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6
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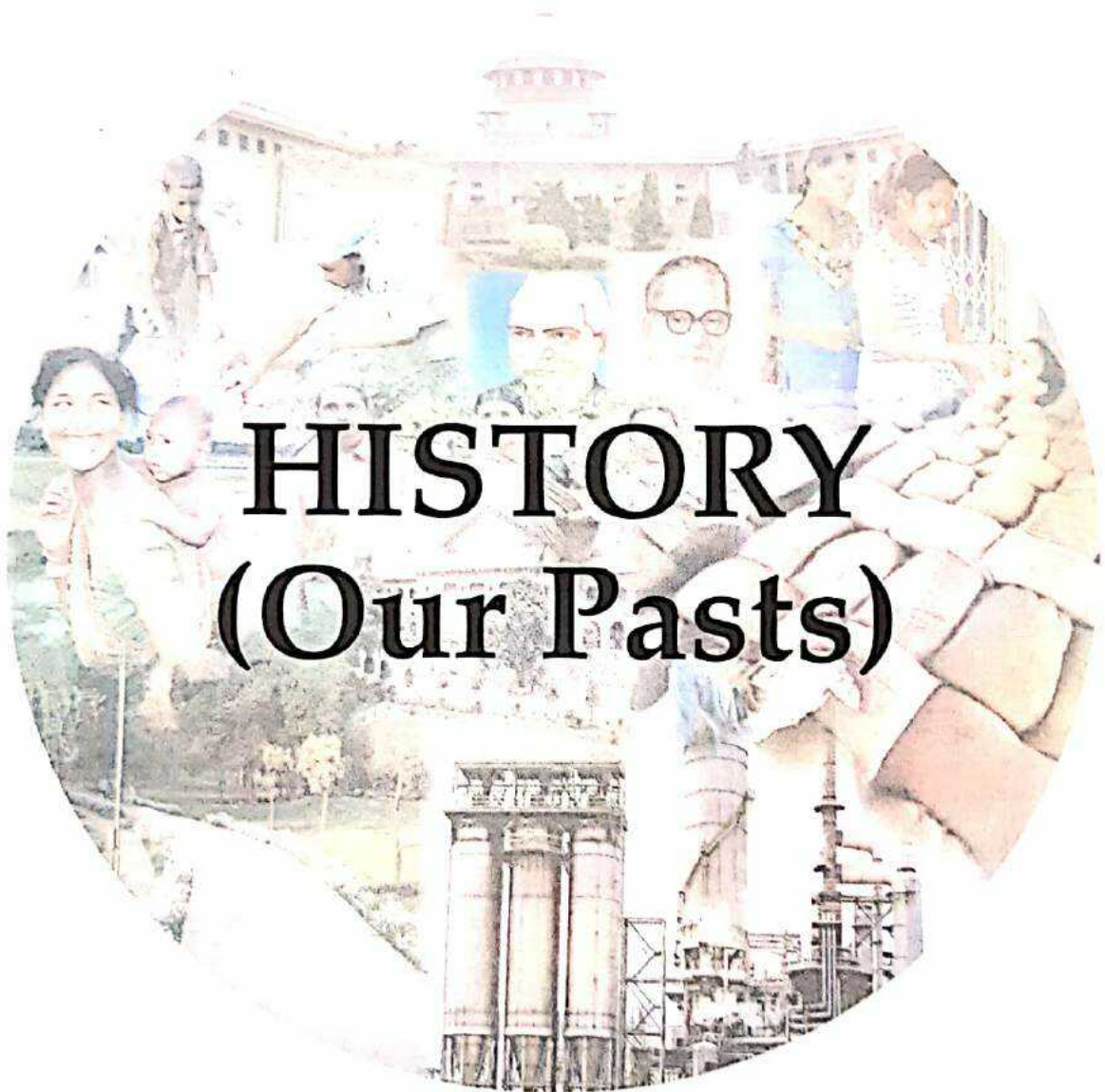
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PART-I



HISTORY (Our Pasts)



An Approach Towards The Past



Key Terms

accounts	: written reports or descriptions of some occurrence or events	history	: the period for which written records are available
archaeology	: the science of exploring and digging the remains of the past	inscriptions	: written records engraved on stone tablets or any other hard surface that provide us important information about the kings and queens
archaeologist	: a person who studies archaeology	prehistory	: the period in history before the invention of writing
artefacts	: objects of different kinds made by humans in the past	secular	: not related to religion
bhojpatra	: dried bark of bhoj tree used for writing in the past	travellers' accounts	: books written by foreign travellers who visited India
historians	: people who describe the past		

Use Cordova Smart Class Software on the smart board in class to make learning enjoyable.

Knowledge that is gained from the study of past is called **History**. It teaches us great lessons. It guides us what to do and what not to do. History also informs us about our rich past, how people lived, what they ate, what they wore and what types of houses they built. We know that the present cannot be understood without understanding our past. **The people who describe the past are known as historians.**

IMPORTANCE OF HISTORY

The study of history is important in many ways:

- We come to know about kingdoms, dynasties, kings and leaders by studying history. It also deals with the lives and activities of ordinary people who have shaped the pages of history.
- The knowledge gained from the study of history is important to understand both the past and the present. Whatever is happening today will be history tomorrow. Each one of us is adding something big or small to our history, our family's history and our country's history.
- History guides people to set goals and tells them not to make the same mistakes.

- We understand the continuous development of human beings by studying history. It includes the study of literature, religion, art and architecture.
- We can easily understand the basic nature of our society by studying history. We study why people behaved the way they did, how and why they fought or co-operated or built forts.

Wonderful To Know

Herodotus was a Greek historian who was born in Halicarnassus, Caria (present-day Bodrum, Turkey) and lived in the fifth century BCE (circa 484 – 425 BCE). He is known as the Father of History. He gave the term 'history'.

The word 'history' comes from the Greek word 'historia' which means 'knowing or learning by inquiry'.



DIVISION OF THE PAST

The past has been divided by historians into two periods – prehistory and history.

Prehistory : It is the period of human development when writing had not been invented and human beings did not know how to read and write. Hence, there are no written records for this period.

We can know prehistory only through archaeology. To understand prehistory, archaeologists dig deep into the ground and collect remains of the past. These archaeological remains like tools, coins, bones, pots and jewellery help us to know about the past.

History: It is the period for which written records are available. This covers the time period after the invention of writing. Early writing was done on the barks of birch trees, clay tablets, palm leaves, copper plates and rock pillars.

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

- The knowledge gained from the study of history is important to understand the
 - present ☐
 - past ☐
 - both (a) and (b) ☐
- History has been divided into
 - prehistory and history ☐
 - history and chemistry ☐
 - none of these ☐

Sources Of History

The difficult question now is how we can know about something that took place thousands of years ago.

A very simple answer to this difficult question is that we learn about the past from the remains which people of that period have left behind. By studying these remains, archaeologists and historians tell us what might have happened in the past.

SOURCES OF HISTORY

ARCHAEOLOGICAL (non-written)

- artefacts
- monuments
- coins, inscriptions

LITERARY (written)

- religious literature
- secular literature

Sources of history are divided into two broad groups:

1. Archaeological Sources
2. Literary Sources

Archaeological Sources

Archaeological sources are 'direct' evidences. They have a significant effect on the writing of history.

They cannot be changed or altered by human beings. They are physical evidences that are available.

Artefacts : The objects of different kinds made by humans in the past are called artefacts, for example, things like metal objects, pottery, tools, ornaments, jewellery, weapons and sculptures. They give us important clues and help us in understanding the cultural life of the past.

The objects found at Harappa and Mohenjodaro throw light on the developmental aspect of that age. Harappa and Mohenjodaro are 4,000 years old cities along the banks of River Indus.

Monuments : Old buildings, ruins of old buildings, temples, stupas, mosques, tombs, caves, palaces and old settlements which are historically important and provide important information of our past heritage are called monuments.



A Stupa – An Archaeological Source

The archaeological excavations at Harappa and Mohenjodaro, Kot Diji, Ropar, Mehrgarh and several other sites have proved that a planned civilisation existed in the Indus Valley 5,000 years ago. The ruins of Nalanda in Bihar reveal the ancient system of education.

Coins : Coins are valuable sources of information. These coins are made of gold, silver, copper and other metals.



Punch-Marked Coin



Mohur of Akbar



Indo-Greek Coin

Indian Coins

They tell us about the economy of the kingdom, the periods of rulers and trade activities with other regions.

Inscriptions : Inscriptions are written records engraved on rocks, metal pillars, copper plates, cave walls, walls of temples and palaces and on clay tablets.

Inscriptions provide us important information about events, rulings and declarations of ancient rulers.



Inscription

Inscriptions also deal with the administration and the personal qualities of the kings. They also provide us with important dates of coronation, specimen of art and relation with neighbouring and distant rulers.

Literary Sources

Whatever our ancestors wrote is an evidence in the form of written records. These are literary sources. In the beginning, when paper was not invented, people of that period used to write on *bhojpatra*, the dried bark of trees.

They also wrote on solid rock stone, copper plates, rock pillars and tablets.

It is from these records our history is made, as we know it today. **Handwritten records of the past, in the form of books, are called manuscripts.** These accounts of contemporary events help us in knowing our past and provide us information about customs, religious beliefs and cultures of people.

Wonderful To Know

Some scientific techniques used to date things found in excavations.

- Radiocarbon (Carbon 14)–This technique is used to date organic matters (eg. bones).
- Thermoluminescence Dating – This technique is used to date pottery.

Literary sources maybe divided into two types:

Religious Literature: Writing that deals with religion is called religious literature. The *Vedas*, the *Aranyakas*, the *Brahmanas*, the *Upanishads*, *Tripitaka*, *Dipvamsa*, *Mahavamsa* and *Jataka* are all religious books of the sub-continent. These give us important information about ancient India.

Secular Literature: Writings which are not religious are known as secular literature. These include the **historical accounts** and **biographies** written by poets and foreign travellers. They were written to record happenings, events, administrative set up, rules and declarations by the kings.

The *Arthashastra* written by Kautilya, on how to run the government, gives us information about the Mauryan administration and contemporary society. **Travellers' accounts** are also included in secular literature. A number of foreign travellers, who visited India from time to time left very important social and political accounts of the country in their travelogues. Megasthenes lived in India for some time as the Greek ambassador at the court of Chandragupta Maurya. He wrote the *Indika*.

Wonderful To Know

Epigraphy is the study of inscriptions or epigraphs as writing. It is the science of identifying scripts, clarifying their meanings, classifying their uses according to date and cultural context. A person using the method of epigraphy is called an epigrapher or epigraphist.

Multiple Choice Questions (Quick Revision)

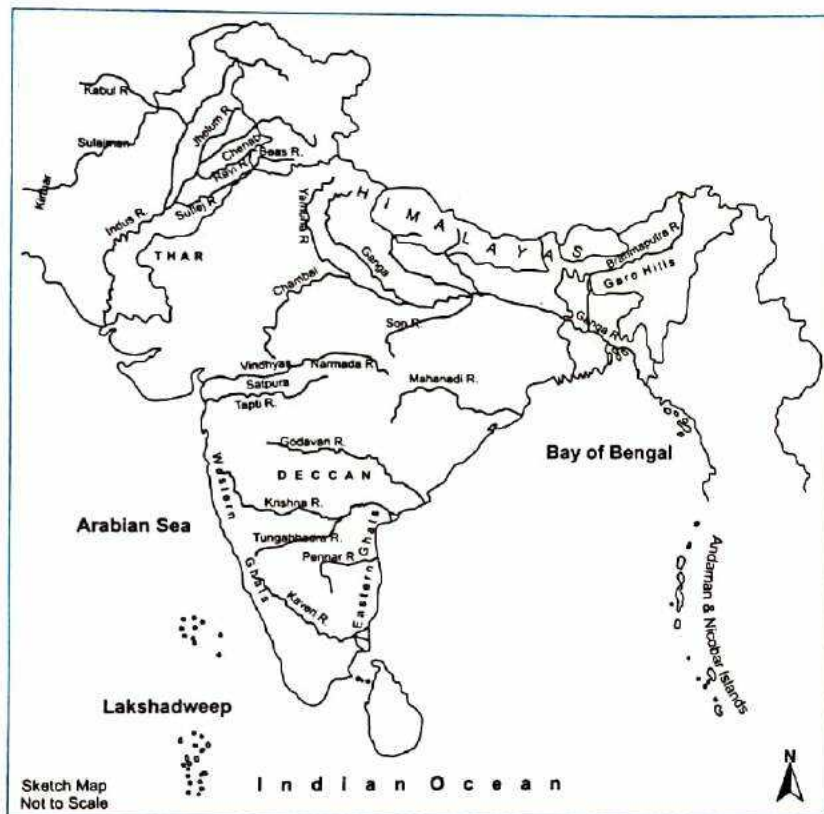
Tick (✓) the correct options.

