moon waxes from the new moon to the full moon and wanes from the full moon to the new moon.

We can calculate the duration between one new moon to the next new moon or one full moon to the next full moon which as a month, thus appearing in many forms.

The moon appears along with various heavenly bodies everyday.

Besides the stars, planets are also seen in the night sky. Planets appear shiny. But they never twinkle like stars.

**Activity**

Take a paper and prick small and big holes on it with a needle. Fix a torch in the centre of the paper with its front portion touching the paper.

Switch off all lights and make the room dark. Now flash the torch-light on the wall. You will see numerous dots of light on the wall. We assume that they are the stars that shine in the sky.

Switch on all the lights in the room. This light can be compared to the sun. All dots of light (stars) will become almost invisible. Similarly stars are invisible during the day because of the bright light emitted by the Sun.
First, if you closely observe, you will be able to notice that stars twinkle. The planets glow without any flicker.

Secondly planets do not remain in the same position. If you see a planet along with a particular star today, you might find it along with another star later.

Thus the various positions of planets can be seen against the backdrop of stars.

Without the help of the telescope, i.e., with your naked eye, you will be able to see the five planets namely Mercury, Venus, Mars, Jupiter and Saturn.

On the other hand, Neptune and Uranus can be seen only through a telescope.

Before sunrise or sunset we can see Mercury and Venus for a few hours. These two planets appear only on the horizon.

Venus rises a few hours before sunrise and therefore it is nicknamed as the 'Morning Star'.

Mars, Jupiter and Saturn are visible with the naked eye during the night either in the east or overhead or in the west. Thus we can see only five planets with the naked eye.

In Tamil the days of the week are named after these five planets, the moon and the Sun.

"Seeing is not believing" is a scientific outlook. It appears to us that the Sun and the stars rises in the east and sets in the west.

But in fact it is only the Earth that spins along its axis everyday. It appears to us that all the celestial bodies including the Sun and the stars move from east to west because the Earth spins from the west to the east.

The moon moves from the west to the east for three consecutive days, with the stars as a backdrop. (which can be seen in the picture below)

Usually the upper part of the map indicates the north, the lower part indicates the south. The right side shows the east while the left side indicates the west. But in the map showing night sky, the right side indicates the west and the left side indicates the east. Directions are located accurately if the map is held overhead in a higher position.
It is not only because of the rotation of the Earth, but also due to the rotation of the moon and other planets, that we are able to observe their movements.

The moon revolves around the Earth, similarly the planets revolve around the Sun. Thus it appears that all the planets move with the stars as a backdrop.

**The Solar System**

Solar family consists of the Sun, its eight planets, the satellites like the moon that revolve around the plants, dwarf planets, thousands of asteroids, meteoroids and comets. This is called the solar system.

We can see the Sun, moon and the five planets that are mentioned above with naked eyes.

With the help of the telescope we can observe other celestial bodies like Uranus, Neptune, Comets, Meteoroids, Asteroids, Galaxies, dwarf planets billions of stars and other gaseous objects.

**The Solar system has eight planets.** All planets revolve around the Sun.

The Earth is also a planet. Different kinds of life including human beings are found on Earth because the Earth's atmosphere has oxygen.

The eight planets have been classified into solid planets and gaseous planets. Mercury, Venus, Earth, and Mars are called as Solid planets, while Jupiter, Saturn Uranus and Neptune are gaseous planets.
Other than the earth, all the other planets have no oxygen and other gases. Hence life does not exist in these planets.

All planets appear to move in an anti-clockwise direction if you take a bird’s eye view from the north pole of the Sun. Even though they all revolve in the same direction, the duration of their revolution around the Sun differs from one another.

The planets which revolve around the Sun, do not deviate from their respective paths. All planets revolve around the Sun in an elliptical path, approximately at the same plane. The path that the planet takes to revolve around the Sun is called 'Orbit'.

**Sun**

The Sun is the head of the Solar family. It is at the centre of the Solar system. It is a large gaseous ball of fire. The gravity of the Sun holds the Solar system together.

The Sun is the source of heat and light for the entire Solar family. The Earth is approximately 150 million km away from the Sun.

The Sun is very hot but the Earth receives only moderate heat from the Sun. The Sun is the only celestial body that emits light in the Solar system.

**THE RINGS OF SATURN**

The rings of Saturn are visible through a telescope. These rings consist of small stones, dust and ice particles. Though only the rings of Saturn are magnificent, Jupiter, Uranus and Neptune also have rings.

**DWARF PLANETS**

Pluto, Charon, Ceres, Eris were newly grouped as 'Dwarf Planets' in the year 2006. They also revolve around the Sun. They are very small in size. Their size is smaller than that of our moon. Hence they are called Dwarf planets.
No planet has the capacity to emit light because they do not have light of their own. They reflect the light of the Sun.

The time taken for the rotation and revolution of the planets around the Sun.

<table>
<thead>
<tr>
<th>Planets</th>
<th>Duration of revolution</th>
<th>Distance from the Sun</th>
<th>Duration of Rotation</th>
</tr>
</thead>
<tbody>
<tr>
<td>MERCURY</td>
<td>87.97 days</td>
<td>5.79 Crore Km</td>
<td>58.6 days</td>
</tr>
<tr>
<td>VENUS</td>
<td>224.7 days</td>
<td>10.82 Crore Km</td>
<td>(∗)243 days</td>
</tr>
<tr>
<td>EARTH</td>
<td>365 ¼ days</td>
<td>15 Crore Km</td>
<td>23 hours 56 min</td>
</tr>
<tr>
<td>MARS</td>
<td>687 days</td>
<td>22.79 Crore Km</td>
<td>24 hours 37 min</td>
</tr>
<tr>
<td>JUPITER</td>
<td>11 years 9 months</td>
<td>77.83 Crore Km</td>
<td>9 hours 55 min</td>
</tr>
<tr>
<td>SATURN</td>
<td>29 years 5 months</td>
<td>142.7 Crore Km</td>
<td>10 hours 40 min</td>
</tr>
<tr>
<td>URANUS</td>
<td>84 years</td>
<td>287.1 Crore Km</td>
<td>(∗)17 hours 39 min</td>
</tr>
<tr>
<td>NEPTUNE</td>
<td>164 years 9 months</td>
<td>449.7 Crore Km</td>
<td>16 hours</td>
</tr>
</tbody>
</table>

Venus and Uranus marked with the (∗) sign rotate from east to west. All other planets rotate from the west to the east.

Source – NASA, USA

ASTEROIDS

Thousands of asteroids are found between Mars and Jupiter. Asteroids are clusters of celestial bodies which include tiny stones and big rocks that measure about 300 to 400 km in diameter.

Some of them have Indian names such as Vynu Pappu the astronomer, Sarabai the Father of Atomic energy and Ramanujam the Mathematician.

MOON

The Moon is called by different names in Tamil. The Moon is not a planet.

It is a natural satellite of the earth.
The moon does not revolve around the Sun. It revolves around the Earth. Hence, it is called a satellite.

The moon is the satellite of the Earth. With the help of telescope and space research, it has been proved that Mars, Jupiter, Saturn, Uranus and Neptune also have a number of satellites.

The moon is a sphere which measures a quarter of the Earth’s diameter. It appears very large to us because it is very close to the Earth. It revolves around the Earth approximately at a distance of 3,84,401 Km.

It takes about 27.3 days for the moon to revolve around the Earth and 27.3 days for the moon to rotate on its axis.

Hence from the Earth we are able to see only one side of the moon. In the year 1959, the satellite Lunar 3 photographed the other side of the moon.

The moon does not have an atmosphere like the Earth. Water is not found there in the liquid form. However, moisture is present here.

Landforms such as mountains, plateaus and valleys are also found on the moon.

Craters are another special feature of the moon. This can be viewed through a telescope. These craters are formed due to the meteorites which fall on the surface of the moon. Some of the craters are found due to volcanic eruptions.

Where does the Moon go on a new moon day?

The Sun is the only illuminating celestial body in our solar system. Though the moon shines brightly during the night, it actually reflects the light of the Sun.

Like the Earth, the moon is also almost a sphere. Therefore, the side that faces the Sun, shines brightly while the other side is dark.

During the revolution of the moon around the Earth, the dark side of the moon that faces the Earth is called the ‘new moon’. The side of the moon that shines brightly on the Earth is called ‘full moon’.

On a new moon day, the moon comes between the Earth and the Sun and on a full moon day, the moon is opposite to the Sun.
Why are we not able to see the other side of the moon?

Ask a student to stand in one place. Draw a circle around him/her with a radius of two metres. Ask another student to stand on the circle. The student who stands at the centre of the circle is the Earth. Give him/her a card denoting the name “Earth”.

The student who stands on the circle is the Moon. Give her/him a card denoting the name “Moon”. Now, the student who represents moon should revolve around the earth facing only the Earth.

The moon is revolving around the Earth. But, does the moon rotate on its axis - Discuss.

Note the direction of the face of the student who represents the moon. The direction of the face of the moon changes on all sides when it revolves around the Earth. This is called rotation.

Hence the moon rotates on its axis. The duration of rotation and revolution of the moon around the Earth is the same.

METEOROIDS

The sudden streaks of light seen on a starry night is called as Meteoroids. This can be seen when the remains of the rocky parts of the comets strike the Earth's atmosphere and streaks of light are generated. They are not stars that fall down.

What happens when you rub your palms together? Do you feel the warmth?

The same way, he it is generated. When fragments of rocks and comets from space strike the earth's atmosphere, the rocky fragments burn and shrink. This phenomena appears as a bright streak of light.
THE EARTH AND THE SOLAR SYSTEM

COMET

It is exciting to see a comet in the night sky. A comet is not a star. It is a rock made of dust and ice. The long tail is seen because, as the comet comes near the Sun, the ice melts and reflects the light of the Sun.

The tail of the comet is seen in the opposite direction of the Sun. The tail of the comet appears because minute particles from the Sun strike the gaseous part emitted from the comet.

UNIVERSE

Millions of constellations of stars seen in the sky is called a galaxy. Thousands of galaxies form the Universe. The Universe is vast and ever expanding. Research and experiments are still being carried out.

Milky way galaxy is one among the many galaxies.

MILKY WAY GALAXY

The twinkling stars that are seen on a starry night are actually like the Sun, but are far away.

Many of these stars are hundreds and thousands of times bigger than our Sun.

They are seen only as a small spot of light because they are too far away. Scientists have found that planets revolve around these stars.

Millions of stars, including the Sun and other celestial bodies which can be viewed with our eyes belong to the Milky way galaxy.

A white streak of light can be seen on a clear night for few days. Our ancestors called this as the Milky Way galaxy. In India it is we call it as “Akash Ganga”.

Milky way galaxy is a dense cluster of stars. They appear as a tiny dot of light because they are far away. We live on the Earth, which is a part of the solar system, present in the Milky way galaxy.
EARTH IS A LIVING PLANET

Earth is the third planet from the Sun. Mercury and Venus are very hot planets. Mars, Jupiter, Saturn, Uranus and Neptune are very cold because they are far away from the Sun.

Land, water, air and heat are available in the optimum level only on Earth. Therefore, different forms of life exist only on the Earth.

In our Solar system there is life only on Earth. There is no life on other planets. Earth is called a 'living planet' because life is found in abundance only on this planet.

Evaluation

I. Choose the correct answer:

1. The planet that can be viewed only through a telescope is ___________
   (a) Mercury (b) Uranus (c) Mars

2. All the planets revolve around the Sun in an ___________ path
   (a) circular (b) elliptical (c) square

3. Asteroids are found between ________________
   (a) Earth and Mars (b) Mars and Jupiter (c) Jupiter and Saturn

II. Answer the following:

1. How will you differentiate stars and planets in the night sky?
2. What does the term 'Solar system' mean?
3. Why are we not able to see the other side of the moon from the Earth?
4. Write a short note on milky way galaxy?
5. Why Earth is a living planet?

Project

The period between the full moon and new moon is called as waning of the moon. The period between the new moon and full moon is called as the waxing of the moon. With the help of a calendar find out and tabulate the full moon and new moon days for this year. Calculate the exact duration taken for one cycle of waxing and waning of the moon.
1. Those who have an opportunity can visit the nearest planetarium in your area.
2. Prepare an album with the pictures of the planets.
3. Prepare the models of the solar system by using clay/paper.
4. Make the students to demonstrate how the Earth revolves, rotates itself and revolves the Sun.
5. Pluto is not a planet—give reason.
6. Sky watching: Watch the sky keenly in the night and mark the position of the planets, the moon and the stars in the given sky map.
7. Crossword puzzle:
   • The nearest planet to the sun.
   • The biggest planet in the solar system.
   • The smallest planet in the solar system.
   • The farthest planet from the sun.
   • The living planet.
   • It is called as morning star.
   • Planets which revolves from east to west.
   • Hero of the solar system.
   • The natural satellite of the Earth.
   • The planet with beautiful ring.

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<td>R</td>
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</tbody>
</table>
5. FAMILY AND SOCIETY

Family:

Group comprising parents and children sharing everything under the same roof is called family.

We live in a family. Who are the members living in our family?

We live with our mother, father, brothers and sisters. The number of members in each family differs from family to family. Some family consists of father, mother and a child, while other families consists of father, mother, grand parents and close relatives.

Family is the basic unit of the society. Nuclear family consists of parents and children. Joint family consists of parents, children, grand parents and close relatives. Happy family leads to healthy and good life.

When many joint families live together they form community. When many communities live together, it is called society.

Community:

Are you living with joint family or nuclear family?

A community consists of a group of people who live together for the common well being and purpose. They share government and have a common cultural and historical heritage. Unity, duty, right, participation, security, development are the very soul of the community.

Our relatives, neighbours, classmates and playmates co-exist in a community.

Society:

When various groups (communities) depend on each other and live together it is called a society. An individual cannot live in isolation. He has to depend others for food, shelter, education, etc.

Our society enlarges from street, ward, town, taluk, district, state and country. The workers,
manufacturers and employees throughout the country form part of the society.

In our house, our parents prepare our food and fulfil our needs. In several ways we mingle with our neighbours. We help each other and because of this, love and friendship develops.

Brothers and sisters from our neighbour's house visit, talk and play with us. We also visit their house, talk and play with them. Our parents also do the same. They mingle with our neighbours.