1. Handwritten records of the past in the form of books, are called
(a) scripts ☐ (b) manuscripts ☐
(c) inscriptions ☐
2. Religious literature is a..... source.
(a) literary ☐ (b) archaeological ☐
(c) none of these ☐

GEOGRAPHICAL IMPACT

The geography of a country plays a major role in its history. Similarly, the geographical features of India have greatly influenced its people and their history. Even the name of the country 'India' has its origin in its geography. The Iranians and Greeks called River Indus as *Hindos* or *Indos*, and so the land to the east of the river was called India.

The physical features of India that have shaped Indian history are:



Physical Map Of The Indian Sub-Continent

The Great Himalayas: The Himalayas in the north of India are very high, so they work as a **natural barrier for invaders from the north**. Hence, very few invasions have taken place from this side.

Low-lying passes such as the Khyber, Tirchi, the Kunlun, the Gomal and the Bolan in the north-west were comparatively easy passages for the invaders to enter India.

The Northern Plains: The Northern Plains have determined the development of India. The places along the rivers have developed faster than any

other part of the country. **Rivers** were the main **mode of travel**. They provided the important **resource of water** and made the areas around them **highly fertile**. As a result, agriculture became prosperous near the banks of the rivers and even trade could easily flourish near the rivers. Some important rivers of north India are Beas, Ganga, Yamuna and Indus.

The Deccan Plateau: The Deccan had always been a **very strong and powerful military base**. So, it was not easy for mighty powers of the north to win and control Deccan for a long time.

Coastal Plains: The coastal plains of India were isolated by land. They were **open to the sea** to establish commercial relations with the European, south-east Asian and African countries. Interestingly, the first Muslim and Christian traders reached Kerala by the sea.

THE CONCEPT OF DATES IN HISTORY

As we all know, we calculate our days and nights through a proper system of dates and years. We take the year of birth of **Jesus Christ as zero**. The left side of the given timeline (on Page 11) represents the years before Christ was born and is called **BCE (Before Common Era)**. For example, 50 years before Christ is written as 50 BCE.

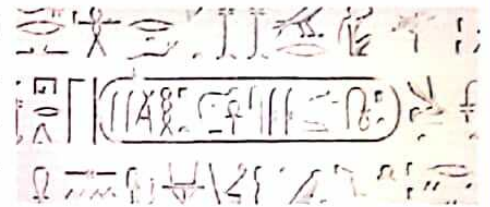
All dates before the birth of Christ are counted backwards, for example, 300 BCE will come first and 400 BCE will come later. On the other hand, anything that happened in the years after the birth of Jesus Christ are expressed in **CE (Common Era)**. This is called Common Era because most countries of the world now use this.

Earlier historians were using the terms **BC** for **BCE** and **AD** for **CE**. Now, they use the terms **BCE** and **CE**. **CE** stands for 'Common Era' and **BCE** stands for 'Before Common Era'.



In Other Parts Of The World During That Time

Cities began to develop in the Indian sub-continent around 2,500 BCE. It was also during this time that human settlements emerged in the Nile Valley in Egypt. An inscribed stone was found in Rosetta, a town on the north coast of Egypt, that contained inscriptions in three different languages and scripts, one Greek and two Egyptian.



The Script Found At Rosetta

Points To Remember

- Knowledge that is gained from the study of past is called 'History'.
- Prehistory is the period of human development when writing had not been invented and human beings did not know how to read and write.
- History is the period for which written records are available.
- Sources of history are divided into archaeological sources and literary sources.
- Literary sources are divided into religious literature and secular literature.
- The geography of a country plays a vital role in its history.
- BCE (Before Common Era) stands for anything that happened before the birth of Jesus Christ and CE (Common Era) stands for anything that happened after the birth of Jesus Christ.

Exercise

Quick Revision

[Use Cordova Smart Class Software on the smart board in class to do these exercises.]

A. Multiple Choice Questions (MCQs) Tick (✓) the correct options.

- Knowledge that is gained from the study of the past is called
 (a) Philosophy ☐ (b) History ☐ (c) Archaeology ☐
- Old buildings which have historical importance are called
 (a) inscriptions ☐ (b) artefacts ☐ (c) monuments ☐

B. Fill in the blanks.

- We can know about prehistory through
- The period for which written records are available is called
- Archaeological sources are '.....' evidences.
- Writings that are not religious are known as literature.

C. Write (T) for True and (F) for False statements.

- Coins are a valuable source of information. ☐
- Long ago people wrote using paper and pen. ☐
- 'Indika' was written by Kautilya. ☐
- Monuments provide important information regarding our heritage. ☐

Answer The Following

A. Multiple Choice Questions (MCQs) Tick (✓) the correct options.

- is the period of human development when writing had not been invented.
 (a) History ☐ (b) Archaeology ☐ (c) Prehistory ☐
- are written records engraved on rocks, copper plates and clay tablets.
 (a) Inscriptions ☐ (b) Coins ☐ (c) Books ☐

B. Short Answer Questions

- What is the difference between prehistory and history?
- What are monuments? What do we get to know from them?
- How did the Northern Plains influence the history of India?

C. Long Answer Questions

- How does the study of history help us?
- How do historians find out about our past?
- Write a short note on secular literature.
- What are inscriptions? How do they help us to study the past?

D. HOTS (Higher Order Thinking Skills) Question

Do you think the work of an archaeologist is similar to that of a detective? Give reasons for your answer.

E. Value Corner

Rulers of ancient times wrote about their own glories on pillars and rocks. If you were one such ruler, how far would you have been honest in your portrayal of yourself?

Activity

♦ Observe the pictures carefully and answer the given questions.

- Name these sources of history and their kinds.
- What kind of information do they reveal?

♦ Hidden in the inscription are names of six sources of history. Find them.

♦ Map Work

On an outline map of India, mark its important physical features.

Surfing is Interesting

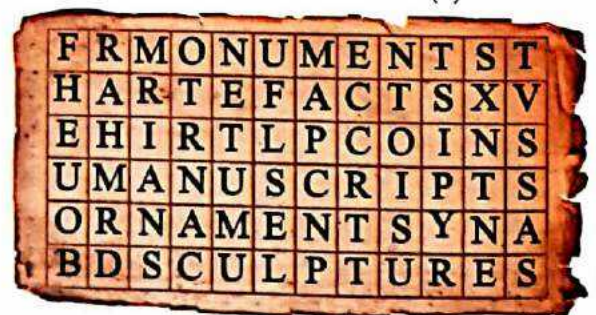
To enjoy some activities related to art and craft and archaeology, visit :

<http://www.amnh.org/ology/archaeology#>



(a)

(b)



Life Skill

It is good to remember friends, but the best part will be that if we remember the time spent with them. Photographs of friends help us to recall the beautiful moments which we shared. Create an album full of photographs of you and your friends. Give interesting captions to all the photographs.

CREATE YOUR MAGIC BOX!

Archaeologists find out about the past by

- **EXCAVATING** artefacts left behind by our ancestors.
- **EXAMINING** what they have found.
- **RECORDING** what they find to refer to in the future.
- **INFERRING** from their findings.

You can try out these archaeology skills at home. For this you need to make a magic box.



PREPARE YOUR MAGIC BOX

You Will Need

- Medium to large size shoe box
- Soil to fill the container
- artefacts (six) from the list below—three organic (things that were once living) and three inorganic (things that were never living)

Materials: Organic

- banana peel • leaves
- empty shell, e.g., garden snail or sea shell
- piece of paper with writing on, e.g., item of packaging or letter

Inorganic

- piece of metal, e.g., a bottle cap • stone/flint
- piece of pottery (e.g., an old mug or a fragment from a broken garden pot)
- piece of plastic or a small plastic (if you choose plastic remember to put it in the top layer of your dig as this is the most modern material on the list)
- Artefact Recording Sheet • pencil and ruler

BURYING YOUR ARTEFACTS

Put about 15 cm of soil into the shoe box and bury three artefacts in the layer. Add another 15 cm of soil and bury one more artefact in that layer. Add a final

layer of soil and bury your remaining artefacts. It is important to keep all the artefacts fully covered.

Now that all your artefacts are buried, place the container outside or leave indoors and water once a week. You need to keep the soil moist but not waterlogged. For the best results aim to leave your container for eight weeks.

EXCAVATING

Place your pit on the plastic sheet or a newspaper.

Set out another newspaper for your excavated artefacts. Start your excavation by removing 3-5 cm deep layers of soil at a time working across the pit. Excavate in layers rather than dig vertically.

When you find an artefact, wipe/dust the soil carefully from around the edges. Carefully take it out and place it on the newspaper.

Record your discovery using the Recording Sheet.

Keep excavating in layers and record each artefact you find until you reach the bottom of your container.

Once you have completed your excavation read your Recording Sheet. Now infer what the life of the people would have been like.

- What did they do? • What did they make?
- What did they use? • How did they use it?

RECORDING SHEET

Archaeologist's name:

The Artefact:

Date

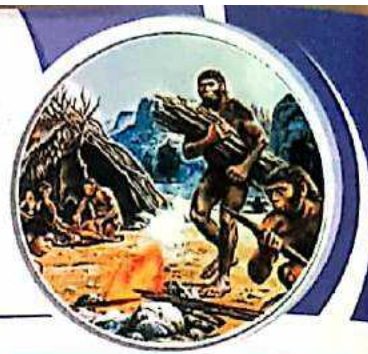
- What is your artefact made from?
- What colour is your artefact?
- Is your artefact in one piece?
- What do you think your artefact was used for?

What do you infer from your artefact? (lifestyle of people)

This is how archaeologists find out about people who lived long, long ago. They first go on a hunt, find pieces of a big jigsaw puzzle and then put these pieces together.

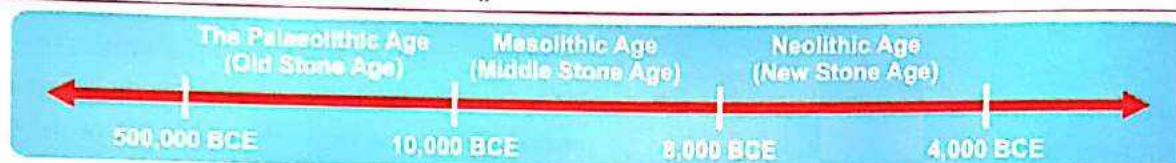
You are also an archaeologist. You have completed your treasure hunt. Now fit the jigsaw pieces and make up the story.

The Stone Age And Earliest Societies



Key Terms

chopping	: an act of cutting something into pieces with a sharp tool	Palaeolithic Period	: the period in human history from 500,000 BCE to 10,000 BCE
depict	: to show an image of something	pressure flaking	: a method of trimming the edge of a stone tool
Mesolithic Period	: the period from 10,000 BCE to 4,000 BCE	Stone Age	: the period when humans depended on stone for their survival
microlith	: a very small stone tool		
Neolithic Period	: the period from 8,000 BCE to 4,000 BCE		



Use Cordova Smart Class Software on the smart board in class to make learning enjoyable.

Historians believe that human beings first appeared on Earth about 1.5 million years ago. The development of human beings on this Earth is a very interesting process. **Earliest humans were food gatherers, hunters and nomads.** Always in search of food and shelter, they travelled from one place to another, hunted animals and gathered fruits, roots, seeds and nuts.

When there was shortage of animals or plants in one area, they moved to another area in search of food. They considered it safer to move in groups rather than wander about all alone. A group generally consisted of a few men and women and children who stayed together with the elders. Early humans led a primitive life. They remained without clothes during summers but in the winter season, they wore animal skins, leaves and the bark of trees to keep themselves safe from severe cold. They used to spend their nights on trees or in rock shelters and caves, that protected them from wild animals when asleep.

HOW DO WE KNOW ABOUT THESE PEOPLE

We come to know a lot about the earliest human beings from their **evidences** in the form of **stone**

tools and weapons. During the prehistoric period, human beings defended themselves against all types of wild animals using stones by attaching them to handles of bones or wood and by making weapons in the form of spears or arrows. They also hunted animals with these weapons. The stones helped early humans in different ways. For example:

- The stones were used to **hunt animals.**
- They were used to **remove the skin of animals, cut meat and bones.**
- Stones were also used to **cut trees and clear forests.**

Wonderful To Know

Hominids: According to scientists, hominids were not human beings but they were similar to human beings. Most of the scientists think that human beings developed or evolved from them.



A Hominid

THE STONE AGE

The main object used by early humans was **stone**. They depended on stones for their survival; that is why this period is called the **Stone Age**.

On the basis of development of different stone tools, anthropologists have divided the Stone Age into different stages.

Stone Age is classified into three sub-periods on the basis of the type and quality of stone tools used by early humans.

1. Palaeolithic Age or Old Stone Age
2. Mesolithic Age or Middle Stone Age
3. Neolithic Age or New Stone Age

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

1. The period during which human beings depended on stone for their survival is the
 (a) Stone Age ☐ (b) Tool Age ☐
 (c) Teen Age ☐
2. The Stone Age is classified into sub-periods.
 (a) four ☐ (b) three ☐ (c) two ☐

The Palaeolithic Age

It is considered that evolution of mankind started in this period. It roughly began around 500,000 BCE and ended around 10,000 BCE. This period is further subdivided into three phases on the basis of changes in climate and stone tools used.

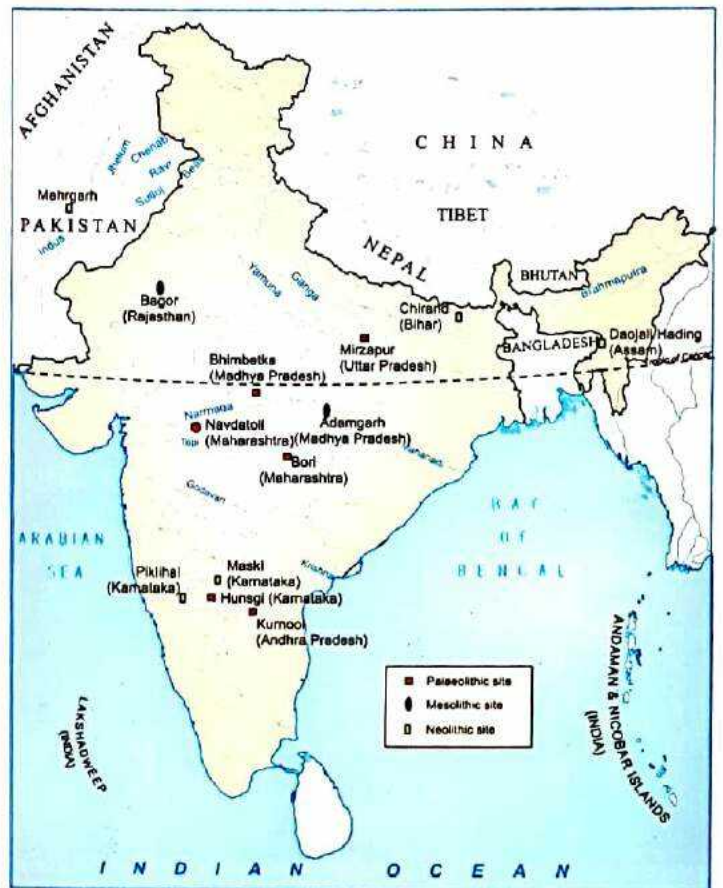
The division is as follows:

- (i) Lower Palaeolithic Age or Early Old Stone Age
- (ii) Middle Palaeolithic Age or Middle Old Stone Age
- (iii) Upper Palaeolithic Age or Upper Old Stone Age

Lower Palaeolithic Age

This age is considered as the formative age. During this age, many parts of the Earth were covered heavily with ice and the climate was extremely cold. Geologists define this 'cold period' as Ice Age or Pleistocene Period.

The most common tool of this age was the hand axe, which was mainly used for chopping trees



Major Sites Of Early Humans In India

and hunting animals. Therefore, these tools are also known as choppers. In India, these tools were mainly found in Punjab and on the banks of River Narmada in Madhya Pradesh.

Middle Palaeolithic Age

The main tools of this period were the different types of borers and scrapers made of stone. These tools have been found from different places in India that include the banks of River Narmada in Madhya Pradesh and the Soan Valley in Punjab.

Upper Palaeolithic Age

Upper Palaeolithic Age is the final phase of the Ice Age. This age ends just at the onset of agriculture. During

Wonderful To Know

'Palaeo' means 'old', 'meso' means 'middle' and 'neo' means 'new'. 'Lithic' comes from the Greek word 'lithos' meaning 'stone'.

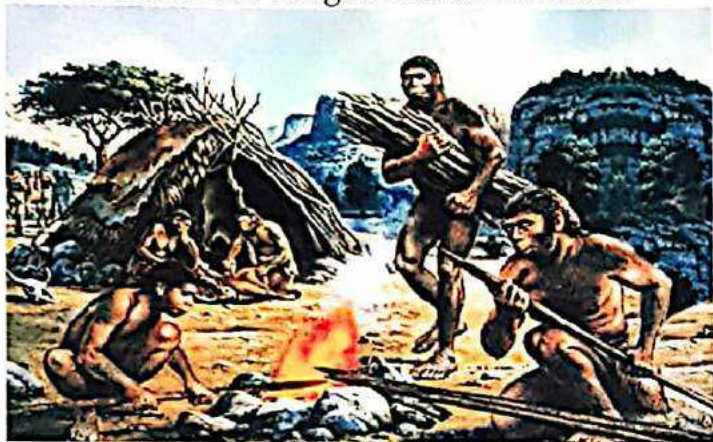


Stone Tools

this age, the climate changed dramatically. From cold it became warm. The tools used by humans during this age were **blades** and **burins**.

Discovery Of Fire

During this period, early humans **learnt to light fire**. It was one of the greatest discoveries made by early humans. Early humans knew about fires. They saw natural fires such as forest fires but they did not know how to light a fire on their own.



Early Humans Using Fire

How did humans learn to light a fire? Perhaps, two stones were rubbed together producing sparks and the sparks fell on some dry leaves lying nearby. Or perhaps, lightning struck a tree, and it went up in flames. Early humans soon discovered that they could use fire to keep themselves warm in cold and to scare away wild animals.

They discovered that the flesh of animals tasted better when heated on fire and learnt cooking.

The Mesolithic Age

The **Mesolithic Age** started around 10,000 BCE and ended around 8,000 BCE. The climate changed, and became dry and warm. Humans of this age developed **small, sharp, pointed stone tools** called **microliths**.

Wonderful To Know

Microliths are found in many parts of India like Chhota Nagpur in Jharkhand and also on the banks of the River Ganga between Ghazipur and Varanasi in Uttar Pradesh.



Microlith Tools

The Neolithic Age

This period lasted from about 8,000 BCE till about 4,000 BCE. The tools of this New Stone Age were more advanced than earlier age tools, much sharper than the tools of Mesolithic Period. They sparkled due to polishing technique used over them. Tools of this period were axes, sickles, spears and arrow heads.

Making Of Stone Tools

Tools belonging to the three Stone Age periods were found at many places. Stone was easily available at that time, therefore, most of the tools were made of stone. Early tools were made from crude stone and were used for particular needs. Later, they discovered **flint**, a type of stone and used it for making tools and weapons. Flint has special qualities, it can chip easily and can be moulded into different shapes.

Small and big stones were used to make tools and weapons. **Axe head, hammers and choppers** were made from big stones. The axe head was tied to a stick which made it a more efficient tool. Knives and scrapers were made from small pieces of stones. Arrows and spears made from smaller stones were used to hunt animals.

Techniques Of Tool Making

The stone tools were produced by two distinct techniques.

Stone On Stone: In this method, one hand of the toolmaker firmly held the stone or core from which the tool was to be made. With the other hand, another stone was used as a hammer. This hammer stone was used to strike off flakes from the core stone till the required shape and size were obtained.

Pressure Flaking: In this method, the core stone was placed on a firm ground or surface. The hammer stone was placed on a piece of bone or stone that was placed on the core to remove flakes that could be shaped into tools.



Pressure Flaking Method

Uses Of Stone

The stone tools were used to dig the ground, hunt animals and skin them, cut trees, scrape the barks of trees, chop meat, fruits and wood and to stitch animal skins for making clothes.

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

1. Microliths were used in..... Age.
(a) Mesolithic ☐ (b) Palaeolithic ☐
(c) Neolithic ☐
2. Stone on stone is a technique of
(a) tool making ☐ (b) cart making ☐
(c) none of these ☐

ROCK PAINTINGS

Early humans lived in caves and they decorated them with paintings on the walls. These drawings were of running wild horses, bison, bears, stags and herds of other animals. Some of these are found in Madhya Pradesh and southern Uttar Pradesh. Red, green, white and ochre colours are used in the paintings.



Early Rock Painting

These paintings also show men hunting (either in groups or alone), riding, women grinding and preparing food and dancing.

ENVIRONMENTAL CHANGES

As discussed earlier, the climate of the world changed around 12,000 years ago. It became warm from cold. Due to this change, grasslands developed. This development increased the number of animals that survived on grass.

Hunters of these animals also followed them. They learned about their breeding seasons and food habits. Slowly, people started thinking about rearing these animals themselves.

During this time, several grain-bearing grasses including rice, barley and wheat grew naturally in different parts of the sub-continent. Early humans collected these grains and used them as food. They learnt their cycle when they ripened and where they grew. This might have been the beginning of growing plants by humans.

CASE STUDY

Hunsgi and Baichbal Valley in the Deccan have several Stone Age sites. Most of them are early Palaeolithic sites. A large number of finished and unfinished tools have been found here. This shows that early humans lived here for a very long time and the sites were probably habitation as well as factory sites. Most tools were made from limestone, which was locally available.



Tools From Hunsgi

• In Other Parts Of The World During That Time •

Rock paintings were also discovered elsewhere in the world, for example, in France. Historians believe that such paintings were made between 20,000 and 10,000 years ago. The ingredients of the colours were mainly minerals like ochre or iron-ore, and charcoal. The subject of these paintings were animals like bison, woolly rhinoceros, reindeer and so on. It is believed that these rock paintings were, perhaps, created on ceremonies for special rituals or perhaps, by hunters before they went for hunting.



Points To Remember

- Historians believe that human beings first appeared on Earth about 1.5 million years ago.
- Early humans depended on stones for their survival; that is why this period is called the Stone Age.
- Stone Age is classified into three sub-periods: 1. Palaeolithic Period or Old Stone Age
2. Mesolithic Period or Middle Stone Age 3. Neolithic Period or New Stone Age
- Evolution of mankind is believed to have started in Palaeolithic Age. It roughly began around 500,000 BCE and ended around 10,000 BCE.
- The period of Mesolithic Age started from 10,000 BCE and ended around 8,000 BCE.
- The Neolithic Age lasted from about 8,000 BCE till about 4,000 BCE.
- The stone tools were produced by two distinct techniques: (i) stone on stone (ii) pressure flaking.
- Early people lived in caves and they decorated them with paintings on the walls.