Society and community are interdependent and interlinked.

We need to learn living together and share the work. We need to understand the feelings of others. We need to voice our opinion for the rights of people. People should come forward to participate and work together joyfully. Just as we thrive to fulfil our needs we should also participate and work for the public welfare.

Family is the foundation for the joyful life. Community helps to give security, rights, duties and properties and society paves the way for a joyful life.

Group comprising parents and children sharing everything under the same roof is called family

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Analyse the following and differentiate- Production, work and service to promote ones well being. (Educational institutions, books, equipments, travel, shirt, sugar, dhal, computer, jewellery, provisions, medicines, chairs, tea, coffee, thread, fruits, vegetables, milk, meat and police)

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Production</th>
<th>Work</th>
<th>Service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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</tbody>
</table>
Evaluation:

I. Choose the correct answer:
   1. Which information is correct for the development of the society?
      a) Society → family → individual → community
      b) Individual → family → community → society
      c) Family → society → individual → community
   2. The occupation which unites the society.
      a) agriculture
      b) carpentry
      c) business

II. Fill in the blanks:
   1. People _________ on each other.
   2. Living in one house and sharing meals cooked under the same roof is called _________
   3. We need to _________ each others feelings.

III. Match the following:
   1. The number of members - to lead a peaceful life
   2. We need to raise our voice - each other
   3. Society helps - differ from family to family
   4. We depend on - for the rights of people

IV. Answer the following:
   1. What is meant by 'living together'?
   2. What is meant by the term 'community'?
   3. What is meant by the term 'society'?

Formative Assessment

1. Write down your family members name and stick your family members photograph.
2. How does our family give protection for us.
3. List the producers, labourarers, and social workers in your area.
4. Differentiate between the nuclear family and joint family.
6. SOCIETY AND SCHOOL

The Society works for the peaceful existence of communities. The society try to fulfill the aspirations and aims of the individuals by laying down certain guidelines, such as economic progress, improving the opportunities and facilities, provisions for healthy life, security, hygiene and nutritious food, drinking water and fair distribution.

Education is an investment which paves way for the social and economic development of society. Therefore in the early days schools were conducted in Temples and other places of worship. Now schools are functioning in buildings constructed for this purpose. After the arrival of European, the responsibility of provision of Education has slowly shifted largely from the society to Government. To achieve this the government is implementing free and compulsory education for all.

The progress and the bright future of the society totally depends on the basic education facilitated to young children.

The school is one of the social institutions. It paves the way for development of education in the society. Children are the future citizens. The school teaches discipline, responsibility and self control to children. All the activities of the school thrive for the fulfilment of the expectation of the society.

Fill in the blanks from the options given below:

[owner, society, teacher, faith, apply, participates, interlinked, land, donations, requirements]

1. The society was the first to ____________ for schools.
2. The society provides the necessary ___________ to establish schools.
3. Schools are established to fulfill the necessary_________ in the society.
4. The society sends its children to schools because they have _______ in the school.
5. The society is the ______________ of the school.
6. The society gives ______________ to schools.
7. The society actively ______________ in all the school functions.
8. Schools thrive well because they are ______________ with the society.
9. It is the responsibility of the ______ to link the society and the school.
10. If the school develops the ______________ also develops.

Match the following:

<table>
<thead>
<tr>
<th>Student</th>
<th>Community</th>
<th>Duties</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Students need</td>
<td>-</td>
<td>wear clean uniforms</td>
</tr>
<tr>
<td>2. Lessons taught in school</td>
<td>-</td>
<td>practice clean habits</td>
</tr>
<tr>
<td>3. Bathe daily</td>
<td>-</td>
<td>should be followed by students</td>
</tr>
<tr>
<td>4. In school and outside</td>
<td>-</td>
<td>should be maintained</td>
</tr>
<tr>
<td>5. Teachers’ instructions</td>
<td>-</td>
<td>do not fight but be friendly</td>
</tr>
<tr>
<td>6. Do not waste water</td>
<td>-</td>
<td>should be respected</td>
</tr>
<tr>
<td>7. School cleanliness</td>
<td>-</td>
<td>be safe and united</td>
</tr>
<tr>
<td>8. Among students</td>
<td>-</td>
<td>will be praised</td>
</tr>
<tr>
<td>9. Parents and elders</td>
<td>-</td>
<td>revised by the students everyday</td>
</tr>
<tr>
<td>10. Outside the school</td>
<td>-</td>
<td>be punctual in school</td>
</tr>
<tr>
<td>11. Midday meals</td>
<td>-</td>
<td>use when required</td>
</tr>
<tr>
<td>12. Behave well</td>
<td>-</td>
<td>wash hands and do not waste food</td>
</tr>
</tbody>
</table>

The school is the stepping stone for the progress of the society. Therefore the society provides all the necessities to the school immediately. The society is the first beneficiary of the school service. The society is waiting to provide the school with the necessary requirements inorder to secure the bright future of its children.

The parents with the help of the school instills in the students human values like discipline, self-control, equality, co-operation, community living, helping tendency and unity.
Teachers are considered as God in society.

The family, community and society should help the student to strictly adhere the moral values imparted by the school. Teachers and parents should help to create an environment conducive for children. The good values acquired by the students in school should be followed and developed further. School should serve as a miniature society. The quality of primary education is the joint responsibility of parents and teachers. The students will ultimately be affected if they fail to do their duty.

At school, the students should learn discipline. The students should follow rules and regulations of the school such as being punctual, having regular attendance, self-discipline, being attentive in class and showing interest in studies, being friendly with the students, not wasting drinking water, being on time and maintaining silence during prayer assembly.

When the students involve themselves in the activities of the society, it is called student community, adolescent community or youth community. Students should learn the code of conduct to be adopted in the society. There should be no variation between what they learn and what they practice. Students in their growing stage should learn good manners, citizenship and leadership. The school should inculcate leadership qualities among students.

Mangoes that we get from a branch of the same tree will not have the same size, weight and appearance even though it has the same fragrance, taste, colour and quality. Similarly even though two people look alike having the same colour and physical appearance they have different feelings and views naturally.

Differences are essential. To differ is not a sin. Those who differ in opinion are not enemies. They are our friends even when they have different views. Today we may deny certain things and tomorrow we may accept them. This is quite human. Differences add enchantment and spice to our lives.

Various shapes and curves go together to complete a picture. Various colours give beauty to the portrait. When these colours and shapes come together they give beauty to the scenery. The variety among people help to unite the society. It is our greatness to find meaning among these differences. We need to understand the character in different people in order to live together.

We cannot avoid these differences in the society. This is the law of nature. Teachers should help students to recognize the reason for these differences and help them to live a harmonious life. Differences should be understood with their background to appreciate their naturality.

"There are many fruit flakes in a Jack fruit yet it is considered as a
single fruit. Likewise many flowers are used to make a garland”

Though there are various differences like caste, creed, language, religion and surroundings in our country yet we are Indians. We should create an awareness among the students that though there are differences we belong to one country. There are also strengthening forces which unite us such as the national flag, the national emblem, our constitution and culture.

The values imparted to the students by the teachers should be carefully carried out with the help of the parents, community and society. The effect of the school should be reflected in the family.

The family life is continued in school. Students should be trained to follow the goals and aspirations of the society. Students should get themselves accustomed for a successful social life.

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**Evaluation**

**I. Fill in the blanks:**

1. School is a ____________ institution.
2. _________________ paves way for the development of the society.
3. The__________ unites the society and the school.
4. Differences are ____________________.
5. _________________ are given equal importance to God.

**II. Match the following:**

1. Society — helps the society to grow
2. Do not waste drinking water — student - society
3. Students who join together — should praise the students
4. Parents and elders — good quality of the students
5. School — owner of the school

**III. Answer the following:**

1. By whom schools are established?
2. What does the development of the society depend on?
3. Why is it necessary to have differences?
4. What are the moral values to be instilled in the students?
5. List the principles, the student should follow in school.
6. List the aims of the society.

**IV. Answer the following in details:**

1. Difference is the 'law of nature’. - Explain.
1. Write down the names of education institution in your area.
3. Write and enact a skit (drama) based on the concept “Unity in Diversity”.
4. Get information about the societies contribution towards the development of your school.
5. Give your suggestions to the development of your school.
ECONOMICS

7. ECONOMICS- AN INTRODUCTION

The basic needs of man are food, clothing and shelter. The food we eat like rice, wheat etc. are cultivated in the land. The farmers cultivate food grains. This is termed as agriculture. Agriculture is the first known occupation to man.

Man who lived in caves, to protect himself from rain, cold and heat later started to live in houses. Cities began to emerge and man’s need started to increase.

To fulfill his needs, he started to manufacture garments, footwear, bi-cycles, cars, radios and television sets.

In our daily life we utilize many things. These things are sold in shops. To buy and sell commodities we use money. If we save money it is good for us and the country.
Food helps us to grow. Education is necessary to grow intellectually. Medical facilities protect us from diseases. Teachers impart education and doctors treat patients. Along with them Government employees work for the welfare of the people.

Agriculturists, labourers and employees help to improve the economy of the country. This is called as National income. What an individual earns is termed as Per Capita Income.

Many people do not get income. Should we provide them with food, clothing and shelter? The Government helps these people. They receive their basic needs by providing them employment opportunities.

This is called distribution.

The basic divisions of Economics are
1. Production
2. Consumption
3. Distribution

We have learnt about production. Discuss in the class and list the requirements of the food, textile production as well as the tools and implements used for the construction of buildings. It is because of the farmers we are able to obtain food grains. The industrial workers manufacture commodities required for our country.

Production is Converting the raw materials into finished products.
Now the production is complete. Will these products reach the people immediately? It is necessary for the buyers to purchase these products and transport them to the markets. Only then can we purchase the products needed. A market is a place where things are bought and sold. When people purchase commodities from the market to satisfy their requirements, it is called consumption.

Trade:

The buying and selling of commodities is termed as trade. People who buy and sell things are called traders. Finished products are bought by traders and sold in the markets. People who buy and sell large quantities of commodities are called wholesale merchants. People who buy and sell small quantities are called retailers. When there is surplus of commodities there is a fall in price. When there is deficit of commodities there is a rise in price.

Fair price shops:

The Government supplies essential commodities like rice, dhal, sugar and oil through fair price shops. The Government has taken several steps to control price rise through the enforcement of laws. When there is a shortage of commodities the Government imports them from other countries and distributes it through fair price shops.

As the demand increases there is an increase in the production, consumption and distribution. This is termed as Economic Development.

What should be produced?

How does production take place? These are monitored by the Government. The Government helps in the stable development of the country's economy.

Amarthya Sen
Scholar in Economics
(Nobel Laureate)
Importance of learning Economics:

It is necessary to have a knowledge of Economics in order to prepare the Central and State Government Annual Budget. A sound knowledge of Economics will surely help in the developmental work in all fields. In our country Amartya Sen received the Nobel Prize for Economics.

Evaluation:

I. Answer in one or two sentences
   1. What are the basic needs of man?
   2. What are the requirements for food production?
   3. What are the three divisions of Economics?
   4. Why is it necessary to study Economics?

II. Fill in the blanks
   1. To fulfill his needs, man started to ____________
   2. When there is surplus of commodities there is a _______ in price.
   3. ___________ of our country received the Nobel prize for Economics.
   4. When there is deficit of commodities in the market there is a ________ in price

III. Match the following
   1. Economy of the country - traders
   2. People who buy and sell goods - Knowledge of Economics is necessary
   3. To attain self - sufficiency - basic needs
   4. Food, clothing and shelter - national income

Formative Assessment

1. Prepare an account of the income and expenditure of your family.
2. List the expenditure that your family incurs for you.
3. Distinguish between the prices of fair price shops and local shops.
4. Go to the library and read books on Amirthiya Sen, the Economics scholar.
5. Form groups of six students each. Two groups may enact as producers, two as traders and two as consumers.
6. Debate. Who is more important - Producers or Traders?
'I can, I did'
Student's Activity Record

Subject:

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Date</th>
<th>Lesson No.</th>
<th>Topic of the Lesson</th>
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SOCIAL SCIENCE

STANDARD SIX

TERM II
HISTORY

1. THE VEDIC PERIOD

The Aryans migrated to India through the Khyber and Bolan passes from central Asia. Being shepherds, they moved in search of pastures for their cattle. They entered about 4000 years ago and settled in the entire north India.

The places where they settled in India was called Arya Vardham. Aryans made their livelihood by herding the cattle. They compiled the prayers of their ancestors as Vedas. In History, this was called the Vedic Age. The Vedic Age was classified into two. They were Early Vedic Age and Later Vedic Age.

Early Vedic Age or Age of Rig Veda: (BC 1500 – BC 1000)

When Rig Veda was compiled the Aryans lived in Sindu, which is now in Pakistan. They settled in Sabta Sindhu (The Land of Seven Rivers) in Punjab. We come to know through the Rig Veda, the political and social conditions of the Aryans.

The Social life of Aryans
Family → Village → Vis → Jana → Janapatha

Routes of the Aryans

Routes of the Aryans

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Political Life

The basic unit of the society was family. Many families joined and formed the village which was headed by the Grahmini. Many villages formed Visu. (Vis) Vishwapathya was the head of the Visu. The next higher administrative unit was Jana. The head of Jana was Rajan (King). The person who had valour and strength became the Rajan. The people lived in a kingdom were called Prajas. The king was called Prajapathi. Kingship became hereditary. Many chieftains formed the Mahajanapadas.

Find out:
Do you have a family name?
Ask and find out the family names of your neighbours.
Which God/Goddess do you worship?

The Raja (King) was assisted in his administration by officials called Prohit and Senai (Commander). There were two Assemblies called Saba and Samiti.

- Saba – Group of Elders
- Samiti – Representatives of People

Duties of Raja (King)
- He protected his lands from different clans.
- He conducted religious duties according to the advice of the prohits.
- He protected his people from poverty, war and enmity.
- During the war he led the people and fought with the enemies.
- Justice and punishments were given after trial.
- He extended and strengthened the kingdom.

Social Life

The father was the head of the family. In the beginning women were on a par with men in the fields of education and religion. There were women poets like Vishwawara, Abala, Kosa, and Lobamuthra. Caste system was not in existence. Monogamy and Polygamy were in practice. Widows' remarriage was permitted.