Exercise

Quick Revision

[Use Cordova Smart Class Software on the smart board in class to do these exercises.]

A. Multiple Choice Questions (MCQs) Tick (✓) the correct options.

1. In the beginning, the early humans were
(a) food producers ☐ (b) food gatherers and hunters ☐ (c) hunters ☐
2. The evolution of mankind started in the
(a) Palaeolithic Age ☐ (b) Mesolithic Age ☐ (c) Neolithic Age ☐

B. Fill in the blanks.

1. The Mesolithic Age started around
2. is the final phase of the Ice Age.
3. are the tools which developed during the Mesolithic Age.
4. Pressure flaking is a method of

C. Write (T) for True and (F) for False statements.

1. Early humans led a lonely life. ☐
2. The Stone Age is also known as Modern Age. ☐
3. Evolution of mankind started in the Mesolithic Age. ☐
4. Stone on stone is a method of tool making. ☐

Answer The Following

A. Multiple Choice Questions (MCQs) Tick (✓) the correct options.

1. Early humans wore
(a) wool ☐ (b) silk ☐ (c) animal skin ☐
2. Palaeolithic, Mesolithic and Neolithic periods are classifications of the
(a) Modern Age ☐ (b) Stone Age ☐ (c) Medieval Age ☐

B. Short Answer Questions

1. What is the Upper Palaeolithic Age?
2. Name the animals that are found in the early rock paintings.
3. Write a short note on the Palaeolithic Age.
4. Write about any one technique of tool making.

C. Long Answer Questions

1. How did early humans make use of stones during the prehistoric period?
2. How did changes in the environment influence the development of the early humans?
3. Why was the discovery of fire considered an important achievement?
4. Why did the early humans lead a nomadic life?

D. HOTS (Higher Order Thinking Skills) Questions

1. How do you think your life differs from that of a child of the Stone Age?
2. What do rock paintings on cave walls reveal about the lifestyle of early humans?

E. Value Corner

Environmental changes have been occurring on this Earth from a long period of time. What are the changes that you notice in the environment around you? If the changes are negative, what can you do to minimise them?

Activity

TRAVEL THROUGH PREHISTORIC SITES

- **Imagine yourself as the owner of a travel agency. You have to prepare a travel brochure that is designed to attract tourists to visit some prehistoric sites. Remember, the brochure should:**
 - be colourful, attractive and comprehensive,
 - contain relevant information and pictures, and
 - contain clear descriptions and locations of each site.

- **Picture Reading**

Given below is a painting of the Stone Age Settlement. Describe the scene in your own words in about 10 to 15 sentences, keeping in mind the location of the settlement, the kinds of houses, the clothing and the other activities in which the people are involved. What are the tools being used? How are they being used? Can you notice anything which signifies that these people knew about fire?

- **Map Work**

On a map of India, mark the important Stone Age sites.



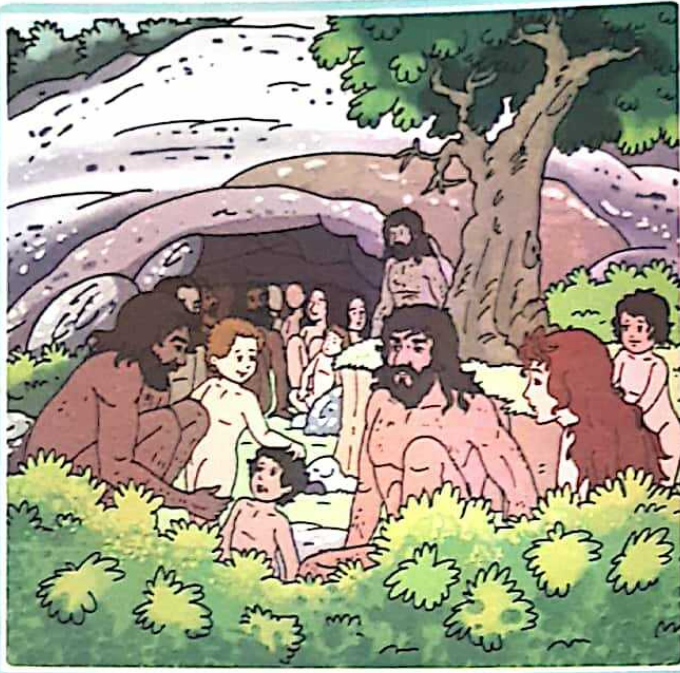
You can also take help from these sites:

- <http://www.bradshawfoundation.com/india/bhimbetka.html>
- <http://www.mnh.si.edu/anthro/humanorigins/aop/hunsgi.html>

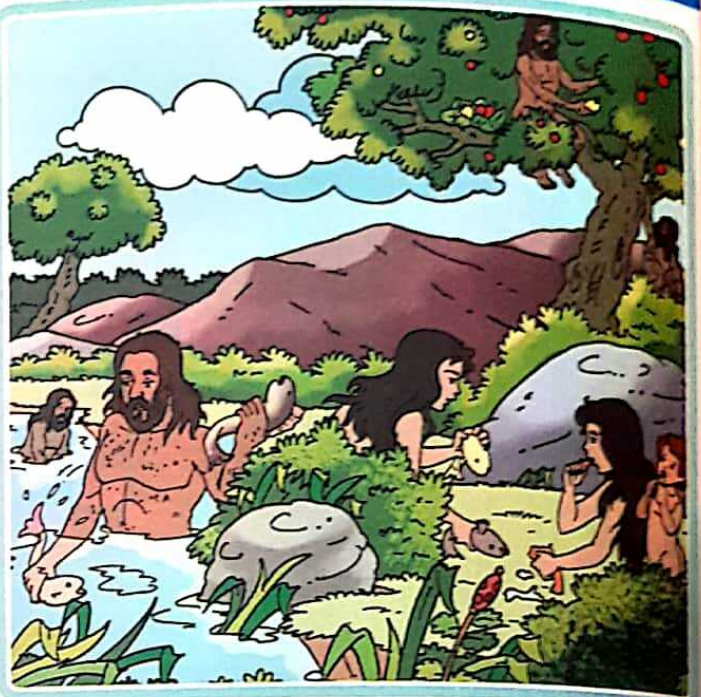
Life Skill

Suppose you are a farmer of the Neolithic Age living on the banks of the River Yamuna. Due to monsoon floods, your farm has been partially destroyed. Write a diary entry expressing your feelings when you see all your crops being submerged in flood. Also, write what you will do thereafter.

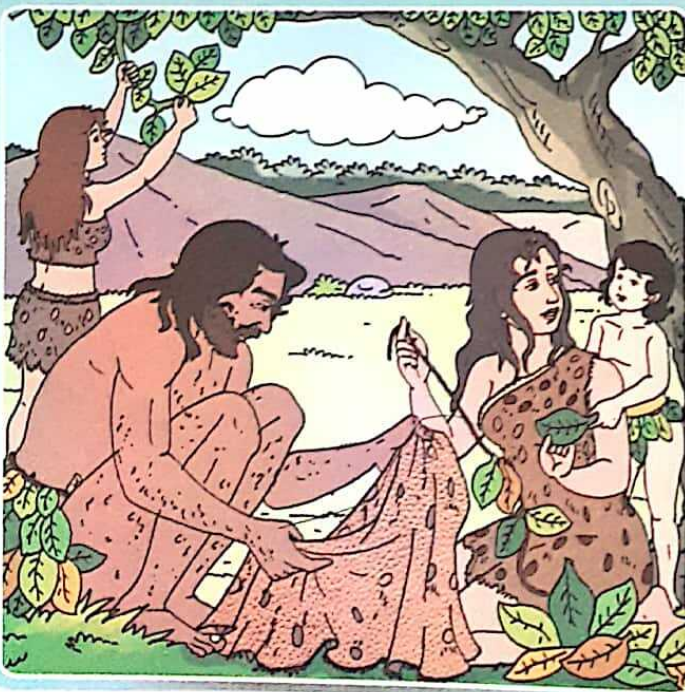
EARLY HUMANS



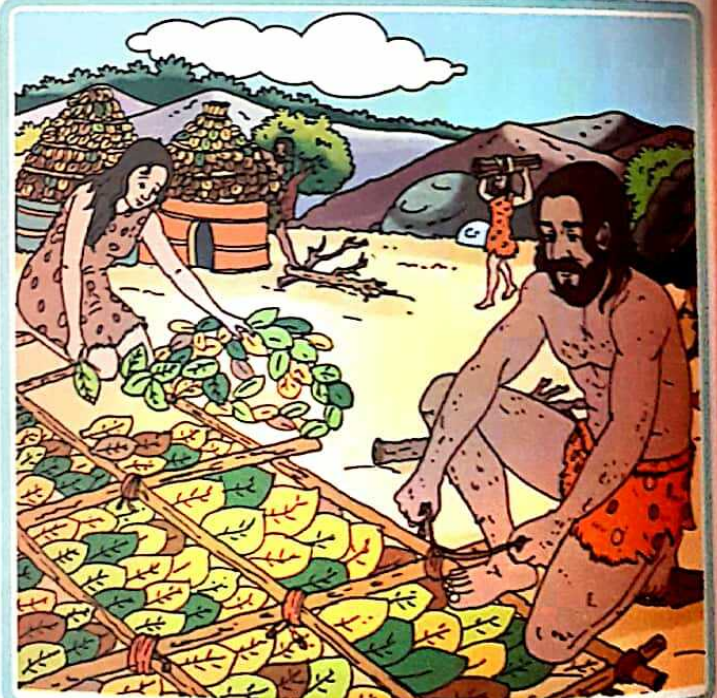
Historians believe that human beings first appeared on Earth about 1.5 million years ago. In those days, people lived in small bands of 20 to 30 in forests.



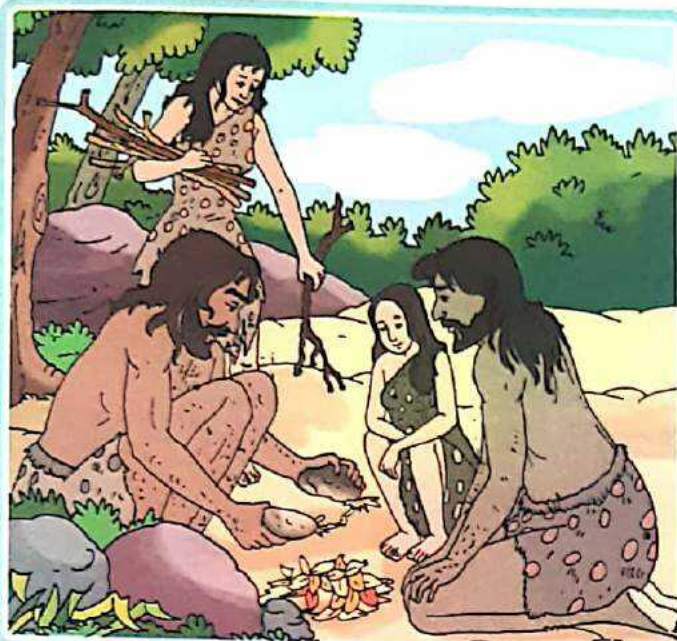
In the beginning, they were hunters, food gatherers and nomads. They travelled from one place to another in search of food. They hunted animals and also fished in lakes and rivers. Their food mainly comprised fruits, vegetables and meat.



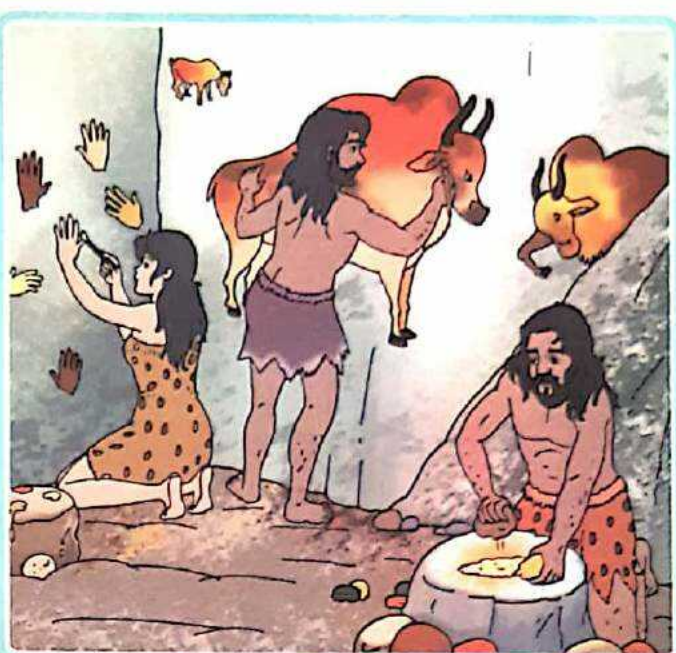
The clothes of early humans were also derived from plants and animals. They wore animal skins along with leaves or bark of trees to cover themselves.



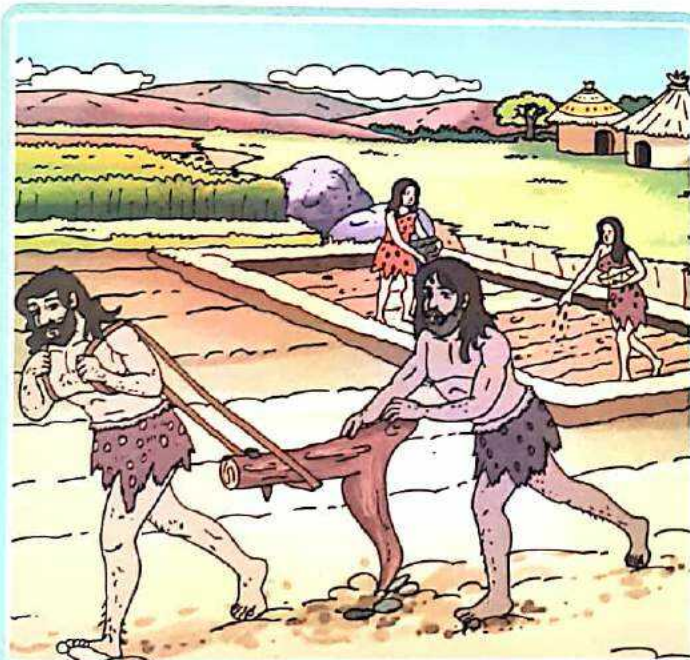
They did not live in houses. They used to live in caves or under rocks. Sometimes, they made small huts of branches and leaves that protected them from wild animals and harsh weather conditions.



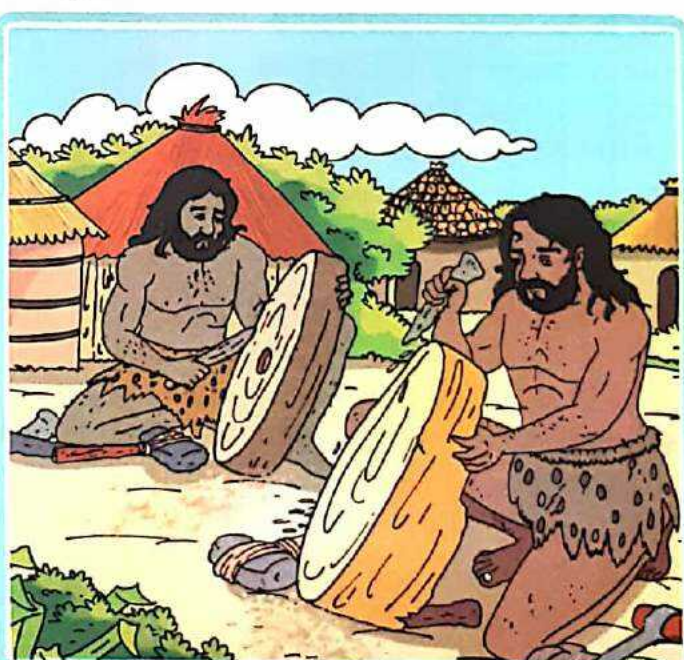
With passing time, early humans learnt to light fire, which is considered as one of their greatest discoveries. Perhaps they rubbed two stones together, accidentally and the sparks fell on some dry leaves that went up in flames.



Early humans made colourful pictures on the walls, inside the caves. They made the colour by grinding together different-coloured stones. Pictures were painted by them on rocks using bamboo brushes.



Agriculture first started in the foothills of the Zagros mountains of Iraq and Iran, around 8,000-10,000 years ago. Various bands started growing crops according to their requirements. Some of them started growing maize, some grew sweet potato and some grew barley.



Invention of the wheel was a very important step towards the development of the early humans. The invention of wheel also resulted in improved pottery-making.



The Age Of Farming



Key Terms

burial : a grave
earthen : any object made of baked clay
habitation : a location or a place where people live
hearth : the floor at the bottom of a fireplace

mortar : a small hard bowl in which we crush substances
nomad : a person who moves with his belongings from place to place
vessel : a container used for holding liquid

Use Cordova Smart Class Software on the smart board in class to make learning enjoyable.

As we know, human beings lived a nomadic life for thousands of years. At that time, they were hunters and gatherers. During the **New Stone Age**, which is also known as the **Neolithic Age**, around 10,000 years ago, **early humans began to produce their own food and lead a settled life**. Changes in climate played a very important role at that time. A large portion of the Earth's surface was covered with ice sheets in the beginning of the Neolithic Age. Due to climate change, the ice melted and these areas became habitable. **Warm climate was best suited for crops and habitations**. As a result, dry areas became open grasslands and forests became dense.

BEGINNING OF FARMING

Agriculture was the greatest discovery of the Neolithic Age. During this period **early humans learnt the technique of sowing seeds, growing plants and finally harvesting them**. They must have learnt this accidentally or by observing the plants growing in the wild. The first crops to be cultivated were wheat and barley. As time passed, early humans began to grow more crops. This changed their lifestyle. Now, they settled in one place and grew crops. From **food gatherers**, they became **food producers**. They left their nomadic life because they had to take care of their crops. As a result, they settled down and started a normal life with regular food supply. They made mud houses near the fields and settled there till the crops were harvested. This change in lifestyle did

not take place suddenly. It was spread over a long time. Even while cultivating crops, humans still hunted and gathered food.

Archaeologists have found evidences of early farmers and herders all over the sub-continent. The most important ones are in the north-west, in **present-day Kashmir**, and in **east and south India**.

Look at the table below to see where evidence of grains has been found.

Grain	Sites
Wheat	Mehrgarh in Pakistan, Gufkral and Burzahom in Kashmir, Chirand in Bihar
Rice	Koldihwa and Mahagara in Uttar Pradesh
Millets	Hallur in Karnataka, Paiyampalli in Andhra Pradesh
Lentils	Gufkral and Burzahom
Black Gram	Paiyampalli

DOMESTICATION OF ANIMALS

Humans of the Neolithic Period started to domesticate animals. The **dog** was probably the first animal to be tamed. Later, other animals like goats and sheep were also domesticated. As a result, there was a continuous supply of milk and related products and also of meat. Fishing and hunting also began. Some animals were used in agriculture and transportation.

Look at the table below to see where evidence of bones of domesticated animals have been found.

Bones	Sites
Sheep, goat, cattle	Mehrgarh in Pakistan
Animal bones	Koldihwa in Uttar Pradesh
Cattle	Mahagara in Uttar Pradesh
Dog, cattle, sheep, goat and buffalo	Burzahom in Kashmir
Buffalo, ox, cattle and sheep	Chirand in Bihar
Sheep and cattle	Paiyampalli in Andhra Pradesh

INVENTION OF THE WHEEL

During this period, the wheel was also invented and it happened to be an important step towards the development of the early humans. Little is known about how the idea of the wheel occurred to the early humans. Perhaps, a rolling log or stone did the trick.



A Wheel

People could now travel more easily and move heavy loads faster than before. The invention of wheel also improved pottery-making. In fact, it was during this age that the potter's wheel came to be used.

BEGINNING OF A SETTLED LIFE

Archaeologists have found traces of huts or houses in Burzahom. Early humans built pit-



A Pit-House

houses, which were dug into the ground, with stairs or steps inside them. This might be for protection from cold weather. Archaeologists also discovered cooking hearths both outside and inside the huts. This shows that according to weather, people could cook food either inside the hut or outside it.

Wonderful To Know

Burzahom (in Jammu and Kashmir) has been an important prehistorical site. A stone slab with a painting done by early humans has been found here. The painting depicts two hunters hunting a deer. Charred remains of grains and seeds of cereals have also been found here.

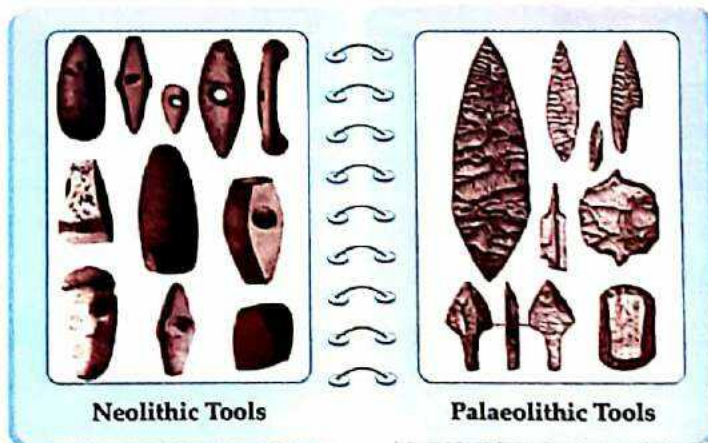
Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

- During the New Stone Age, humans began to produce their own
 - (a) money ☐
 - (b) food ☐
 - (c) machines ☐
- people started to domesticate animals.
 - (a) Modern ☐
 - (b) Palaeolithic ☐
 - (c) Neolithic ☐

NEOLITHIC TOOLS

Mortars and pestles were two very important Neolithic tools. They were used for grinding grains. Neolithic tools are completely different from Palaeolithic tools.



Neolithic Tools

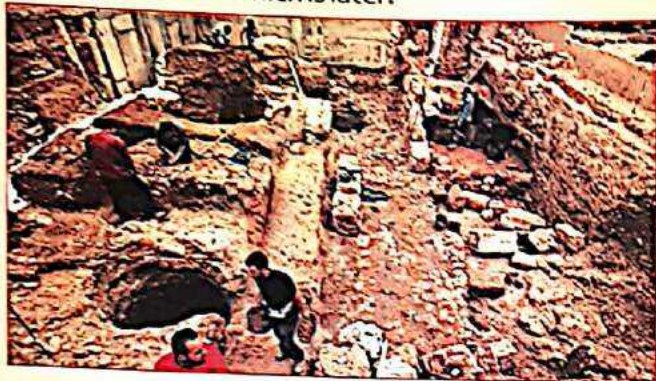
Palaeolithic Tools

Ancient Tools

Neolithic tools were well-polished with a fine cutting edge. Palaeolithic tools however, continued to be made and used. Some tools were also made using bones. Neolithic tools have been found in Burzahom in Kashmir and Maski, Brahmagiri, Nasirpur and Hallur in Karnataka.

Wonderful To Know

Let us understand how archaeologists find out the level of the site which is earlier or which is later.



Level Of Archaeology

Look at the picture.