Economic Life

Cattle rearing and agriculture were the main occupations of the people during Rig Vedic Age. Iron was used to make tools and instruments. With the help of these tools they destroyed the forests and made them into cultivable lands. Carpentry and weaving were also their occupations.

They produced cotton and woollen clothes. Goldsmiths made ornaments and potters made pots for household use. Barter system was in practice. Rivers were used for transportation. Their unit of currency Nishka, was made of gold.

Mention the origin and growth of the following:

Carpentry, blacksmith, goldsmith, weaving, agriculture, cattle rearing and making weapons.
Food
They had wheat, barley, milk, curd, ghee, vegetables, fruits and meat as their food. They drank intoxicating drinks like 'Soma' and 'Sura'.

Dresses and ornaments
The Aryans used clothes made of cotton and wool. Men wore dhoti and shawl. They also wore turbans. Women wore upper garments and lower garments. Both men and women wore ornaments. They wore earrings, necklaces, bangles, anklets and wore bands on their foreheads.

Religion
The Aryans worshipped the forces of nature such as Sun, fire, air, sky and trees. They also worshipped Indira, Varna, Agni and Yaman. There was neither temple nor idol worship in the early vedic age. Religious sacrifices were practised. They wrote religious principles and their explanations. They offered milk, ghee, grains and silk. Yagas like Ashvamedha, Rajasuya and Vajapaya were conducted during poojas.

Later Vedic Period: (BC 1000–BC 600)
The period of Sama Veda, Atharvana Veda, Yajur Veda are called the Later Vedic Period.

In this period the Aryans spread over the eastern side. (Pre Vedic Aryans spread from Kabul to Upper Ganges) During this period the kingdoms emerged. During this period Brahmanas, Upanishads and Aranyakas were also written.

Political Life
The important administrative region was the Indus Valley. Kingdoms like Kosala, Videham, Kuru, Magadha, Kasi, Avanthi and Panchala emerged. Kingship became hereditary. The duty of the king was to defend his country from enemies and to maintain law and order. Since the kingdom expanded, he had more responsibilities. Sacrifices such as Rajasuya and Ashvamedha were performed to establish his undisputed authority. Saba and Samithi declined.

Economic Life
The metal widely used was iron. Handicrafts improved because of this. New tools were made. They grew paddy, sugarcane, barley and wheat. Cow dung was used as manure. Cattle wealth developed. According to the number of cattle owned by a person, his economic status was estimated.
There were weavers, tanners, carpenters and goldsmith. Gold and silver coins like Nishka, Swarna and Satamana were in use.

Caste system became rigid which was called Varna Dharma. Those who performed sacrifices and religious ceremonies were called Brahmanas. Those who waged war to protect and rule the country were known as Kshatriyas. The Vaishyas were the traders and farmers. The people who served the three upper caste and did all the menial works were called Sudras.

Status of Women
During the Later Vedic Period there was no improvement in the status of women. They were subordinate to men. They did not inherit property. They were deprived of administrative power. Child marriage was prevalent. Women who belonged to the royal family enjoyed some privileges. Sati, according to which the widow would throw herself into the funeral pyre of her husband was in practice.

Education
According to the Aryan Dharma, the Brahmin students stayed in the Gurukul (home of the teacher) and learnt. There were highly educated women like Gargi and Maitreyi. In the Gurukul, they learnt philosophy, logic, religion, grammar, astrology, medicine, discipline, mathematics, Vedas and Upanishads. The royal children alone were taught Danur Veda (military strategy).

Religion
There were a lot of changes in the religion according to the Varna Dharma of the Brahmans. The pre-vedic Gods lost their importance. In this period, Brahma, Vishnu, Rudra (Siva) gained importance. Rituals and animal sacrifices gained importance. People had faith in soul, fate and moksha. By the end of this period there was opposition for the rule of the priests, rituals and sacrifices. It was against these meaningless rituals and costly sacrifices, Buddhism and Jainism originated.

Thus Aryan civilization was one of the ancient civilizations, which flourished in India. But it varied from the Dravidian civilization.
## Qualities of Dravidians and Aryans

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Qualities of Dravidians</th>
<th>Qualities of Aryans</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Dark complexion, medium height, dark long hair.</td>
<td>Fair, tall and brown hair.</td>
</tr>
<tr>
<td>2.</td>
<td>Main occupation-Trade and agriculture.</td>
<td>Main occupation-Cattle rearing and war.</td>
</tr>
<tr>
<td>3.</td>
<td>Wore cotton clothes.</td>
<td>Wore woollen, cotton and dresses made out of skin of animals.</td>
</tr>
<tr>
<td>4.</td>
<td>Important animal bull. They worshipped bull.</td>
<td>Important animal cow. They worshipped cow.</td>
</tr>
<tr>
<td>5.</td>
<td>Built houses out of burnt bricks.</td>
<td>Built houses out of bamboo and clay.</td>
</tr>
<tr>
<td>6.</td>
<td>Worshipped idols, lingam, trident, sakthi and snake.</td>
<td>No idol worship and temples. Worshipped nature and performed yagyas and rituals.</td>
</tr>
<tr>
<td>7.</td>
<td>Used copper. They did not know the use of iron.</td>
<td>Used iron.</td>
</tr>
<tr>
<td>8.</td>
<td>Tiger was known. Horse was unknown.</td>
<td>Tiger was unknown. Used horses.</td>
</tr>
</tbody>
</table>

## Evaluation

### I. Choose the correct answer

1. The period of Rig Veda
   - a. BC 1600 - BC 1000
   - b. BC 1000 - BC 600
   - c. BC 1500 - BC 1000

2. The unit of currency used during Rig Vedic period
   - a. Nishka
   - b. Rupee
   - c. Dollar

3. The woman who excelled in education in the Later Vedic Period.
   - a. Gargi
   - b. Abella
   - c. Kosa

### II. Fill in the blanks

1. The head of the village was ______________.

2. Widows’ __________ was in practice during the Early Vedic Period.

3. Assembly that consisted of the Representatives of People was __________.

4. According to __________, the widow would throw herself into the funeral pyre of her husband.
III. State whether the following statements are True or False

1. Sabta Sindu is called the ‘Land of Seven Rivers’.
2. The commander-in-chief was the Senai.
3. Widows’ remarriage was not allowed in Rig Vedic Age.
4. The basic unit of the society was family.
5. Tiger was unknown to the Dravidians.

IV. Match the following

1. Satamana - Shiva
2. Praja - Rajan
3. Rudra - Vishwapathy
4. Head of Jana - coins
5. Head of Visu - people of the kingdom

V. Answer the following

1. List the ornaments of the Rig Vedic people.
2. What did the Brahmin students learn during the Later Vedic Period?
3. Compare and contrast the qualities of the Aryan and the Dravidian Civilization.

FORMATIVE ASSESSMENT

1. Search from the Internet
   i. Khyber and Bolan Passes.
   ii. Know their role in Indian history.
2. Collect various kinds of coins and list out the information known from them.
3. Compare the status of women during the Vedic period and the present day.
4. On the outline map of India mark the route of Aryans to India and the following places.
   i. Kalibangan
   ii. Mohenjo-Daro
   iii. Lothal
   iv. Ujjaini
   v. Raja Griham
   vi. Vaishali
   vii. Mathura
   viii. Asthinapuram
2. JAINISM AND BUDDHISM

The 6th century B.C. was a period of intellectual awakening. During that period, Jainism and Buddhism arose in India. These two religions existed to reform the socio-religious organizations. The aim of these religions is to remove the superstitious beliefs, unwanted religious rituals and the caste discrimination. Vardhamana Mahavira was the founder of Jainism. Gautama Buddha was the founder of Buddhism.

JAINISM

In Jainism, 24 Thirthangaras were worshipped. The first Thirthangara was Adhinathar, who was known as Rishabadevar. Vardhamana Mahavira is the last Thirthangara. (24th) He gave a strong formation to Jainism.

Vardhamana Mahavira lived during B.C.534 – B.C.462. He was born in Kundagramam near Vaishali Nagar, which is now in Bihar. His father was Siddhartha and mother was Trisala. His wife was Yasodha and he had a daughter called Anoja Priyadharshana. At the age of 30, he gave up all the worldly pleasures and became an ascetic. He performed penance for 12 years, seeking answer for the problems during these days. He treated both joy and sorrow equally. He won in his search for truth. So he was called “Jina” which means the “Conqueror”. People also called him “Mahavira”. Mahavira went to many places preaching his principles for 30 years.

Mahavira

Why are people born? Why do they die? What are the causes for their sufferings? – These were the important questions that arose in him. He started thinking why people are troubling others and cheating each other. One set of people said that it was because of the sin they did in the previous birth. But Mahavira never accepted this. He thought that how people could not commit sin in this birth.
So he said that one should not harm others. Human beings are responsible for their own problems. We should not harm any living being. He preached a restricted life. He asked his followers to follow his principles of 'Ahimsa' or 'Non-Violence'. To attain the spiritual goal the Jains starved and subjected themselves to all bodily hardships.

Jainism stressed that no one should kill any living creature. They eliminated clothes. It insisted that they should not wage war or do agriculture. Trade and commerce was their occupation. The religion preached that they should lead a restricted life.

Three Gems or Triratna:

**Right Knowledge**

**Right Belief**

**Right Action**

**The Five Doctrines**

1. Ahimsa (Non-Violence)
2. Satya (Truth)
3. Asatya (Non Stealing)
4. Aparigraha (Non-possession)
5. Brahmacharya (Celibacy)

His principles spread far and wide when superstitious beliefs, quarrels and fightings prevailed.

**Kings who followed Jainism:**
Chandragupta Maurya
Kalingathu Karavelen
Koon Pandian
Mahendravarma Pallava I

**Contribution of Jains to Tamil Literature:**
Epics -
Sillapathigaram,
Chivagachinthamani,
Vallayapathi and Soodamani.

Literature and Grammar works-
Yapperungalaviruthi,
Neminatham,
Nannool,
Agaporulvillakam,
Naladiar,
Nanmanikadikai,
Pazhamozhi,
Thinaimalai Noorthiyampathu and Tamil Nigandu.

**Contribution of Jains to architecture:**
Rajasthan - Dilwara temple at Mount Abu.
Kajiraho - Chittoor, Ranakpur – Temples of Jains.

**Dilwara**

“Kollaan pulaalai maruththaanai kaikoopai
Ella uyirum thozhum”

– Thirukkural

**Sculpture:**
- Udaiyagiri
- Hathigumpa
- Girnar
- Sravanabelagola.
- Kazhugumalai

The statue of Gomatheswara at Sravanabelagola is at Karnataka.
Buddhism

Chapter - 2

HISTORY

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near Kapilavastu in Nepal. His father Suddhodana belonged to the Sakya dynasty. His mother, Mayadevi died at the seventh day of his birth, so he was brought up by his step-mother. He got married at the age of 16. His wife was Yasodha and Rahul was his son.

Even at his early age, he was anxious to know about what was happening in the world. He never showed any interest in hunting and luxury. The miseries and poverty of the poor people affected him very much.

Gautama Buddha was the founder of Buddhism. His original name was Siddhartha. He lived during 563 - 483 B.C. He was born at Lumbini Vanam near Kapilavastu in Nepal. His father Suddhodana belonged to the Sakya dynasty. His mother, Mayadevi died at the seventh day of his birth, so he was brought up by his step-mother. He got married at the age of 16. His wife was Yasodha and Rahul was his son.

Even at his early age, he was anxious to know about what was happening in the world. He never showed any interest in hunting and luxury. The miseries and poverty of the poor people affected him very much.

Siddhartha, who was enlightened under a pipal tree at Gaya became Buddha.

The meaning of the word 'Buddha' is a person who knows what is good, what is bad and what is suffering.

He preached his first sermon at Deer Park in Sarnath near Banaras in Uttar Pradesh.

Principles of Buddhism

Life is full of miseries. The reasons for the sufferings are not because of fate or the deeds of our previous birth. There are other reasons for sorrows. We should strive to overcome the sorrows by not being greedy, not telling lies and not harming others. To avoid miseries one should have right thinking, right speech and right livelihood. He opposed caste discrimination. Man need not have any fear for God, soul and fate. One should depend and live on his own ideas and knowledge. We should show compassion towards animals, birds and human beings.
Buddha’s principles on suffering are the Four Noble Truths and the principles on conduct are the 'Eight Fold Paths'.

The Four Noble Truths are:
1. Life is full of sorrow.
2. Desire is the cause of sorrow.
3. Sorrow can be ended by giving up desire.
4. The eightfold path is the way to end sorrow.

Eight – Fold Paths to overcome desire:
- Right belief
- Right speech
- Right living
- Right memory
- Right effort
- Right thought
- Right action
- Right meditation

In order to spread the truth he went from place to place. Wherever he went, he discussed his ideas with various groups of people. Buddhist monks came forward to spread the principles of Buddha. The organization of the monks was called as 'Sangam'.

The agriculturists, poor people, women, menial labourers and those who were affected by the society accepted the principles of Buddha. The idea that all are equal was new to them. So Buddhism spread far and wide.

Many kings followed Buddhism like Jainism. The most important among them was King Ashoka. Jainism and Buddhism were at their zenith till the 6th century. They started to decline when Hinduism regained its earlier position. Later Buddhism split into Hinayana and Mahayana.

<table>
<thead>
<tr>
<th>Hinayana</th>
<th>Mahayana</th>
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<tbody>
<tr>
<td>Accepted Buddha’s principles.</td>
<td>Worshipped Buddha as God.</td>
</tr>
<tr>
<td>No idol worship.</td>
<td>Idol worship</td>
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</tbody>
</table>

Art and Architecture

Sanchi Stupa

Even today Buddhism is followed in Ceylon, Burma, Tibet, China, Japan and Thailand. The kings who followed Buddhism – Ashoka, Kanishka and Harsha.
Do you Know?

- Our National Emblem (The figure of four lions) is taken from the capital of Ashoka Pillar.
- The Chakra in our National Flag which has 24 spokes is taken from the ‘Dharma Chakra’ of the Ashoka Pillar.
- Bihar is the place where there are many Buddha Viharas.
- Manimekalai and Kundalakesi are Buddhist literature. The books written by Jain monks.
- Sillapathikaram, Nannool (Grammar)
- Chivagachinthamani, Vallayapathi (Literature).
- Religious text: Angas and Purvas.

Historical Monuments

- The Jataka tales describes the history of Buddhism. The Jataka stories are depicted at Gaya, Sanchi and Burcut.
- Ajanta and Ellora Cave paintings which are in Aurangabad at Maharastra describe the fame of Buddha. Gandhara art also belongs to Buddhism.
- The prayer halls of the Buddhist monks are called Chaityas and their monasteries are called Viharas. They are of rock cut structures.

To know

Mahavamsam, a book of Sri Lanka says that Tripitakas was written during the reign of Vattakkamini Abayan. In Pali language it is called as Tripitakam which means three baskets.

Water cannot enter into a Properly constructed house; Evil thoughts cannot enter into the hearts of those who have good thoughts.

– Buddha.

Literature

- The Buddhist religious texts are called Tripitakas. They are Vinaya Pitaka, Sutta Pitaka and Abhidamma Pitaka.

Evaluation

1. Choose the correct answer.
   1. The one who laid strong foundation to Jainism
      a) Vardhamana Mahavira    b) Athinathan   c) Rishabdeva
   2. The principles stressed by Jainism
      a) idol worship    b) not to kill   c) untouchability
3. A place in Tamil Nadu where you can see Jain sculptures
   a) Girnar   b) Kazhugumalai   c) Hathigumba
4. The place where Buddha was enlightened
   a) Kundagrammam   b) Deer Park   c) Gaya
5. One of the most important kings who followed Buddhism
   a) Chandra Gupta   b) Ashoka   c) Bindusara

II. Fill in the blanks.
1. _______________ was known as Conqueror or Jina.
2. The principles stressed by Jainism are called _______________.
3. _______________ is the place where Gomatheswara statue is situated.
4. The principles of Buddha are called _______________.
5. The organization of the Buddhist monks is called _______________.
6. The Dharma Chakra in our National Flag is taken from the _______________ pillar.

III. State whether the following statements are True or False
1. Mysore is the place where Gomatheswara statue is situated.
2. The son of Buddha was Rahul.
3. The founder of Jainism was Buddha.
4. Mahavira was the 24th Thirthankara.
5. There are 24 spokes in the Ashoka Chakra.

IV. Match the following.
1. Tripitakam - worshipped Buddha as God
2. Hinayana - Buddha's first sermon
3. Sillapathigaram - who accepted Buddha's principles
4. Deer Park - Jain literature
5. Mahayana - religious text of Buddhist

V. Answer in five lines.
1. What are the causes for the rise of Jainism and Buddhism?
2. Describe the Triratnas insisted on by Jainism.
3. Write short notes on the contribution of Jains to Tamil literature.
4. Write the Four Noble Truths of Buddha.
5. Mention the Eight Fold Paths to overcome desire.

VI. Answer in detail.
1. Explain the distinctive features of Jainism.
2. Explain the ideas you like in Buddhism.
1. Which of the principles of Jainism and Buddhism do you like to follow? By following such principles what are the good changes that can happen? Think it over and explain.

2. Jainism and Buddhism which originated in India are now being followed only in the foreign countries. Examine the reasons.

3. Know the special features of Ajanta and Ellora or to visit a library and know these things through books.

4. On the outline map of India mark out the following places:
   i. Sravanabelagola
   ii. Vaishali
   iii. Mount Abu
   iv. Kabilavasthu
   v. Sanchi
   vi. Gaya
   vii. Ajanta and Ellora
GEOGRAPHY

3. Rotation and Revolution of the Earth

The Earth is always in motion. It has many movements. Rotation on its own axis and Revolution around the Sun are the two important movements of the earth.

Rotation

The Earth takes approximately 23 hours and 56 minutes for one rotation on its axis. This movement is called rotation. It causes day and night.

All parts of the Earth do not experience day and night at the same time. The part of the Earth's surface which faces the Sun experiences day. The part of the Earth's surface which does not face the Sun experiences night.

So when it is day time in India, America which is on the other side of the Earth experiences night.

Let us do

Take a ball and keep it on the floor of a dark room. Focus the light from a torch on one part of the ball in the dark room. What do you see?

The light of the torch is seen only on the front portion of the ball. The other side of the ball is dark because light does not fall on it. It is assumed that the torch is the Sun and the ball is the Earth.

Similarly the surface of the Earth that faces the Sun has day and the surface of the Earth which does not face the Sun has night.

In olden days, Sunrise is marked as the beginning of a day. At present a day begins at 12 midnight.

The Earth not only rotates on its axis but it also revolves around the Sun in an elliptical orbit.
The duration taken by the Earth to complete one revolution is called a year. A year consists of 365\(\frac{1}{4}\) days.

How many times in a year does the Earth rotate? Calculate, discuss and check the answer with your teacher.

The Earth’s axis is not a real axis drawn around the ground. Some imagine it to be real. It is only an imaginary line that connects the North Pole with the South Pole. Does this axis pass through the centre of the Earth or not? Debate it with your teacher and check your answer.

The Earth is inclined at an angle of 23½° from its vertical axis. This inclination causes seasonal changes. (see the picture)

What would happen if the Earth’s axis were not inclined at 23½° but were flat?

If the Earth’s axis were also flat then there would be six months of day and six months of night on earth for one revolution around the Sun.

This situation prevails in the Uranus, which can be seen in the picture above.

A wheel spins on its axis. This axis is the centre. Similarly when the Earth rotates, it rotates around the line that connects the North pole and the South pole. This imaginary line is called as its axis. Where is the Earth’s axis located? Think – Discuss with your classmate.

Do the experiment and enjoy: Select a place facing the East, where the Sun rises in the morning. Select the place that exactly faces the Sun and place a stone on the wall which faces the Sun. Keep new stones every day regularly in a straight line. You will notice that the point at which the Sun rises shifts daily towards the North east or South east.
Rotation and Revolution of the Earth

Leap Year
(A year with an extra day)

The Earth does not exactly take 365 days to complete one revolution around the Sun. It takes approximately 365 ¼ days to complete one revolution.

For the sake of convenience we consider only 365 days for one year. The remaining ¼ day is added as one whole day to every fourth year. When this is added to the fourth year that year has one extra day which is called as leap year. During a leap year the extra day is added to the month of February. So in a leap year the month of February has 29 days. i.e. Divide any given year by four. If you get a remainder it is not a leap year, if the remainder is zero then it is a leap year.

When we divide year 2000, the remainder is zero.

Thus 2000 A.D. was a leap year.

Revolution of the Earth

Day and Night are the systematic changes that take place everyday.

Similarly there are seasonal changes every year. The four seasons are Spring, Summer, Autumn, and Winter. Why do seasonal changes occur?

The path which the Earth takes to revolve around the Sun is elliptical in shape.

Hence at one position the Earth is close to the Sun and at another position it is far away from the Sun.

Generally during July the Earth is far away from the Sun. In January it is very close to the Sun.

If seasons are caused because of this, then it should be winter in July and summer in January.

During December Tamil Nadu which is in the northern hemisphere experience severe winter whereas Australia which is in the southern hemisphere has summer.

When we sweat out during April and May due to summer, Australia shivers with cold.

Therefore it is clear that the seasons are not the same everywhere on the earth. If it is summer in the northern hemisphere, it is winter in the southern hemisphere and if it is winter in northern hemisphere, it is summer in the southern hemisphere. Hence there is reversal of seasons. We cannot say that the seasons are caused by the earth's elliptical orbit.

Then why do seasonal changes occur?

Seasons are caused because the earth's axis is inclined. Let us do an experiment to illustrate this.

![Experiment with torch and paper to illustrate the effect of the earth's axis inclination on seasonal changes.](image-url)
Let us take a torch. Spread a sheet of paper on the floor. Hold the torch exactly on top of the paper and with the help of a red colour pencil draw how much of light it spreads on the paper. (diagram)

Now hold the torch at a slanting position over the paper. Even now light spreads on the paper. With the help of a blue colour pencil, mark how much light is spread on the paper.

The area covered by the light that spread on the paper when the torch was held straight was less and the area covered by the light that spread on the paper when the torch was slanting was more. Hence when light falls in a slanting position the area covered is more. You will notice that the brightness of the light that falls also varies. The light that spreads on the paper varies from point to point and becomes less.

The sunlight that falls on the North pole and South pole varies, because the axis of the earth is inclined.

When we are asked where does the Sun rise? immediately answer that the Sun rises in the east.

But the truth is that Sun does not exactly rise in the east everyday. In Tamil Nadu, during most of the days of the year the Sun rises either in the south east or north east.

On December 22nd the Sun which rises mostly in the south east, now starts moving towards the north. This is called Northern movement (Uthrayan). From then on the point at which the Sun rises moves towards the north east and on June 21st it reaches maximum of its point.

After this the points at which the Sun rises moves towards the south and this is called as Southern movement (Dakshinayan). Between these points, on two days the Sun rises exactly in the east.

On March 21st and Sep 23rd the duration of day and night is equal throughout the Earth - i.e. 12 hrs of day and 12hrs of night. Hence they are called equinoxes. March 21st is referred to as Spring equinox and Sep 23rd as Autumnal equinox.
The northern hemisphere is exposed to the Sun's light during the month of June, for six months, because the earth's axis is inclined.

After six months the southern hemisphere is exposed to the Sun's light during the month of December. The Sun is overhead at the northern hemisphere and is exposed to the Sunlight. Hence the northern hemisphere receives the direct rays of the Sun. It is summer in this region.

After six months when the southern hemisphere is exposed to the direct rays of the Sun, it is summer in the southern hemisphere.

Summer is usually associated with heat, brightness and longer days.

During this time Northern hemisphere receives the slanting rays of the Sun. Hence it is winter in the Northern hemisphere.

Winter is associated with cold weather early sunset, shorter days.

In December, India and England celebrate Christmas as a winter festival, whereas in Australia it is summer, so Christmas is celebrated as a summer festival in Australia.

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**Day and night at the poles**

**Picture 1**

You will notice in the picture that the northern hemisphere faces the Sun during the month of June. Also observe the day and night line. You have to understand that due to the earth's rotation day and night changes occur in the equatorial region but the North pole has continuous daylight. At the same time, notice that the southern pole has continuous night.

**Picture 2**

Look at the picture. When the South pole faces the Sun during December, the North pole is completely dark and the South pole has continuous daylight. The inclination of the Earth's axis not only causes seasonal changes but there is something amazing about it. At the poles there are six months of continuous daylight and six months of continuous darkness.

**Picture 3**

The Sunlight falls vertically on the earth's axis on March 21st and September 23rd. Hence on these two days, day and night is equal in both the hemispheres. The days are equal to the nights all over the Earth.
According to Tamil tradition there are six seasons, (for every two months there is one season) Ancient Tamil literature speaks about this. The six seasons are Khar, Kulir, Munpani, Pinpani, Ilavenil and Mudhuvenil. But according to the international standard, only four seasons have been recognized. The four seasons are summer, winter, autumn and spring.

What gets heated?

Take two black coloured papers and two thermometers. Fix the thermometer on the black coloured paper. Place one paper on the ground in a horizontal position and the other paper in a slanting position and make sure that the Sun is approximately overhead.

When the Sun is overhead the light falls vertically on the paper that is in a horizontal position. The paper that is in a slanting position receives the slanting rays of the Sun. Ensure that the shadow of the clouds and the students does not fall on both the papers.

The temperature increases in both the thermometers. After reaching a certain stage the temperature remains constant. It will take about ten minutes for this to happen. Then compare both the temperatures and find out which received more heat. Discuss and find out the relationship between this experiment and how the temperature changes according to seasons on earth. Summer is hot because the earth receives the direct rays of the Sun and winter is cold because the earth receives the slanting rays of the Sun.

Shadow game

Fix a pole in an upright position in a playground. Get the help of your teacher to do it. The pole will cast a shadow in the morning. Mark accurately the end of the shadow with a stone. Measure the distance of the shadow and make a note of the time.

Discuss in the class where the shadow will be and how long will it be after 30 minutes. With the help of a stone, mark the end of the shadow which each student indicates. After 30 minutes find out where actually the shadow will be and measure the length of the shadow.

The Sun is exactly overhead during midday. The shadow is the shortest during midday. Not only that, the shadow of the pole will face the north. The shadow is the longest during the morning and in the evening. Notice the direction of the movement of the shadow in the clockwise direction.
Let us draw an outline of an ellipse

Fix two nails on a board. Take a thin thread. Measure twice the distance between the two nails.

Make a knot by bringing the two ends of the thread together. Fix the thread on both the nails. Place a pencil somewhere at a point on the thread and pull it tightly. Draw a line by holding the pencil tightly. Now you will get an oval shape.

A circle has only one centre. But an ellipse has two convex centres other than the centre. The position of these two nails are the convex centres of the ellipse. We know that the Earth takes an elliptical path to revolve around the Sun.

The Sun is situated in one of the convex centres of the ellipse and not in the centre of the ellipse.

Evaluation

I. Choose the correct answer:

1. The earth is inclined at an angle of _____ degree.
   a) 23½  b) 66½  c) 90

2. Rotation results in ________________ .
   a) Seasonal changes  b) Day and night changes
   c) Northern and Southern movement

3. In a leap year February has _______ days.
   a) 28  b) 29  c) 27

II. Answer the following questions:

1. Why does day and night changes happen?

2. When it is summer in the northern hemisphere, why is it winter in the southern hemisphere?

3. Why do the poles have six months of day and six months of night?

III. Project:

1. Identify the leap years between 1999 and 2011.

2. What will be the outcome, if the Earth rotates in the same place?

3. Find out which days of the year have the longest duration of day and night.

4. With the help of a map or a globe find out what season will India experience when Australia has winter?
1. List the seasons and their months in Tamilnadu.

<table>
<thead>
<tr>
<th>Seasons</th>
<th>Months</th>
</tr>
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<tbody>
<tr>
<td>Summer</td>
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<tr>
<td>Winter</td>
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<tr>
<td>Spring</td>
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<tr>
<td>Rainy</td>
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</tbody>
</table>

2. Find out the time with the help of the shadow of your school or your house and compare it with clock time.

3. List the festivals of summer and winter seasons.

4. Complete the following tabulation.

<table>
<thead>
<tr>
<th>Seasons</th>
<th>Food</th>
<th>Dress</th>
<th>Precautionary Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer</td>
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<td>Rainy</td>
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<td>Winter</td>
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CIVICS

4. VILLAGES AND CITIES

India is a country consisting of a large number of villages. About 70 percent of Indian population live in rural areas. Occupations like agriculture and textile activities are the primary activities of the rural population. These people engaged themselves in these noble occupations which provide food and cloth for all. But the living conditions of the people are not improving. Ghandhiji mentioned that “Villages are the backbone of India”.