Imagine that people started living on a flat land. As years passed, the surface gradually rose because people threw waste material and generally stayed and constructed houses in the same area. A mound is formed after continuous deposition of waste material. When this mound is dug up, the objects found in the upper layers are of later times than what is found from the lower layers of the mound, and whatever is discovered in the lower layers is considered to be of older times. These upper and lower layers are known as levels.

POTTERY

Farming gave rise to pottery-making. At first, they stored the grains in large baskets or they preserved it in pits or trenches that they dug below the ground. Storage of grains till the next cultivation season created the need of pottery.

Many kinds of earthen pots were used by the Neolithic people. They were plain, different in colour and had decorations on them. Earthen pots

were also used for cooking food. Cloth-making also started during this age. They wove clothes using different kinds of materials. Cotton began to be grown during this time.

LIFE OF THE PEOPLE

There is no direct archaeological evidence regarding the customs and practices of the Neolithic people. Anthropologists studied the lives of present-day farmers, who practise simple agriculture and also observed the lives of herders. They made inferences that these farmers and herders (of Neolithic period) lived in groups called **tribes**. The **eldest** or the **strongest** was the **leader**. Every member of the tribe was assigned a task or tasks like making tools or hunting.

People exchanged their surplus with others' surplus. This system is known as the **barter system**. This was the earliest form of trade.

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

- Mortars and pestles were two very important
 - (a) Neolithic tools ☐
 - (b) Palaeolithic tools ☐
 - (c) None of these ☐
- Earthen pots were also used for
 - (a) storing honey ☐
 - (b) cooking food ☐
 - (c) making pottery ☐

CHALCOLITHIC AGE—USE OF METALS

Gradually, the early humans began to use **copper** along with stone tools. This happened around 6,000 years ago and this period is called **Chalcolithic Age**, also known as **Copper-Stone Age**, starting from 4,000 to 2,000 BCE. Copper came into use since it was stronger as compared to stone. **This Chalcolithic Age is important since it marks the shift from the use of stones to metals.**

Wonderful To Know

A tribe is a group of two to three generations living together in small settlements or villages. Hunting, gathering, farming, herding and fishing are the occupations of tribal people. Most of the agricultural work is done by tribal women. Women also thresh, husk and grind grains. A large herd of animals is led by men. Both men and women clean animals and milk them, make pots, baskets, tools and huts. They also actively participate in singing, dancing and decorating their huts. In tribes, leaders are usually men, who may be old or experienced or young, brave warriors or priests. Old women are respected for their wisdom and experience.

Tribes follow their own cultural tradition. They have their own music, stories, language and paintings. They have their own gods and goddesses. Tribal people regard land, forest, grassland and water as their wealth. These are shared and used by everybody together. There are no visible differences between the rich and the poor.

CASE STUDY – MEHRGARH

Mehrgarh is located in a fertile plain, near the Bolan Pass in Baluchistan, Pakistan. It provided evidences of the earliest agricultural and pastoral communities in South Asia. Mehrgarh is one of the oldest Neolithic sites which had continuous occupation. Archaeologists found evidences of many kinds of animal bones from the earliest levels. Bones of wild animals such as deer are found. In later levels, bones of sheep and goats are found, and in still later levels, cattle bones are most common. It shows that

these animals were kept by the people.

Rectangular houses are also found at Mehrgarh. Each house consists of four or more compartments. Some sections may have also been used for storage. Several burial sites have been found at Mehrgarh.



Mehrgarh

Material remains of the Stone Age have been found in the north-eastern states in Thebrongri, Mismagiri, Selbagiri and Rongram Alagiri. In Mizoram and Manipur also, remains of stone tools have been found.

Daojali Hading in Assam, is an important Neolithic site. Pestles and mortars, polished stone tools and some pots have been excavated from this site.

These findings point towards a probability that people were growing grains and using these grains to prepare food.

Tools made of fossil wood have also been found here. Another important find is a stone – jadeite, which most probably, was brought from China.

• In Other Parts Of The World During That Time •

One of the most famous Neolithic sites was Catal Huyuk in Turkey. It was a carefully planned town which used things brought from faraway lands such as shells from the Mediterranean Sea, cowries from the Red Sea and so on.

Points To Remember

- Human beings lived a nomadic life for thousands of years extending roughly between 200,000 BCE to 10,000 BCE.
- Early humans learnt the technique of farming and domesticating animals during the Neolithic times.
- During this period, the wheel was also invented and it happened to be an important step towards the development of the early humans.
- Farming gave rise to pottery-making and cloth-making also started in this age.

Exercise

Quick Revision

[Use Cordova Smart Class Software on the smart board in class to do these exercises.]

A. Multiple Choice Questions (MCQs) Tick (✓) the correct options.

1. The New Stone Age is also known as the Age.

(a) Neolithic ☐

(b) Palaeolithic ☐

(c) Chalcolithic ☐

2. Mortars and pestles were used for grains.

(a) harvesting ☐

(b) growing ☐

(c) grinding ☐

B. Fill in the blanks.

1. In the beginning of the Neolithic Age, the Earth's surface was covered with

2. system was the early form of trade.

3. gave rise to pottery-making.

4. Early humans built, which were dug into the ground, with stairs inside them.

5. Neolithic people used many kinds of pots.

C. Write (T) for True and (F) for False statements.

1. Wooden furniture was made by the Neolithic people. ☐

2. Traces of houses are found in Burzahom. ☐

3. Cultivation of cotton started during the Neolithic Age. ☐

4. Wheel helped early humans to move faster. ☐

Answer The Following

A. Multiple Choice Questions (MCQs) Tick (✓) the correct options.

1. The was probably the first animal to be tamed.

(a) dog ☐

(b) lion ☐

(c) cat ☐

2. Daojali Hading in, is an important Neolithic site.

(a) China ☐

(b) Manipur ☐

(c) Assam ☐

B. Short Answer Questions

1. Why did the early humans leave their nomadic life?

2. Why did pottery-making start during the Neolithic Age?

3. What is a tribe?

4. Name two items discovered in Burzahom, an important Neolithic site.

C. Long Answer Questions

1. How do we get to know about the Neolithic people?

2. How did agriculture change the lifestyle of early humans?

- Write a short note on the Neolithic tools. How were they different from the Palaeolithic tools?
- Write about two changes in the life of the early humans during the Neolithic Age.

D. HOTS (Higher Order Thinking Skills) Questions

- The beginning of farming was an important development in human history. How do you think it changed the world?
- The discovery of fire or the invention of wheel, which one of these two, do you think was an important step towards the development of human kind?

E. Value Corner

The early humans led a simple life. Do you think a simple life is a happy life? Why / Why not?

Activity

- Complete the crossword with the help of clues given below.

Across

- used for grinding grains
- an important invention
- storing of these created a need for pottery

Down

- people who move from place to place
- an important occupation during Neolithic Age
- a Neolithic tool
- house dug into the ground

¹ N		² F				⁴ P			
⁵ M				R			³ P		
					⁶ W			L	
D									
		⁷ G				S			
						E		E	

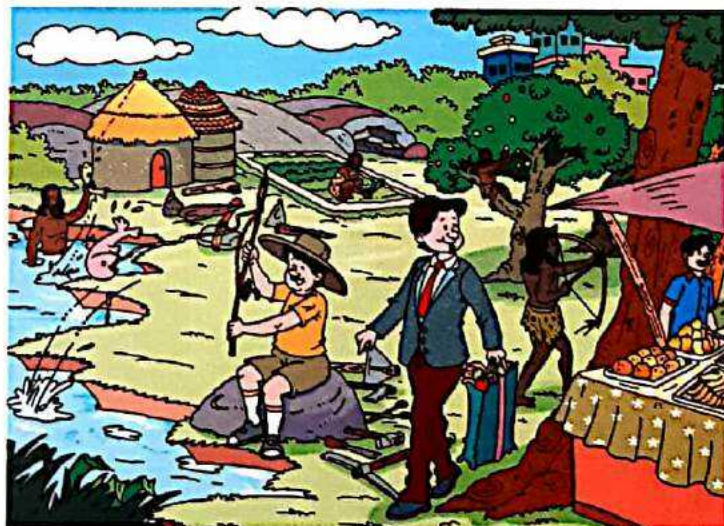
Picture Reading

Observe the given picture carefully. Now, circle the things which do not belong to the ancient era.

Surfing is Interesting

To know more about the early humans, log on to:

- <http://www.mnh.si.edu/anthro/humanorigins/aop/hunsgi.htm>
- <http://wikipedia.org/wiki/Neolithic>



Life Skill

Imagine that you have moved to a place where no food is available. How will you try to adjust at such a place? Tick the (✓) correct option.

(a) go out on a hunt with friends

☐

(b) will remain hungry

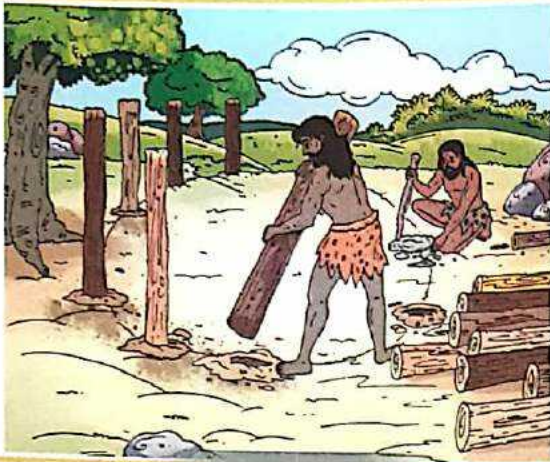
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(c) try to contact the neighbourhood for help

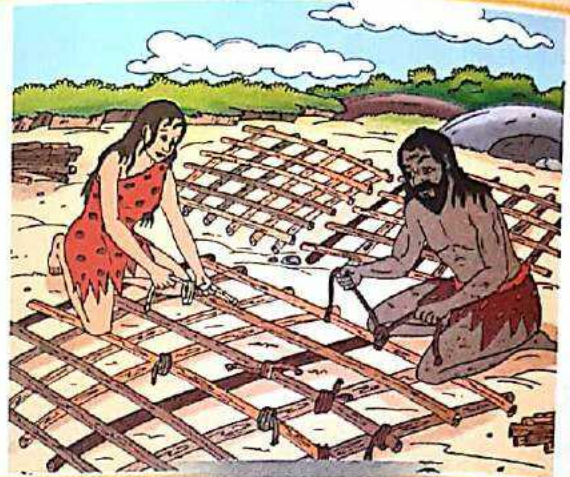
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Give reasons for your answer.