These days people prefer to migrate from villages to towns and cities. Those who migrate from the villages find it difficult to live in cities in initial stages.

Cities with large population are called Corporations. Some of them are Chennai, Madurai, Coimbatore, Trichy, Salem and Tirunelveli. Corporations have broad four-way roads, flyovers, skyscrapers, parks, private and public offices, industries, educational and technological institutions. Residential apartments are increasing in the suburban areas.

Villages are located more or less twenty five kms. away from the cities. These are called as suburban areas. The main occupation of the people living in these areas are agriculture, weaving, handicrafts, brick kiln and rice mills. They even engage themselves in fishing. Nowadays we find many differences between cities and suburban areas.

The basic requirements like food, clothing, shelter, education, medical facilities, transport facilities, employment opportunities and social security should be provided.

There are more employment opportunities available in cities. People working in Government offices and technical industries receive monthly income. Permanent employees, people who work in factories television and journalists also receive regular income. These people are able to satisfy their basic requirements easily.

But at the same time people living in villages are entirely different. Most of the people are agriculturists or farmers.

As agriculture is well developed, it provides job opportunities to agricultural labourers. In recent years the pastural lands have been reduced in size and cattle rearing has also decreased. Most of the agricultural activities are done by machines.
This was a death blow to agriculture. Therefore, agricultural labourers started migrating to towns and cities. People who have migrated from villages and towns are employed in construction industries and manufacturing industries.

**Difference between the life in villages and cities**

<table>
<thead>
<tr>
<th>Village life</th>
<th>City life</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fresh air and ventilated residential areas</td>
<td>Polluted environment and crowded residential areas</td>
</tr>
<tr>
<td>2. Dependent on each other</td>
<td>Independent life</td>
</tr>
<tr>
<td>3. Hereditary occupations</td>
<td>Changes according time to time</td>
</tr>
<tr>
<td>4. Simple and natural food</td>
<td>Fast food and expensive food varieties</td>
</tr>
<tr>
<td>5. Less transport facilities</td>
<td>Different modes of transport</td>
</tr>
<tr>
<td>6. Less medical facilities</td>
<td>Expensive modern medical facilities</td>
</tr>
<tr>
<td>7. Availability of Primary, Middle and High School Education. Less opportunities for higher education</td>
<td>Higher educational facilities are available in all fields</td>
</tr>
</tbody>
</table>

**Municipal Corporations of Tamilnadu:**
Chennai, Madurai, Coimbatore, Thiruchirapalli, Salem, Tirunelveli, Erode, Tirupur, Vellore, Tuticorin, Dindigul, Tanjore

Do you agree with the differences mentioned above? Form small groups and discuss. Prepare a list regarding the life in villages and cities.

The various government welfare schemes help to reduce the gap between villages and cities.

- To increase employment opportunities the government has introduced “Velai Urithiyalippu Thittam”.
- Medical insurance for the poor.
- Transport facilities in villages
- Each and every panchayat is provided with infrastructure.
- Fair price shops supply goods of good quality to the consumer at reasonable price. By adopting these methods, the government has made efforts to control migration of people from villages to cities.
The Government has introduced the scheme “Sarva Shiksha Abhiyan” (SSA) to enable all children in the age group of 6 to 14 years to attend school up to 8th standard. In order to help these students to continue their Secondary Education, the Government has also implemented the “Rashtriya Madyamik Shiksha Abhiyan” (RMSA). As a result of these programmes, the number of dropouts from schools has been reduced.

Evaluation

I. Fill in the blanks
   1. The main occupation of the people in the village is _________.
   2. Transport facilities are available in _________.
   3. Agricultural workers migrate from villages to _________.

II. Answer the following
   1. What are the basic requirements of man?
   2. Give reasons for the migration of agricultural workers to cities.
   3. How can corporations be identified?
   4. List the infrastructure facilities found in cities.
   5. Enumerate five differences between village life and city life.

III. Think and answer
   1. List the reasons for the differences between villages and cities.
   2. Give suggestions to remove the differences found in villages and cities.

FORMATIVE ASSESSMENT

1. List the employment opportunities of rural and urban areas.
2. Give your suggestions to improve the conditions of villages.
3. Give your suggestions to reduce the difficulties prevailed in towns.
4. Enact a drama to highlight the insufficiency of medical and transport facilities in villages.
5. Imagine and draw a picture of a village or town which you like.
In the previous lesson, we have learnt about the steps taken by the Government to minimize the differences found in villages and towns. In this lesson, we will learn ‘What is meant by Government?’

In the olden days, our country was ruled by kings and chieftains. Tamil Nadu was ruled by the Cheras, Cholas Pandyas, Kalabhras, Pallavas, Nayaks, and Marathas.

**Coming of Europeans**

The Europeans like the English, Portuguese, French and Dutch came to India for trade. In India there were frequent wars among the rulers. Taking advantage of this situation the English subdued the Indians and ruled over the country for more than two hundred years. During this period the Zamindari system emerged. Most of the land was under the control of the Zamindars.

**Freedom for India**

The Indians were eager to free themselves from the British rule. They did not want the British to rule over them. Indians wanted to have their own rule. At the same time they decided to remove the inequality in the society. The Indians joined together and revolted against the British rule. As a result of this India got independence on 15th August 1947.

In independent India, there was a discussion regarding the type of government to be formed. They were in favour of a democratic government. According to their desire, after independence a democratic government was established.

**Democracy - Definition**

It is a system of modern Government in which people rule themselves through their elected representatives. Indian adults above 18 years become eligible to vote. These people have enacted a constitution for them through their representatives. Now people are governed by constitutional law. Therefore India is called Republic.
Our Government

Only elected representatives of the Parliament and the Assembly can make decisions, frame laws and implement various plans.

Our representatives are elected through elections. Those who have completed the stipulated years of age are eligible to contest in the elections. There is no discrimination in caste, creed, religion, language, gender and economic status to contest in the election.

The Constitution assures Justice, Liberty, Equality and Fraternity. The Supreme Court is the guardian of our Constitution. People can approach the court with their grievances and get justice. All are equal before law. Those who are talented and interested can become lawyers or judges.

The District Collector receives orders from the State Government and implements them through his officers.

Departmental officers below the collector provide requirements of the people like drinking water electricity, food supply and transport. The administrative officers are in various stages at Taluk, Block and Village level.

The Collector along with the subordinate officers help in implementing the development programmes.

If we find any disparities in the basic services, we have to approach the officers concerned and mention our grievances. Every Monday is observed as 'Grievance day'. People residing in that area can approach the officers with their grievances. Apart from this once a month officer in the rank of District Collector or District Revenue officer conducts camp in remote villages. Those who do not have the facility to visit the District Collector's office can utilize this opportunity and approach the Collector directly and hand over their petitions. In the same camp all the grievances are solved by the Public Relationship Programmes. (Makkal Thodarbu Thittam).

Maintaining law and order is the duty of the District Collector while prevention of crimes is the duty of the Police department. The duties of the Defence force is to protect our country’s border from foreign invasion. At the time of natural calamities they help the Civil Administrators.

The executive head of the Indian Government is the Prime Minister. Each state is ruled by the Ministers under the leadership of the Chief Minister. Lok Sabha, Rajya Sabha and State Assembly representatives are elected according to the Indian Constitution.
India became Republic on 26th January 1950.

When we play cricket or football, we frame rules and regulations. In the same way, we have rules and regulations for our Government. This is known as “Constitution of our Nation”

Activity

1. Visit the camp organized by the Collector for 'Public Relationship Programme' and 'Grievance day'. Form small groups with the assistance of the teacher. Observe how the officers find solution to the problems and discuss in class.

2. Visit a police station, court near your village / city with your teacher. Observe how they function. Discuss with the officials there and gather information. Explain and discuss in classroom.

Evaluation

I. Fill in the blanks

1. The type of Government followed in our country is ________.
2. Law and order is maintained by ________.
3. Officer from the rank of Village Administrative Officer to the ________ participate in camps in remote villages once a month. This is called _____.

II. Answer the following

1. Who ruled our country during the ancient period?
2. Where and when do they observe 'Grievance day'? How do they find solutions?
3. Who are representatives? How are they elected?
1. Conduct a mock general election in the classroom.
2. Conduct student grievance redressal day once in a month and record its events.
3. Form the rules and regulations of your class room with help of your teach
4. Which of the following departments do you like to serve?
   i. Administration
   ii. Judiciary
   iii. Politics
   iv. Police
   v. Military
5. Write down the names of the persons who occupy the following positions.
   i. President
   ii. Vice President
   iii. Prime Minister
   iv. Chief Justice of Supreme Court
   v. Governor
   vi. Chief Minister
   vii. Chief Justice of High Court
   viii. District Collector
   ix. Member of Parliament
   x. Member of Legislative Assembly
"I can, I did"

Student's Activity Record

**Subject:**

<table>
<thead>
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<th>Sl.No</th>
<th>Date</th>
<th>Lesson No.</th>
<th>Topic of the Lesson</th>
<th>Activities</th>
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SOCIAL SCIENCE

STANDARD SIX

TERM III
1. RISE OF KINGDOMS

Mahajanapadas:

At the end of the Vedic period, the Janapadas fought among themselves for the new fertile lands and mineral wealth and for the same reason they tried to move towards the east. Because of this, they had clashes with the non-Aryans who came from the east and south of Indus valley. Ultimately, the small janapadas were either defeated or aligned themselves with the Mahajanapadas.

The term Mahajanapadas actually means "great kingdoms" and is derived from Sanskrit. Buddhist texts provide elaborate facts of this Mahajanapadas.

Many Janapadas joined to form the Mahajanapadas. They depended more on the types of lands than on the clans. There are sources to prove that during the period of Buddha there were 16 powerful Mahajanapadas in North India. Some of them were ruled by hereditary kings. The rest were ruled by elected kings. There were 18 groups together in the Vajjian confederacy which had Vaishali as their capital. Kosala, Avanti, Vatsa and Magadha were some of the powerful monarchies of this period. They fought with each other and other republics. Ultimately, Magadha defeated others and became the most powerful Mahajanapada. The area around Patna in Bihar is called Magadha. It's first capital was Siravasthi, The second capital was Rajgir and later Pataliputra became the capital.

Rise of Magadha:

Bimbisara - Ajatasatru

Bimbisara belonged to Haryanka Dynasty. He expanded the kingdom of Magadha by conquests and by marriage alliances. His son Ajatasatru imprisoned his father and succeeded the throne. He waged war for a long period against Kosala, Avanti, Vaishali and extended his empire. The fort of Pataliputra was laid by Ajatasatru.

Sisunaga – Mahapadma Nanda

After Ajatasatru the noteworthy ruler who maintained the greatness of Magadha was Sisunaga. He even defected the ruler of the Avanti. It was during his reign the second Buddhist Council was called at Vaisali in 387BC.

Sisunaga defeated the Haryanka Dynasty. The Nanda Dynasty who succeeded Sisunaga Dynasty spread
the rule of Magadha throughout north India. Mahapadmananda, the first Nanda king crossed the Vindhyas and annexed Deccan. He extended the Magadha Empire beyond Vindhyas to Deccan.

Though Sisunaga and Mahapadmananda, were Sudras they became the kings. It was a great change. The Nandas patronized Jainism. The Macedonian king Alexander came with his troops through the West of India. He had to return since he was aware of the Nanda warfare and his soldiers were tired of a long journey.

**MAURYAN EMPIRE**

**Chandragupta Maurya:**

Chandragupta of Mauryan Dynasty revolted against the last Nanda king Dhanananda, defeated him and took over the Magadha Dynasty (BC 324-299).

He invaded parts of West India which were annexed by the Greeks under the leadership of Alexander and extended the Mauryan Dynasty. He defeated the Greek General Seleucus Nikator and he annexed Afghanistan and Gandhara with his empire.

Megasthenese, the ambassador of Seleucus stayed at Pataliputra for many years and wrote about India in his book 'Indica'. The Jain religious text says that Chandragupta Maurya became a monk leaving his throne and went with the Jain monk, Bhadrabagu to south India. He ended his life by fast unto death as a devout follower of Jainism at Saravanabelagola.

In 2001, a stamp was issued on the historical ruler Chandragupta Maurya the most Colourful Personality of Indian History.

**Ashoka:**

Chandragupta was succeeded by his son Bindusara, who ruled for 25 years. He was succeeded by Ashoka, one of his sons (BC 273-236). He killed his brothers and came to the throne. After the eighth year, he waged a terrible war against Kalinga which was separated and annexed with the Mauryan empire. Ashoka was so upset and grief stricken at the sight of the war that he took a pledge that he would never wage war again.
Ashoka's Dharma Vijaya:

Ashoka declared that helping his subjects and leading them in the righteous way is the duty of a king. He spent the rest of his life, meeting people and helping them. He hated 'Dig Vijaya' (Conquest of the World). In order to spread Dharma, he undertook a journey which was called 'Dharma Vijaya'. He constructed inns and hospitals for everyone irrespective of caste and creed. Medical assistance was given to cattle. Sacrifices were banned. The laws were altered to humanitarian basis. Death sentence was reduced. He spread Dharma among people through rock edicts which were inscribed on regional languages. He appointed Dharmamahamatras to help the people. Ashoka was the first emperor who established the welfare state for people.

Ashoka's contribution to art and architecture:

Ashoka's stupas and pillars are considered to be the oldest only next to the monuments of the Indus Valley Civilization. Buddhist stupas at Sarnath and Lumbini are marvellous. The Ashoka's pillar cannot be compared with any other art. The structure of Ashoka's pillar, the bell shaped capital resembling an inverted lotus shows the influence of the Persian architecture.

Ashoka's Stone Edicts:

Ashoka's royal proclamations and messages are inscribed on the walls of the caves, stone pillars and rocks that are kept all through his empire. Most of them are written in Prakrit, Kharoshti in north western India, Greek in Afghanistan. These edicts depict Ashoka's humanitarian love and non-violence.