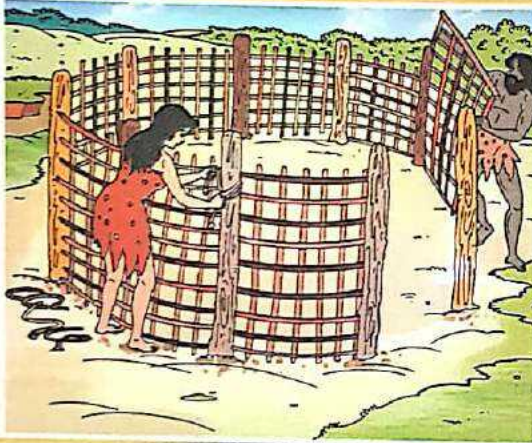
AN EARLY METHOD OF MAKING HOUSES



1. Land was cleared. Stones and pebbles were removed. Holes were dug. Wooden poles were fixed.



2. Bamboo was cut into thin strips. Strips were then woven into mats.



3. Bamboo mats were fixed to the poles.



4. Thin strips of bamboo were used to make the roof. Grass was spread on the roof and then tied on to it.

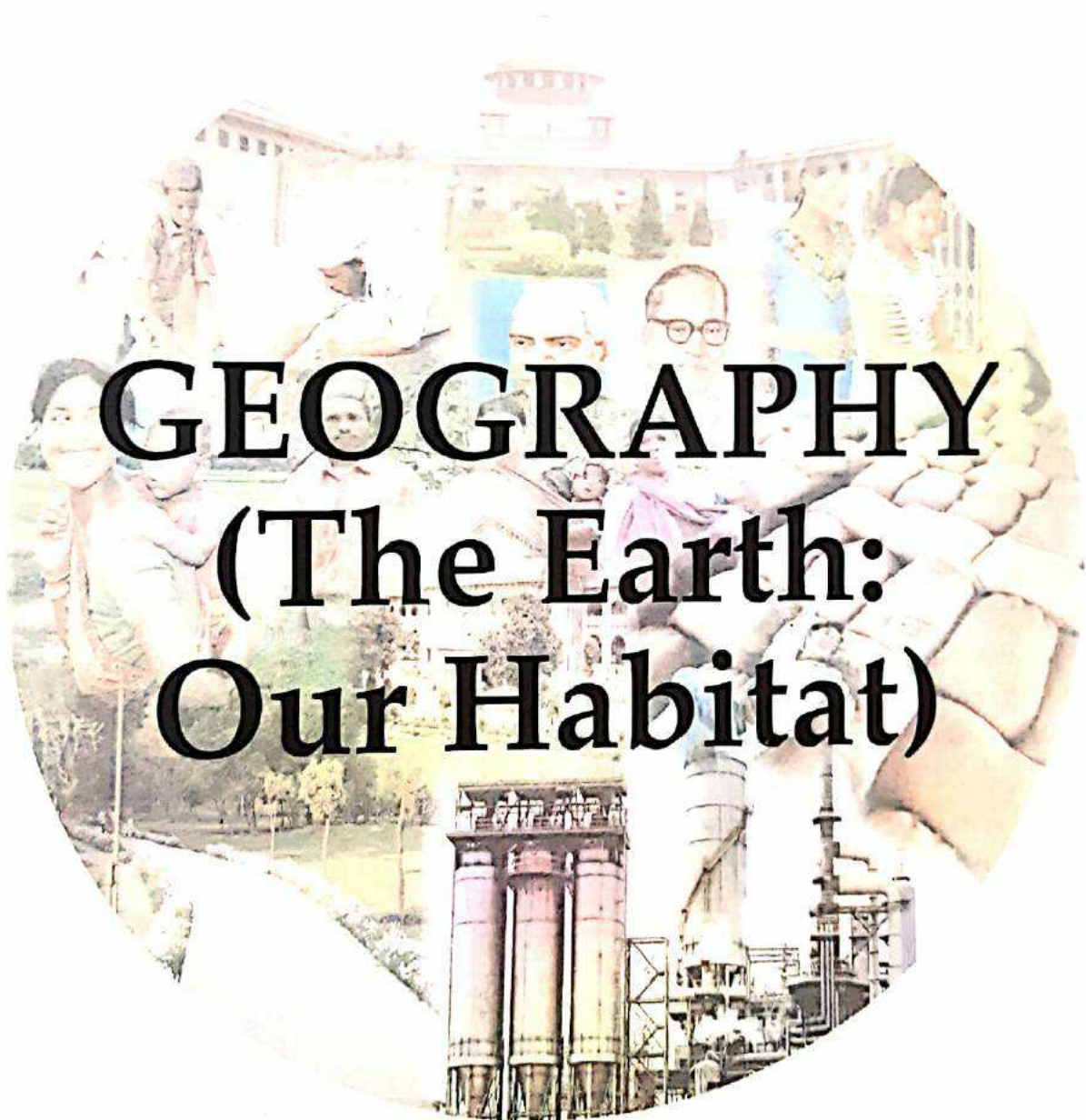


5. The whole roof was placed on top of the poles and tied firmly. The walls were plastered with mud from the inside and outside. Mud was also used to plaster the floor.



6. Have you seen such houses in any of the villages?

PART-II





Our Earth And The Solar System



Key Terms

asteroids	: planet-like large pieces of rocks that revolve around the Sun	orbit	: an elliptical path followed by a planet or an object around the Sun, planet, moon, etc.
comet	: a beautiful heavenly body having a long tail	planet	: a heavenly body that revolves around the Sun
constellations	: groups of stars forming various patterns	saptarishi	: a group of seven stars
galaxy	: a group of billions of stars	satellite	: a heavenly body that revolves around a planet
meteorites	: those meteors that reach the surface of the Earth	star	: a heavenly body having its own heat and light
meteors	: small pieces of rocks that revolve		

Use Cordova Smart Class Software on the smart board in class to make learning enjoyable.

When we look at the sky, we see different types of objects. During the day, we see the Sun. At night, we see many shining objects in the sky like the stars, the moon and the shooting stars. People have always looked at the sky with curiosity. There have always been some questions in their minds. Why do stars twinkle? Why does the size of the moon change? Where does the Sun hide at night? Let us try to find the answers of these questions in this chapter.

All objects like stars, planets, satellites, comets, asteroids and meteors in the sky are called celestial or heavenly bodies and these are collectively known as the universe.

THE UNIVERSE

The universe is vast and limitless. It is also called space. All the heavenly bodies as well as dust and gases found in space are included in the universe. Nobody knows exactly how the universe was formed. Most astronomers think that the universe started with a very big explosion called the **Big Bang** about 13.7 billion years ago. Our universe has a large number of galaxies. A **galaxy** is a group of billions of stars and clouds of dust and gases. The Sun and the stars form our

galaxy. This galaxy is called **Milky Way** or **Akash Ganga**.

Wonderful To Know

Geography, an English word, has its origin in the Greek language. It is made of two Greek words, 'geo' meaning 'earth' and 'graphia' meaning 'writing'. It means the description of the Earth.



The Milky Way Galaxy

STARS

Stars are huge heavenly bodies made up of hot gases. They emit their own heat and light in huge amount. They twinkle at night. They look small because they are very far from us. The Sun is also a star. It looks big because it is very close to the

Earth. The other star nearest to the Earth is **Proxima Centauri**.

The celestial or heavenly bodies are very far from each other. The distance between them cannot be measured in ordinary units. Therefore, the distance in space is measured in light years. A light year is the distance travelled by light in one year. The distance of Proxima Centauri from the Earth is approximately 4.25 light years.

Clouds of dust and gases in space form stars. These clouds are called **Nebula**. We can see it when there are stars in or near it.

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

- The stars, planets, satellites and asteroids are known as bodies.
(a) celestial ☐ (b) heavenly ☐
(c) both of these ☐
- The distances between stars and galaxies are measured in
(a) kilometres ☐ (b) years ☐
(c) light years ☐

Wonderful To Know

The speed of light is 300,000 km per second. The light from the Sun reaches the Earth in about 8 minutes.

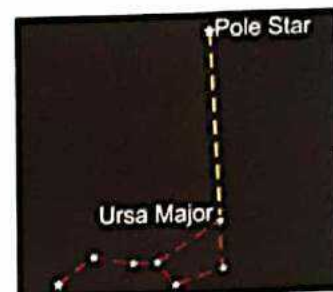
When we watch the sky at night, we notice that different groups of stars form various patterns. **These groups of stars forming different patterns are called constellations.**

A group of seven stars called *Saptarishi* or Small Bear is one such constellation. It forms a part of the **Ursa Major** or **Great Bear** (Big Bear) constellation. Some other constellations are **Ursa Minor**, **Scorpius** (the scorpion), **Leo** (the lion) and **Cygnus** (the swan).

In ancient times, there were no scientific instruments to know the directions during the



Ursa Major (Great Bear)



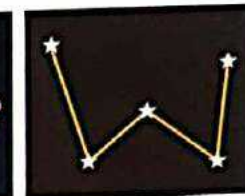
Locating The Pole Star



Scorpius (Scorpion)



Leo (Lion)



Cassiopeia
(W Or Inverted M Shape)

Some Other Prominent Constellations

night. So, people used the stars to determine the directions.

The brightest star in the north is the **Pole Star**. It is also called the **North Star**. Its position is fixed in the sky. The first two stars of the *Saptarishi* point to the **Pole Star**. They are called **pointer stars**. We can easily locate the Pole Star with the help of the *Saptarishi*.

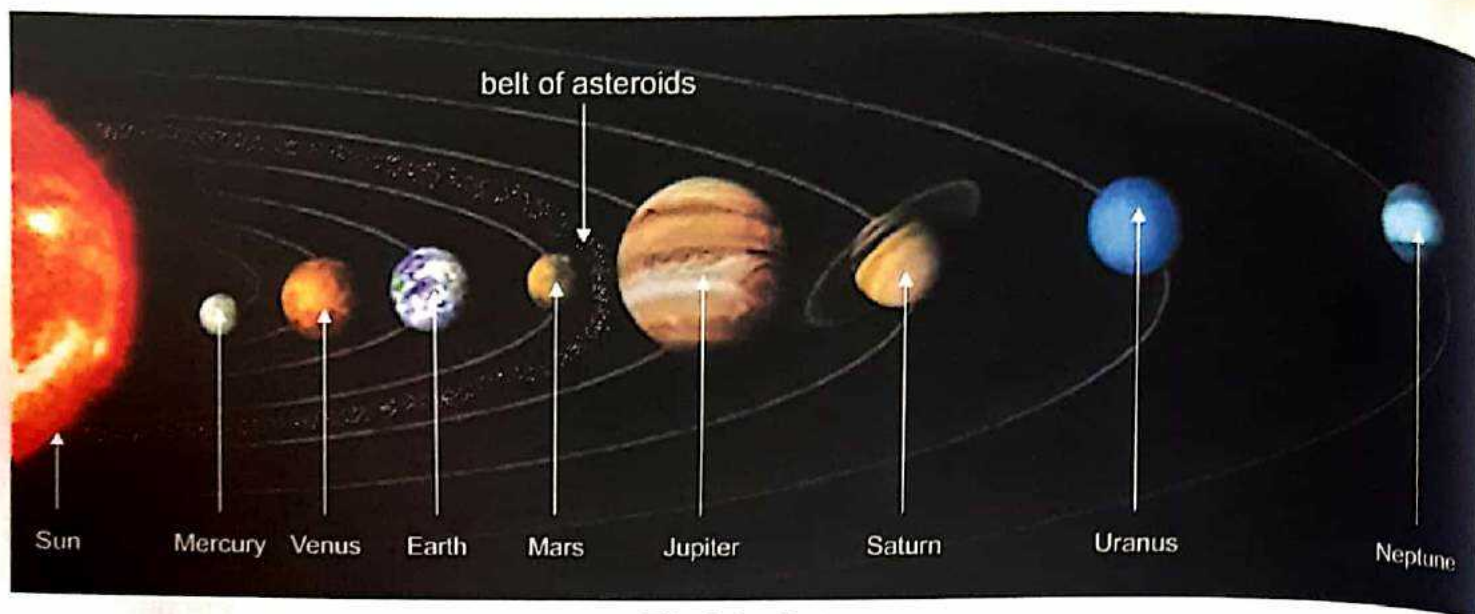
THE SOLAR SYSTEM

The Sun, the eight planets with their satellites, and some other heavenly bodies like asteroids, meteors and comets form the Solar system. The Sun is at the centre of the solar system.

THE SUN

The Sun is the largest member of the solar system. All the planets, satellites, asteroids and comets revolve around it. It is about 150 million km away from the Earth. It produces a lot of heat and light which is necessary for all forms of life on the Earth.

The surface temperature of the Sun is about 6,000°C. The Sun is also made up of hot gases. Its gravitational force keeps all the members of the solar system together. All the planets and their satellites shine because they reflect sunlight.



The Solar System

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

- The brightest star in the north is the
 (a) Pointer Star ☐ (b) Pole Star ☐
 (c) Saptarishi ☐
- The largest member of the solar system is the
 (a) Mercury ☐ (b) Jupiter ☐
 (c) Sun ☐

THE PLANETS

The planets are celestial bodies that do not have their own heat and light. They are spherical in shape. They revolve around the Sun in fixed paths called **orbits**. Most of them revolve from west to east. While revolving around the Sun, the planets also rotate on their own axes.