Ashoka and Buddhism:

Ashoka embraced Buddhism which insisted love, knowledge and discipline. Eventhough he was a Buddhist, he was kind to Brahmins and Agivagirs. He took maximum effort to spread Buddhism. He renovated and expanded the monuments at Kapilavastu, Saranath and Buddhagaya. He constructed hundreds of stupas and pillars. He organized the Third Buddhist Council at Pataliputra. In order to spread Buddhism, he sent Buddhist monks to different parts of his empire and also to foreign countries. He sent his son Mahendra and daughter Sanghamitra to spread Buddhism in Sri Lanka. Buddhism become a world religion by the efforts of Ashoka.
After the death of Ashoka, Kalinga regained independence. Later, the great KharaVela became the emperor of Kalinga. The inscription found in the elephant caves of Khandagiri and Udaigiri mountains near Bhubaneswar describes in detail the reign of Emperor KharaVela.

Mauryan Administration:

For the convenience of administration, the empire was divided into five provinces. Taxilla was the capital of North province, Ujjaini was the capital of West province, Swarnagiri was the capital of South province and Dosali was the capital of East province. The main province, Magadha was ruled by the king himself with Pataliputra as its capital.

A council of ministers and army chiefs were appointed to help the king in his administration. They were appointed without the discrimination of caste. The higher officials called Mahamatras were appointed as superintendents and governors of the big provinces. Princes were also appointed as Mahamatras.

There were other officers like Yuktas, Pradeshikas, Ambassadors and Spies. Those who protected the frontier were known as ‘Andamahamatras’. Dharmamahamatras looked after the moral life of the public.

There were local self government in the cities. Megasthenese described in his Indica that the administration of the city of Pataliputra was maintained by a set of 30 officers who belonged to 6 committees. Each committee had a specific duty. The strong army of Mauryas was administered by a set of 30 officers. Infantry, cavalry, elephants, chariots and navy were controlled by 5 committees. The sixth committee looked after the transport, food, medical facility and production of weapons for the army.
The judicial administration was very strict. Ashoka brought some changes on humanitarian grounds. Torture was banned. He introduced new methods to console the people who were given death sentence. The tenure of petty cases were reduced. Kings and ministers went on tours to solve the problems of the people.

Brihadratha, the last king of the Maurya Dynasty was assassinated by Pushyamitra. After this, the Magadha lost its power for more than 500 years.

Evaluation

I. Choose the correct answer
1. The one who built fort Pataliputra
   a. Ashoka       b. Bimbisara   c. Ajathasatru
2. The book written by Megasthenese
3. Ashoka ascended the throne in
   a. BC 232       b. BC 273      c. BC 255
4. The place where the Third Buddhist Council was held

II. True or false
1. Seleucus Nikator was the ambassador of Megasthenese.
2. Mahapadmananda was the first king of Nanda Dynasty.
3. Ashoka refused Dharma Vijaya and accepted Dig Vijaya.
4. Ashoka was the first one to establish a welfare state for people.
5. Mahendra spread Buddhism at Sri Lanka.

III. Answer the following
1. How did the Mahajanapadas establish themselves?
2. To whom does the credit go in establishing the first empire in India? Explain.
3. Ashoka was the one who established an empire for the welfare of the people. Why?
4. What are the causes for the change in Ashoka's life?
5. Explain the inscriptions used in the stone edicts of Ashoka.
6. Give a detailed account of Maurya's Administration.
1. The common people were much affected during the wars between kings of the older days. Enumerate how the people are affected today.

2. Visit a nearby stone edict and try to read the letters on it.

3. Draw a picture of Saranath pillar or Write the details you learnt from the picture of the pillar.

4. Draw the boundaries of Mauryan Empire during Ashoka's period and mark the following places in the given map.
   - Thatsaseelam
   - Indra prastham
   - Pataliputram
   - Saranath
   - Gaya
   - Kalingam
   - Girinagar
KUSHANA EMPIRE

The powerful empire which was established in India after the decline of the Mauryans were the Kushans. The Kushans were the people who belonged to the Yueh-chi tribe. During the 1st century AD Kadphises I established the kingdom of Kushana in the North west part of India. Kadphises II (AD 65-75) who succeeded Kadphises I conquered Punjab and Indus Valley.

Kanishka:

After the death of Kadphises II, Kanishka (AD 78-101) captured the throne. He was considered as the most powerful king of Kushans. He marched to Pataliputra and subdued Saka Satraps. He fought with the Chinese twice. He was defeated by the Chinese commander-in-chief, Panchao, in the first expedition. In the second war, he won and annexed Kashgar, Yarqand, Khotan and the parts of central Asia with his Empire. He created a new capital called Purushapuram. (Peshawar).

He was impressed by Buddhism. He organized the Fourth Buddhist Council at Kashmir. The famous Buddhist philosophers like Vasupandu, Ashvaghosa and Nagarjuna participated in the Fourth Buddhist Council.

The new division of Buddhism, Mahayana originated in this council. Groups of monks were sent to Tibet and China to spread Mahayana.

Ashvaghosha, who was the Mahayana Buddhist scholar, wrote large volumes of Sanskrit literature like Buddhacharita, Sutralankar. Vasumithra compiled Mahavibhasa. Nagarjuna wrote books on philosophy. Charaka, a famous physician and the great builder Ajilasim were in Kanishka's Empire.

The Gandhara art which combined the Indo-Greek style made new statues of Buddha and Bodhisatvas. Kanishka was called Asoka II because of the involvement and the steps he took for the spread of Buddhism. The year that Kanishka ascended the throne was the beginning of the Saka era. He met a violent death in his tent. The successors of Kanishka were weak and inefficient. Thus the Kushan Empire declined.
THE GUPTA EMPIRE

After the Kushans the next empire to arise in north India was that of the Guptas with Pataliputra as its capital. Chandragupta I was the first important king of the Gupta dynasty (AD319-335). The year of his coronation was considered as the beginning of the Gupta Era. The Allahabad inscription describes the conquests and the victories of Samudragupta (AD 335-375) who succeeded Chandragupta I. The Gupta empire extended from Bengal to Indus and the Himalayas to Vindhyas. The Allahabad inscription describes that he conquered 9 North Indian kings, 11 Republicans and 12 South Indian kings. The Allahabad pillar inscription was inscribed by his minister Harisena. After Samudra Gupta, Chandragupta II (AD 380 – 414) was considered as a famous king.

He defeated Sakas, the foreign invaders and captured Ujjain.

The epics like Ramayana, Mahabharatha, 18 Puranas and Panchathanthras were compiled during Gupta's period. They patronized Sanskrit scholars like Kalidasa, Pasar and Visagathatha. Sanskrit was the official language. They built small temples for Gods and Goddess like Vishnu, Shiva and Durga. The Ajanta cave paintings and sculptures belonged to the Gupta age.

The famous astrologer and mathematician, Aryabhatta, Varahamihira, the famous physicians Saragar, Susurudar and Dhanvantari belonged to the Gupta age. The iron pillar at Mehrauli which is 1500 years old is a specimen of the art of metallurgy that flourished during the Gupta age. Nalanda University was founded by Kumara Gupta. Caste system was worse. The sacrifices which were banned during the period of Ashoka revived. They worshipped Shiva, Sakthi, Vishnu, Kumaran (Murugan) and temples were built for Hindu Gods. The Chinese traveller Fahien visited the Buddhist pilgrim centres during the period of Chandragupta II (Vikramaditya)

Gupta period was considered the Golden Age. The Gupta empire declined because of the invasion of Pushyamithra and Huns.
HARSHA DYNASTY

Harshavardhana, the King of Thaneshwar created an empire in north India which was already defeated by the Huns after the downfall of the Guptas. (AD 606 – 647) Harsha fought for a long time with Sasanka, the one who killed his brother. In this war, the king of Kamarubha, (Assam) Bhaskararvarma helped him. After the death of Sasanka, he annexed most parts of the kingdom of Bengal. As per his sister's request, he became the king of Kanauj, which became his capital. He conquered Malwa, Sind and Orissa. He also tried to conquer south India which was a failure because Pulikesi II defeated Harsha.

Because of the influence of his sister and Hieun Tsang, the Chinese scholar, Harsha embraced Buddhism. He held religious councils at Kanauj and Prayag. In this, most of the Buddhist and other religious scholars participated. At the end of the council, he generously distributed all his wealth to the monks, scholars and public. The Nalanda University was the great seat of learning which came to limelight under Harsha’s patronage. It attracted not only Indians but also foreigners.

Harsha went on frequent tours to find out the problems and fulfil the needs of his subjects during his administration. He patronized art and architecture. His minister Bana was a Sanskrit scholar, who adorned his court. He wrote a book called Harsha Charitha.
Harsha, who was a great scholar wrote Nagananda, Ratnavali and Priyadarshika. The Chinese Buddhist monk Hieun Tsang visited India during his reign. He visited Kanauj, Prayag, Nalanda and Kanchipuram. He stayed in Harsha’s court for sometime. Si-Yu-Ki, a book on tours tells about Buddhism and about India of those days. Harsha's Empire was the last Empire in north India before the Islamic conquest.

Evaluation

I. Fill in the blanks

1. _________ established the Kushana Dynasty.

2. The book Buddha Charita was written by ________.

3. ________ was the physician of the Gupta period.

4. _______ was the king of Thaneshwar.

5. The period of Gupta was called the ________ of India.

II. State whether true or false

1. Peshawar was the capital of Kanishka.

2. Si-yu-ki was written by Hieun Tsang.

3. Ajilasim was the Greek architect.

4. Mehrual pillar belongs to the age of the Guptas.

5. Ashvaghosha wrote Sutralankar.

III. Match the following

1. Fourth Buddhist Council - established Kushan Empire

2. Samudra Gupta’s period - Kumara Gupta

3. Kanishka’s period - Kanishka

4. Bana - Yueh-Chi tribe

5. Harsha - AD 335 – AD 375

6. Kushan - AD 78 – AD 101

7. Ashoka II - Harshacharita

8. Nalanda University - Kashmir

9. Kadphises I - Priyadharshika
IV. Answer the following

1. Explain the background of Gandhara art.

2. Why Gupta's period is known as the 'Golden Age' of India?

3. Mention the foreign invaders who were responsible for the decline of Guptas.

4. Explain - Saka period and Gupta period.

5. Discuss about Fahien and Hieun Tsang.
1. Fill in the blanks.
2. Write the names of the books and authors that you have read in the library.

3. How was it possible for Hieun Tsang to come to India when there was no transport facilities during those days? Know such travel experience by when reading or listening.

4. What was the main interest of the kings?
   I. War
   II. Social service – discuss.
3. THE EARTH WE LIVE IN

Is there a mountain, a sea or a river in your place? Mountains, plateaus and plains are important landforms. High Landforms with peaks are called mountains.

A continuous stretch of mountains is called a mountain range. The highest mountain range in the world is the Himalayas.

Study the physical map of India and locate another mountain range.

Flat upland with steep slope is called a plateau. The plateau of Tibet is the highest plateau in the world.

With the help of your teacher locate the plateau in South India.

A relatively flat and low lying land surface a plain. The area where the River Ganges flows is one of the most important plains in the world.

Locate the plains in the banks of River Cauvery, River Tamiraparani and River Palar on a physical map.

Chennai, Madurai, Tirunelveli, Trichy, Ooty, Kodaikanal and Theni are parts of Tamil Nadu. Tamil Nadu is a part of India.

Find out the landform wherein Rameshwaram and Tiruchendur are situated?

With the help of your teacher find out whether your native place is located on a plateau or plain or on a mountainous region?

India is a part of the continent of Asia. Countries like India, China, Russia and Pakistan are situated in Asia. Countries like England, France and Germany are situated in the continent of Europe.

There are seven continents like Asia, Europe, North America, South America, Africa, Australia and Antarctica. Large land masses are called continents.

The seven continents:

1. Asia: It is the largest continent. It is situated in the northern hemisphere. Our Country, India is situated in Asia.

The cold Gobi desert and the Himalayan mountains are located in this continent.
2. Africa:
It is the second largest continent in the world. This continent is situated in both, the northern and southern hemisphere. The equator divides the continent into two equal halves.

River Nile, (6,695kms) the longest river in the world and the Sahara, the largest desert in the world, are found in this continent. This continent is rich in mineral resources and has dense forests.

3. North America:
This continent is surrounded by the Arctic ocean, Atlantic ocean and Pacific Ocean. The Rocky mountains situated along the west coast is a very long chain of mountains.

4. South America:
This continent lies almost entirely in the southern hemisphere. The Andes, the world’s longest mountain range and River Amazon, (6,586 kms) the world's largest river, is situated in this continent.

5. Europe:
This continent lies to the west of Asia. The Alps mountain range is situated in this continent.

6. Australia:
Australia is referred to as 'Island continent', because it is surrounded by oceans all the sides. It consists of many islands like New Zealand and Fiji. Fiji islands, Papua and New Guinea are called oceanic islands. The Great Barrier Reef, the world's largest coral reef is situated off the east coast of Australia.

7. Antarctica:
Antarctica is situated around the South Pole and is entirely covered with snow. It is a very cold place. Penguins, Seals and other living creatures live here.

Our Country has set up the Dakshin Gangotri (Not in function) and Maitri scientific research stations. Throughout the year Indian scientists conduct many experiments in this continent. Bharathi, the new scientific research station, has recently been established.

Island:
A piece of land surrounded by water on all sides is called an island. Sri Lanka is an island. A group of islands is called an archipelago.

Locate an island group belonging to India.
Oceans: 71% (two third) of the earth's surface is covered by water. A large stretch of water covering a huge area is called an Ocean. Just like the mountains, plains and plateaus are part of the Earth. Oceans are also a part of the earth.

There are five oceans on the Earth. They are the Pacific ocean, the Atlantic ocean, the Indian ocean, the Arctic ocean and the Southern ocean.

For our convenience oceans are divided into seas. The sea to the east of Tamil Nadu is called the Bay of Bengal and the sea to the west of Kerala is called Arabian sea.

1. Pacific Ocean:
    It is the deepest ocean in the world. The volcanic mountains surrounding the Pacific Ocean are called the Pacific Ring of Fire.

   The deepest Mariana Trench is located in the Pacific Ocean. This trench is so deep that even Mt. Everest is not enough to fill it.

2. Atlantic Ocean:
    It is the second largest ocean in the world. Hurricanes are very common in this ocean.

3. Indian Ocean:
    It is the third largest ocean in the world. India receives rainfall from the monsoons which originate in this ocean.

4. Antarctic (Southern) Ocean:
    The ocean surrounding the continent of Antarctica is called the Southern ocean or Antarctic Ocean.

5. Arctic Ocean:
    This is the smallest ocean in the world. It surrounds the North Pole. This ocean has many icebergs.

Land, Water, Air:-
    Apart from the seas, the rivers, lakes, ponds and tanks are the other water bodies. The peaks of the Himalayas, Arctic circle and Antarctic circle are covered with snow and not with water.

    The atmosphere is filled with water vapour, cloud and moisture. The water on earth is found in three forms namely solid, liquid and gas. Apart from land and water, air is present in the earth.

    Though we are always surrounded by air, we feel its presence only when there is wind and cyclones.
The solid portion of the earth on which we live is called the Lithosphere. Water covers a large area of the earth's surface and this area is called Hydrosphere. The gaseous layer that surrounds the earth is called Atmosphere.

Apart from water, land and air, the life that exists here is unique to this planet. Plants, animals and millions of micro organisms are found on the land surface.

Let us learn

The zone in which living organisms exist is called as Biosphere. Lithosphere, Hydrosphere and Atmosphere together forms Biosphere. Hence if any one of these is polluted, the living organisms are affected.

Trees, plants, creepers, worms, insects, birds, animals, micro organisms and other millions of living forms exist in the biosphere. The living organisms extend up to many kilometers in the atmosphere.

Apart from many kinds of fish, plankton which serves as food for the fish are also found in the ocean.

Living organisms are found at great depths were geysers are present. Worms and micro organisms are present deep in the soil. Many species of plants and animals are present on land.

Peninsula is a piece of land that is surrounded by water on three sides. India is a peninsula.

A strait is a narrow stretch of water that separates two large land masses.

For example the Palk strait between India and Sri Lanka.

A gulf is a hollow carved out in the sea coast which lets the water reach deep inland. A bay is an inlet of the sea with a wider opening than a gulf. Examples of these are the Bay of Bengal and the Persian Gulf. Which are the gulf countries? Why are they called so? Refer a world map.

An isthmus is a narrow strip of land separating two large water bodies. The Isthmus of Panama connects North America with South America.
Lithosphere, hydrosphere and atmosphere do not exist separately. They are interdependent and interact with each other. For example, sea water evaporates and forms water vapour. This mixes with the atmosphere. The surface of the Earth is heated by the sun’s rays, as a result of this air on the land surface gets heated.

This hot air rises upward towards the cooler atmosphere. Therefore changes take place in the atmosphere. As a result of this, air moves and causes winds and breeze.

Land, water and air together help the plants to grow.

Structure of the Earth:

When an apple is cut into two halves you can see the skin, flesh and seeds. Similarly what can you see if you cut the earth into two halves?

The core is in the semi-solid state. Nickel and iron is found in abundance in this layer. This is called as the inner core. Minerals are found in the molten stage around the core. Here the temperature is very high. It is approximately 6,000°C.

The core is surrounded by the Mantle. 85% of the Earth’s minerals are found here. The entire layer consists of rocks in the solid and semi-solid state. Like the skin of the apple, the Earth’s outer crust is a thin layer.

The continents and oceans are found in this layer. The thickness of the Earth’s crust below the oceans is 5-10 km. The thickness of the crust varies from 30 – 50 kms. on the continents.
Evaluation

I. Choose the correct answer

1. Land that is surrounded by water on all sides is called an _____.
   a) strait     b) island     c) peninsula

2. The world’s deepest Mariana trench is located in the _______ Ocean.
   a) Pacific     b) Atlantic     c) Arctic

3. India is a ____________.
   a) island     b) peninsula     c) strait

II. Answer the following questions

1. Distinguish between a plain and a plateau.

2. Define a peninsula. Give an example.

3. What is biosphere?

4. Name the five oceans.

5. Define: a) Strait   
   b) Isthmus

III. Map skill

1. Mark the continents and the oceans on a world map.

2. Mark a few peninsulas, bays, gulfs, straits, isthums and islands on a world map.
1. Write the name of the following using Atlas
   Islands _____________ _____________ _____________
   Peninsula _____________ _____________ _____________
   Gulf _____________ _____________ _____________
   Bay _____________ _____________ _____________
   Strait _____________ _____________ _____________

2. Prepare GK Questions and conduct a Quiz Competition in the class room.

3. Prepare a model of the globe using the coconut shell.
Exercise 2

Mark the following on the world map:

1. Strait
2. Peninsula
3. Island
4. Isthmus

Equator
4. MAPS AND GLOBE

What is the shape of the earth that we live on?

This question has interested the scientists throughout history from the earliest times. In the 6th century B.C, the Greek philosopher mathematician Pythagoras had said that the earth is round which was not accepted by many at that time. The Indian astronomer Aryabhata-I (476-550 A.D) had written in his treatise Aryabhatia that the earth was like a sphere and spinning on its axis. The fact that the earth is spherical was confirmed when the earth was viewed from outer space. According to the astronauts, the earth appears as a blue sphere with green and brown patches. On July 19, 2013 NASA’s Distant spacecraft “Cassini” had sent pictures of the earth and the moon as seen from the Saturn, which is nearly 800 billion km away. In the Cassini images Earth and the moon appear as mere dots. The earth a pale blue and the moon a stark white, are visible between Saturn's rings.

The earth is spherical but not exactly a sphere. It is slightly bulged at the equator and flattened at the poles. The shape of the earth is called an “Oblate Spheroid.”

MAPS

During earlier times maps were not required because the people lived in one place. Then people started to move from place to place, either in search of food or due to the change in seasons.

Later, merchants travelled from one country to another country for trade and commerce. People used maps to travel on correct route. Migration created the need for maps.

A map is a visual representation of an entire area or a part of it that is drawn on paper or cloth.

There are different types of maps static or dynamic, interactive, 2 dimensional or 3 dimensional. They may represent various things like physical features of a place, political boundaries, climate, natural resources, roadways and railway lines etc.

If you went to a new city and asked your friend for directions to a cinema hall, he may say, “It is just behind the jubilee bus stop, opposite to the railway station. To make it easier for you he may draw a route map from his house to the cinema theatre. This is a map in which you may not be able to infer the actual distance. This type of map is called as a “sketch map.”

An architect or a civil engineer will represent the building by means of a diagram on a paper before construction. This is called a “blue print” and is commonly called as the “plan” of the building.
For map making certain conventions are followed.

**Direction**

In a map **direction** is always indicated at the top right hand corner as shown in the figure given below.

To understand the directions in/to a place, an arrow indicating north (N) is marked on the map pointing towards the northern direction of that particular place.

How will you find out the North-south direction of a place i) during day time (ii) at night? Discuss.

**Scale**

**Scale** is indicated at the bottom of the map.

A scale is a relationship between a certain distance on a map and the actual distance on the ground. It is expressed as a ratio.

There are three ways of representing the scale.

1. Statement form
2. Representative fraction
3. Linear form or graphic scale

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**Let us do**

Draw a sketch map to show the route from your home to school.

**Sketch Map**
For example:

(i) It may also be shown as 1 cm = 1 km or 1 cm = 10 km.
(ii) If the scale on a map is shown as 1:1,00,000. It means 1 cm on the map is equal to 1,00,000 cm or 1 km on the ground. It means that if the distance between any two points on the map is equal to 1 cm, then the actual distance between the two places is equal to 1 km.

Conventional Signs and symbols

Can we draw on the map the mountains, forests, rivers, roads, bridges, buildings, railway lines and other land features of the Earth in the same size and shape?

We draw them with the help of certain symbols. The symbols are used within the map itself. The explanation for these symbols are given on the right or left corner of the map. It would be easy if the same symbols are used everywhere, hence standard, uniform Conventional symbols are used throughout the world.

### Conventional Signs and symbols

- **International boundaries**: • • •
- **State boundaries**: . . .
- **District boundaries**: — — —
- **Railway lines**: 
- **Railway station**: RS
- **River**: 
- **Well**: 
- **Temple**: 
- **Mosque**: 
- **Church**: 

### Classification of maps

All the objects and the information about the earth cannot be shown on the same map. Hence maps can be classified into three types.

1. Physical features like mountains, plateaus, rivers and oceans are drawn on a Physical map. eg. Refer the Physical map of India which is given.

2. Countries, states, districts, cities, villages and other boundaries are drawn on a Political map. eg. Refer the Political map of India and District map of Tamil Nadu which are given.

3. Maps that show temperature, forest, and minerals resources are drawn based on a theme, hence they are called Thematic map. eg. the Transport map of India and the Industrial map of Tamil Nadu which are given.

### Uses of maps

1. It is used to locate places.
2. It is used to locate resources that are found on the earth.
3. It helps the military to move its troops.
4. It helps in planning.
5. It helps us to know the movement of the satellite and planets in the sky.
6. It is used for teaching and learning in a class room.
INDIA - TRANSPORT

[Map of India showing transport routes and major cities such as Ahmedabad, Gulbargah, Delhi, Calcutta, etc.]

- Air Transport
- Water Transport
- Rail Transport
- International Airports

Pakistan

Arabian Sea

Aden - Mumbai

Singapore - Penang

Goa

Cochin

Trivandrum

Lakshadweep

Mangalore

Bangalore

Delhi

Jaipur

Agra

Lucknow

Patna

Calcutta

Chennai - Yangon

Port Blair

Bhuvaneswar

Raipur

Rourkela

Nagpur

Vishakapatnam

Warangal

Mumbai

Pune

Nasik

Nabarangapur

Goa

Guntakal

Cuddapah

Chennai - Yangon

Chennai - Port Blair

Bay of Bengal

Arabian Sea

Indian Ocean

IN PAKISTAN

Ahmedabad

Gulbargah

DELHI

SOCIAL SCIENCE
A globe is a three dimensional model of the earth. On its surface continents, oceans, islands and other landforms are marked. The latitudes and the longitudes are also marked. The globe spins on an axis and its axis is a metal stick which passes through its centre. The axis is kept inclined just like the earth’s axis at an angle of 23 ½ degrees.

It is the most accurate map of our world. All the countries are shown in true size relative to each other. You can see how far apart different cities are, and where they are located.

The Lines on the Earth

When we travel from one place to another we enquire what is the distance between the two places. We erect milestones on roads to show the distance (kilometre). We say that the place is 15 km towards the east.

Where is a mountain located on the earth? Where is a country located on the earth? At which point exactly is the ship that sails on the sea? How can we accurately calculate these distances?

To help us locate a place correctly imaginary lines are drawn on the surface of the earth. These imaginary lines are called latitudes and longitudes. Ptolemy the Greco-Roman mathematician, astronomer and a geographer was the first man to draw latitudes and longitudes on a map. Ptolemy’s world map is shown below.

Latitudes

Latitudes are imaginary lines that run horizontally from east to west on a globe or a map. Latitudes are marked by degrees numbered from 0° to 90° North and South.

The imaginary line that runs through the centre of the earth is called the Equator which is at 0° degree latitude. It divides our planet into the northern and southern hemispheres. The earth’s surface to the north of the equator is called the Northern Hemisphere and the surface to the south of the equator is called the Southern Hemisphere. 90° north is the North Pole and 90° south is the South Pole. And we write it as 90° N and 90° S.
Longitudes

Longitudes are imaginary lines that run vertically from the North Pole to the South Pole.

The lines of longitude are also known as meridians. They converge at the poles and are widest at the equator (about 69 miles or 111 km apart). A space observatory is located at Greenwich in London. The longitude that passes through Greenwich is called the Greenwich meridian (or prime meridian) and it is considered as 0° longitude. The degrees continue 180° east and 180° west where they meet and form the International Date Line in the Pacific Ocean.

1° latitude/longitude is equal to 111 km.

To specify latitude we need to say how many degrees it is away from the equator and in which direction north or south. For example 10° N latitude is the 10° line north of the equator and 10° S is the 10° line to the south of the equator.

Similarly 10° E and 10° W represent the longitudes to the east and west of the Greenwich meridian respectively.

A particular place is located with the help of the latitude and longitude. The location of Chennai is given as 13° 04' N, 80° 17' E. It means it is at the intersection of the latitude 13 degrees 4 min to the north of the equator and the longitude 80 degrees 17 minutes to the east of the prime meridian.

India is located between 8° 4' N to 37° 6' N latitude and 68° 7' E to 97° 25' E longitude.

Let us do:

With the help of a globe or a map find out the latitudinal and longitudinal extent of few countries and islands.
Maps and Globe

Evaluation

I. Choose the correct answer

1. The imaginary lines that are drawn from the east to the west on the earth is called ______.
   a) Latitude
   b) Earth’s axis
   c) Longitude

2. $0^\circ$ Longitude is called as the ______
   a) Greenwich Meridian
   b) Latitude
   c) Earth’s axis

3. Map that shows the continents, countries, capitals is called as ______ map.
   a) Physical
   b) Political
   c) Thematic

II. Answer the following questions

   1. What are the different types of maps?
   2. What are the uses of maps?
   3. Define latitude.
   4. Define longitude.
   5. Explain about thematic map?

III. Map skill

   1. Look at any physical, political and thematic map with the help of your teacher and answer the following questions:
      a) What is the scale of the map?
      b) What is the information given?
      c) Tabulate the explanation given about conventional signs and symbols.

   2. On a political map of India mark the states and its capitals.
1. Draw the map of your street/area using conventional symbols.
2. Observe the map drawn by Ptolemy and discuss.
3. Visualize a tour
   What are the places do you want to visit in the world and what kind of transport will you use to go there?
   Teacher: where do you want to go?
   Student: Antarctica
   Teacher: what kind of transport will you use to go there?
   Student: Ship

If he sails in a ship the students will act and touch Antarctica in the wall hanging map. Countries, islands, cities, like places are introduced to students by this play way method.
Excercise

India - Political

Mark the states and its capitals on the map of India.
Our Country, India consists of a large landmass. It is densely populated. The people live in villages, towns and cities. India is a vast country with a large population therefore the Central and the State Government alone cannot provide the necessary requirements and solve the problems.

The Local Self-Government is formed in India to serve every nook and corner of the country. In this lesson we will learn about Local Self-Government.

Activity

What is the name of your village? How did your village get its name? What is its meaning and reason for it? Find out from your grandparents and elders of the village.

The speciality of Tamil Nadu is the fascinating and meaningful names of villages. Some of the names of places are mentioned in History.

'Gangaikondacholapuram'  
'Malaiyadikuruchi' 
'Cheranmadevi' 
'Sandropalayam' 
'Eapothumvendran' 
'Nallan pillai pettral', 
'Paal varthu vendran' 
'Thiruchitrambalam' 
'Malaiyandipattanam'

'Pan pozhil' – These are some of the names of the villages in Tamil Nadu. Find out how these places got their names with the help of your teacher. Form small groups and collect information.

You would have seen a Panchayat Union Office in your village. The names of the Panchayat President, Vice President and the Ward members are written on the same board.

In the same way the Panchayat union, Town Panchayat, District Panchayat, Municipality and Corporation also have members.

This system is called as 'Local Administration'. 'Lord Ripon' introduced Local Self-Government in India. Local Self-Government was in existence even before independence.

Village Panchayat:

The local body of the village is known as Village Panchayat. It’s President, Ward Members and Councillors are elected by people directly through election. The vice President is elected by ward members among themselves. They remain in office for five years.

The functions of the Village Panchayat:
- Laying village roads
- Drinking water supply
- Laying drainage system
• Maintaining street lights
• Construction of small bridges
• Sanctioning the construction of houses
• Maintaining village libraries
• Construction of group houses
• Maintaining and establishing recreation centres and playgrounds.

Village Council:

There is a Village Council in every village. Those who reside within the limits of the Panchayat are its members. The village development programmes and annual budget plans can be implemented only after the beneficiaries of the programmes get approval from the Village Council.

To whom would you complain to solve the following problems:

Street lights that are not in working condition, damaged roads, non-availability of drinking water, block in the drainage.

To solve the above mentioned problems we need funds. Who will provide these funds? We, the people give it in the form of house tax, professional tax, property tax etc. and with that tax the above mentioned works are done.

Revenue:

• House tax, professional tax, tax from shops.
• Fee for drinking water connection and water tax.
• A share of the land revenue.
• One part of the share from the land registration fee, are utilized for the development of villages.

Since this is not sufficient, the Central and State Governments provide financial assistance in the form of funds, subsidiaries and grants through the District Rural Development Authority.

Activity

Have you ever seen the Village Council in progress? Witness with your parents. Collect information regarding the functioning of the Village Council.

The Village Council meets four times a year:

January 26th  - Republic day
May 1st  - Labour day
August 15th  - Independence day
October 2nd  - Mahatma Gandhi’s birthday

These four days are public holidays. It is convenient to conduct the Village Council on these days. The Village Councils can be conducted on other days apart from these specified days. Special councils are conducted to get permission in times of emergency or special programmes.

Know about tax from one of the members working in the Panchayat.
Panchayat Union:

The Panchayat Union consists of several village panchayats.

Through elections they elect the panchayat union members in the ratio of 1:5,000. Among them one will be selected as the Panchayat Union Chairperson.

Functions of the Panchayat Union:

- Maintenance of the Panchayat Union roads
- Providing drinking water
- Establishment of primary health centres
- Maintenance of primary school buildings
- Monitoring maternity homes
- Establishing village markets
- Distributing agricultural implements and fertilizers
- Developing and extending social forests.
- Establishing veterinary dispensaries.

Activity:

With the help of your teacher interview the Chairman of the Panchayat Union. Note down their duties and future plans. Discuss with your teachers in classroom.

The Panchayat Unions are supervised by the District Rural Development Agencies which are under the control of the district administration. All the plans are implemented with the help of the District Collector, Programme Officer and the Block Development Officers.

District Panchayat:

Each district is provided with a District Panchayat. The members of the District Panchayat are elected by the people through elections in the ratio of 1:50,000. These members elect one member among them as the District Panchayat President. They remain in office for five years.

Functions of the District Panchayat:

The important functions of the District Panchayat involve giving suggestions to the Government regarding the development work and the improvement of roads and transport carried out by the Village Panchayats and the Panchayat Unions within the district. It also supervises the various development work carried out in the district.

Activity:

Form small groups and collect the names of the Panchayat Unions and Municipalities. List them.
Let us learn:

District Planning Committee:

The District Panchayat President also acts as the President of the District Planning Committee. The important functions of the committee is to draft a Development Plan for the whole district. The Draft plan is submitted to the State Planning Commission. The elected representatives of the local bodies elect the members of the District Planning Committee. The members of the Legislative Assembly and also the members of the Parliament of India belonging to each district are included as members of this committee.

Town Panchayat:

Villages which have a population of more than 10,000 are upgraded into Town Panchayats. Through elections they directly elect the President and representatives. The Executive Officer supervises the administration of the Town Panchayats.

Municipality:

An area which has a population of more than one lakh is termed as a Municipality. The people directly elect their Chairperson and the Ward representatives through elections. They hold office for a period of five years. The administrative officer is the Municipal Commissioner.

Corporation:

A city which has a large population, big infrastructure and important government offices is called as a Corporation. The chairperson of the Corporation is called the ‘Mayor’. The Mayor holds office for a period of five years. The Administrative officer of the Corporation is the Commissioner.
Evaluation

I. Choose the correct answer

1. Local self government was introduced by __________ .
   a. Lord Ripon
   b. Gandhiji
   c. Indira Gandhi

2. Panchayat Union Chairperson is elected by ________ .
   a. Ward members
   b. People
   c. Union President

II. Fill in the blanks

1. The term of office for the Mayor is ________ years.
2. Every district has a ________ panchayat.

III. Answer the following

1. Why is Local self-government necessary?
2. What are the duties of the Village Council? How many times in a year and when does the Village Council meet?
3. List out the important functions of the village Panchayat.
4. How does the Village Council get its revenue?
5. How is the Panchayat Union formed?
1. Frame questions to interview the Panchayat union chairman.
2. Write a drama highlighting the activities that take place during an election.
3. Prepare a model application to be presented when you meet the Panchayat union chairman for redressal of the local grievances.
4. What are the committees needed to be formed to have effective administration of a school?
5. Prepare a mind map of your Panchayat union.
6. DEMOCRACY, HUMAN RESOURCES AND WOMEN EMPOWERMENT

Representatives are elected by the citizens of our Country. This is called Democracy. The Government governed by the people is called as Democratic Republic.

Citizens enjoy equal rights in a Republic. Those who complete the age of eighteen are eligible to vote.

The citizens in our country enjoy equal opportunities. Women who constitute half of the Indian population have been denied these opportunities and have been left behind. This can weaken the democratic set up of our country. If equal opportunities are given to women, their participation will surely help to strengthen the democracy.

Disparities in the society emerge through various means. These disparities that have emerged are by birth, high class and low class, untouchability, rich and poor, employer and employee, master and servant, educated and uneducated, landlord and peasant.

The people have missed out many opportunities to lead a better life due to the prevailing disparities in the society. By providing them with the opportunities which they had missed, they have been enabled to lead a complete life. Thus these disparities can be eradicated and equality can be established in the society. Thereby 'social justice' prevails.

By nature we find a division in gender – male and female. For many years people have blindly believed that men are superior and women are inferior. This blind belief is a hindrance for the development of human resource in the society.

Because of the characteristic features of women we cannot say that women are inferior in knowledge to men. In general men are physically strong and women are mentally strong. Physical and mental strength differs from person to person. This difference is not due to gender. It is due to the hereditary practices. Men get the opportunity to be educated, receive salary for their work and right to property. Due to this misconception that prevailed in the society, men have been given the opportunity to rule and obtain high government posts.

Women were made to stay at home because of child birth, take care of the children as well as the family. From the earlier days there has been misconception that men were suitable to run errands and do physical labour.

Women always depend on male companions like father, husband, brother and son to lead life.
Many concepts have been in practice for generations. The same concept prevails in the minds of the students in the society.

We know the ability and capability of women through their work from early times.

- Managing the house and cooking
- Rearing and maintaining cattle
- Weaving mats, basket making and making thatched roofs out of dry coconut leaves
- Medical or health workers, sanitary workers, prevention of diseases, home remedies
- Maternity, child care, helping children to grow
- House gardening, vegetables, fruits, flowers, roots, production and sale of milk
- Economic budget, maintaining relationships with relatives
- Agricultural labour, gathering and storing grains

Through the ages they have been engaged in intellectual, technological excellence and have been laborious with patience. Because of the educational development women have engaged themselves as teachers, nurses, typists, stenographers and police. Mostly women are doctors, engineers, lecturers, advocates, judges, press reporters and work in the field of cinema. Some are government employees, car drivers, bus drivers, lorry drivers, pilots and travel by space rockets. They also do research work. Some are bank managers, collectors and police commissioners.

In these ways women engage themselves in various occupations. Is it right to say that only these occupations can be done by women? Many women become modern women as envisioned by the great poet Subramania Bharathiyar.
These are the famous lines sung by our great national poet, Subramania Bharathiyar. These lines depict that in all fields women are not in anyway inferior to men.

**A noble woman-**
**Dr. Muthulakshmi**

A multifaceted personality, Dr. Muthulakshmi was one of the outstanding Indian women of her time.

She was born on 30th July 1886 in the princely state of Pudukkottai. She was an outstanding student. A crop which is about to yield bumper harvest can be identified at the seedling stage. Likewise her versatile talents were visible even when she was a child.

According to the custom of her community she was not allowed to attend school. So she was tutored at home and she passed her examination from home. She was the first woman to study in the men's college in Pudukkottai. By nature she was just and compassionate. She was interested in human welfare and was a woman of exemplary character.

She was the first Indian woman to obtain a medical degree from Madras Medical College in 1912. She was nominated to the Madras legislative as a member of the Legislative Council and became the first woman member during the British rule. She was elected as the Deputy Chairperson of the Legislative Council. She fought for the rights of women. Like men, women should also be given the right to property and to vote.

She was the first woman President of the All India Women's Association and the first woman to be elected as Alder-woman of the Madras (now Chennai) Corporation. She respected the Indian freedom fighters. Therefore she was familiar with the poet Subramania Bharathiyar.

She was concerned with the plight of women as they were suppressed for many generations.

She wanted to wipe the tears of the women. She fought for the betterment of women, right to women's education, equal rights for women, emancipation of women and protection of the girl child.
She took interest in cancer studies and pursued it at the Royal Cancer Hospital in London for the benefit of the women cancer patients. She was instrumental in starting the Cancer Institute in Adyar, Chennai. The Institute stands as a testimony of her fame and name.

With the help of the government aid for the orphan children, widows and destitute women she established a home at Tambaram.

The social evil of child marriage prevailed throughout the country. She rose in revolt against child marriage and the government passed a Bill.

In earlier days it was a custom to dedicate girls to the deity to be of service in the temple under the ‘Devadasi’ system. Thousands of women’s lives were destroyed throughout the country because of this.

In those days it was believed that to become a devadasi, is a way of offering oneself to the service of God. But this was a social sin inflicted on women folk. Dr. Muthulakshmi fought against this social evil and took measures to eradicate this by suitable enactments. Many conservative rationalists and religious fanatics opposed the amendment of the bill.

Dr. Muthulakshmi with the help and guidance of E.V.R. Periyar, leader of the Self-Respect movement strived to eradicate the devadasi system. A bill was passed in the Legislature.

In those days E.V.R. Periyar, Tamil Thendral, Thiru.Vi.Ka and Moovalur Ramamirtham Ammaiayar supported the bill. They explained about its importance and got the support of the public. This shows the social life of the people.

Dr. Muthulakshmi has worked for various social causes. She started orphanages. She opened free dispensaries for the slum dwellers. With the help of many institutions, she helped the downtrodden. In 1930 she founded the Avvai Home at Adyar for the benefit of destitute women.

She introduced a free education scheme for girls up to class eight.

Dr. Muthulakshmi was a pioneering social reformer. She was awarded the Padma Bhushan in 1956 for her meritorious service. She dedicated her life for the upliftment of women.

In order to highlight Dr. Muthulakshmi’s service to the society, the Tamil Nadu Government has implemented a welfare scheme namely Dr. Muthulakshmi Maternity Stipendary Scheme. Under the scheme, the mothers are provided with financial assistance to get a nutritious diet for three prenatal care months and three postnatal care months.
Evaluation

I. Choose the correct answer

1. In a Republic, citizens
   a. have equal investments
   b. own equal property
   c. have equal rights

2. The first Indian woman doctor
   a. Muthulakshmi Ammaiayar
   b. Vijayalakshmi Pandit
   c. Kalpana Chawla

3. Avvai home
   a. home for the destitute women.
   b. orphanage for girls.
   c. home for the unemployed women.

II. Fill in the blanks

1. ____________ creates an equal society.
2. Age at which men and women can vote is ____________.
3. Dr. Muthulakshmi was awarded ________ in 1956 for her meritorious service.
III. Match the following

1. To eradicate the inequality in the society – beliefs passed through the generation.
2. Men alone are suitable for all positions – it proclaims the fame of Dr. Muthulakshmi.
3. Women depend on male companions – wrong attitude.
4. To stop the custom of child marriage – social justice.

IV. Answer the following

1. What is the hindrance for human resource development?
2. Mention eight services where women require mental and physical abilities.
3. Mention the scheme introduced in Tamil Nadu for the welfare of the mother and child.
4. Mention the first achievement of Dr. Muthulakshmi in India.
5. Name the award awarded by the Central Government to Dr. Muthulakshmi.
6. How does the society deny women, their rights?
1. Visit a library and read books of following leaders.
   a. E.V. Ramasamy (Periyar)
   b. Madam Moovalur Ramamirtham
2. Among the ladies you know, whom do you think as achiever in life? why?
3. List the prestigious awards of Government of India.
4. Convene a debate on the topic “Did the women obtain equal rights or not?”
5. Fill in the bio data of Dr. Muthulakshmi
   a. Name
   b. Date of Birth
   c. Place of Birth
   d. Name of the institutions where she studied
   e. Name of the posts she held
   f. Name of the hospital she established
   g. Name of the Award / year of the award
   h. The best service rendered by Dr. Muthulakshmi
'I can, I did'

Student's Activity Record

Subject:

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