There are eight planets in our solar system. According to their distance from the Sun, they are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.

Scientists have categorised planets into two groups: (1) the inner planets (2) the outer planets. Mercury, Venus, Earth and Mars are the inner planets. They are close to the Sun. They are made up of rocks and stones. They are also known as the **terrestrial planets**.

The outer planets are Jupiter, Saturn, Uranus and Neptune. They are made up of gases. Thus, they are also known as **gas giants**.

Wonderful To Know

Two planets, Venus and Uranus, rotate from east to west while all other planets rotate from west to east.

THE EARTH—OUR PLANET

The Earth is the fifth largest planet in the solar system and is the third planet from the Sun. It is the only planet in the solar system that supports life.



The Earth As Seen From Space

The Earth is the habitat of many animals and plants. It is a unique planet in many ways. Among all the planets, it is at the most suitable distance from the Sun. Due to this appropriate distance, it has moderate temperature that makes life possible. The presence of water on the Earth also supports life.

When seen from the outer space, the Earth looks blue. It is due to the presence of water on its surface. Therefore, the Earth is also known as the **Watery Planet** or **Blue Planet**. Another unique feature is that due to the temperature which the Earth experiences, water is available in three forms – solid, liquid and gas.

Our Earth is surrounded by a blanket of air called **atmosphere**. It has gases like oxygen, nitrogen and carbon dioxide. These gases are necessary for life. The air on the Earth is rich in oxygen. This is necessary for survival. The atmosphere protects us from the harmful ultraviolet radiations coming from the Sun.

The atmosphere also traps the heat of the Earth. It stops the heat from escaping into outer space. It also prevents us from the harmful radiations of the Sun. It keeps our planet warm and suitable for living beings.

In ancient times, people thought that the Earth is flat, but it is not so. Astronauts who saw the Earth from the space, found it round. But it is not a perfect circle. It is bulging at the equator and flattened at the poles. This is a result of the rotation of the Earth on its axis.

OTHER PLANETS

Mercury

It is the closest planet to the Sun. It has no moon. During the day, the temperature of Mercury is 427°C and when it is night, the temperature is -183°C . It takes 88 days to complete one revolution around the Sun. It is named after the mythical Roman God, Mercury.



Mercury

Venus

It is the brightest and hottest planet of the solar system. It is named after the Roman Goddess of love and beauty. It is the second planet from the Sun. Its size is nearly equal to that of the Earth. Therefore, it is also known as the **Earth's twin**. Like Mercury, it also has no moon.



Venus

Mars

It is the planet next to the Earth in the solar system. It is named after the Roman God of war. It is also known as the **Red Planet** which is because of the presence of iron oxide on its surface that gives it a reddish appearance. Its rotation period is almost similar to the Earth. Mars has two known moons, Phobos and Deimos.



Mars

Jupiter

It is the largest planet of the solar system. A large part of it is made up of gaseous material. It is named after the mythical Roman God, Jupiter. It has 66 known moons revolving around it. Therefore, it is also known as a **Mini-Solar System**.



Jupiter

Saturn

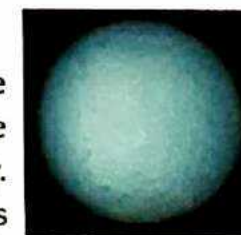
It is the most beautiful planet of our solar system. There are bright rings around its Equator. These rings are made up of icy particles, dust and gases. Saturn has 62 known moons.



Saturn

Uranus

It is the seventh planet from the Sun. It is named after the mythical Greek God of sky. Like Saturn, it also has rings around it.



Uranus

It has 27 moons known so far. A large part of it is made up of ice. Therefore, it is also known as the Ice giant.

Neptune

It is the eighth and the farthest planet from the Sun in the solar system. It is named after the mythical Roman God of sea. It is 17 times the mass of the Earth. It has 13 known moons.



Neptune

Wonderful To Know

A few years back, Pluto was considered the ninth planet of the solar system. In 2006, the International Astronomical Union (IAU) termed it as a **dwarf planet**. A dwarf planet is a spherical celestial body, much smaller than a planet, that revolves around the Sun.

THE SATELLITES

The satellites are celestial or heavenly bodies that revolve around the planets. The word 'satellite' means 'an attendant or a companion'. They are so called because they revolve around the planets.

The satellites rotate on their own axes. The satellites move around the planets from west to east.

Today, we know more than 160 satellites in our solar system. Mercury and Venus are the only planets that do not have any satellites. Like planets, satellites also do not have their own light. They shine because they reflect the light of the Sun.

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

1. This planet is also called the Red Planet.

- (a) Mars ☐ (b) Earth ☐
(c) Venus ☐

2. A celestial body that revolves around a planet, is called a

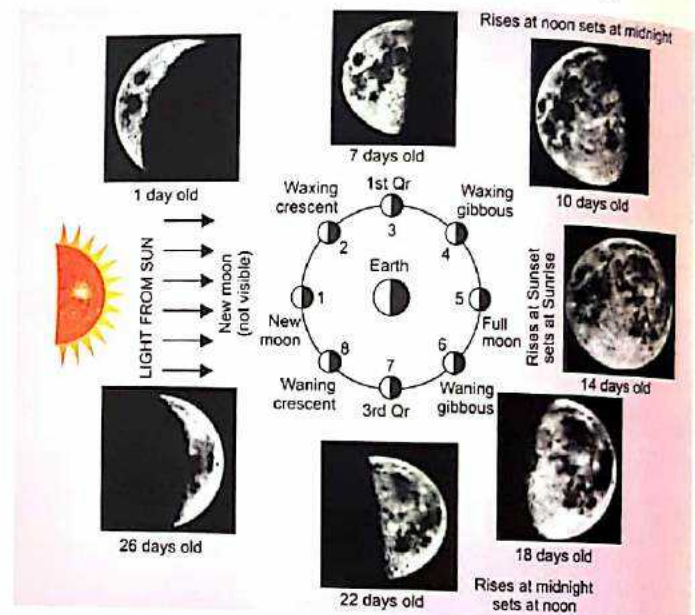
- (a) satellite ☐ (b) comet ☐
(c) asteroid ☐

The Moon

The moon is the only natural satellite of our planet Earth. It is the closest celestial body to the Earth. It is about 384,400 km away from the Earth. It has no light of its own. It reflects the light of the Sun.

The moon appears to increase and decrease in size. It appears at different positions and in different shapes at different times. These are known as the **phases of the moon**. The **lunar calendar** is based on the phases of the moon.

Phases are caused due to the revolution of the moon around the Earth. The moon takes 27 days and 8 hours to complete one revolution around the Earth. The visible shape of the Moon that reflects sunlight, changes from night to night.



Phases Of The Moon

When the moon travels from the new moon to the full moon phase, the visible portion increases. This is called **waxing of the moon**. When the moon journeys from the full moon to the new moon phase, the visible portion decreases and the moon is said to be **waning**.

Actually, the moon is constantly half bright and half dark but the angle of view from the Earth keeps on changing.

When the dark hemisphere of the moon faces the Earth, we call it a **new moon night** or **Amavasya**. When the bright hemisphere of the moon faces us, we call it a **full moon night** or **Poornima**.

Sometimes, when the moon comes between the Sun and the Earth, it casts its shadow on the Earth. This is called an **eclipse**. When it covers the Sun completely, a **total solar eclipse** occurs. It becomes dark in the day time. When the Earth comes between the Sun and the moon, a lunar eclipse occurs.

There is no air and water on the moon. It does not have an atmosphere like our Earth. Thus, there is no life on the moon. The moon is very hot in the day (120°C) and very cold in the night (-120°C).

On July 21, 1969, two American Astronauts, Neil Armstrong and Edwin Aldrin landed on the moon. They explored the surface of the moon.

Wonderful To Know

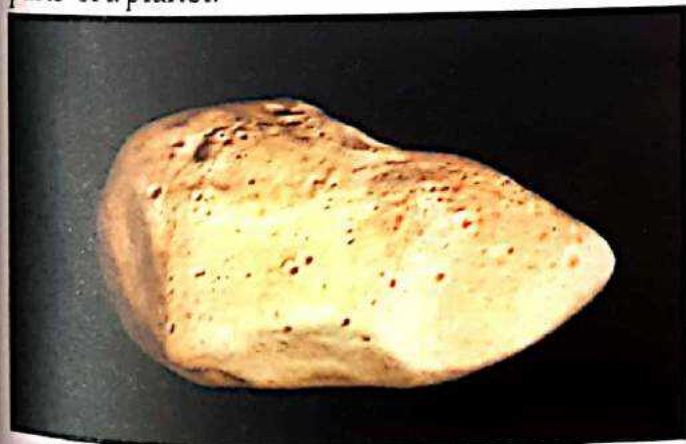
Human-made satellites are called artificial satellites. INSAT, IRS, EDUSAT are Indian artificial satellites. Artificial satellites help us in weather forecasting, telecommunication and various other activities. Because of them, we are able to see cricket matches and other TV programmes in our homes.



ASTEROIDS

Asteroids are small planet-like heavenly bodies found in the solar system. They are large pieces of rocks floating in space. Most of them are located between Mars and Jupiter. This area of the space is also known as the **asteroid belt**.

They are also called **planetoids** or **minor planets**. Scientists believe that asteroids are the broken parts of a planet.



An Asteroid

METEORS

In the night, you must have seen some bright streaks of light moving across the sky with great speed. These are called **meteors**. They are also called **shooting stars**.

Meteors are small pieces of rocks. Like many heavenly bodies, they also revolve around the Sun. They cannot be seen as they are very small. The meteors can be seen in the sky only when they enter the Earth's atmosphere. Most of them burn up and become gases. Some big meteors do not burn up completely. They reach the surface of the Earth and are called **meteorites**.



A Meteor

When they hit the Earth, they create large depressions known as **craters**. Many such craters are found throughout the world. Some of the famous craters can be seen at Ramgarh in Rajasthan and Arizona in the USA. The crater at Arizona in the USA, is the largest known crater in the world.



The Meteor Crater At Arizona (USA)

Many meteorites have been collected by scientists. They are useful in the study of our solar system. Most meteorites contain a large amount of iron.

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

- are called shooting stars.
(a) Satellites ☐ (b) Comets ☐
(c) Meteors ☐
- The unburnt part of a meteor that reaches the surface of the Earth is a
(a) meteorite ☐ (b) Nebula ☐
(c) asteroid ☐

COMETS

Comets are celestial bodies made up of snow and rocky dust. They also revolve around the Sun in their own orbit. When comets reach near the Sun, they develop a long tail that starts glowing. The

tail is thousands of kilometres long. In the past, people considered comets as bad omens. Scientists believe that there are about 2 billion comets orbiting the Sun.

The most famous comet is the **Halley's comet**. It can be seen once in every 76 years. It was last seen in 1986. There are some comets that take even more time than Halley's comet to orbit the Sun.



The Halley's Comet

Points To Remember

- All objects that we see in the sky are called celestial or heavenly bodies.
- A light year is the distance travelled by light in one year.
- The Sun is at the centre of the solar system.
- The planets are celestial bodies that do not have their own heat and light.
- The Earth is the only planet in the solar system that supports life. It is also known as the 'Watery Planet' or 'Blue Planet'.
- Jupiter is the largest planet of the solar system.
- Mars appears reddish in colour due to the presence of iron oxide. Therefore, it is also called the 'Red Planet'.
- The moon is the only natural satellite of our planet Earth.
- The other heavenly bodies found in the solar system are asteroids, meteors and comets.

Exercise

Quick Revision

[Use **Cordova Smart Class Software** on the **smart board** in class to do these exercises.]

A. Multiple Choice Questions (MCQs)– Tick (✓) the correct options.

- The universe started with a very big explosion called the
(a) galley ☐ (b) Big Bang ☐ (c) Milky Way ☐

2. Clouds of dust and gas in space form stars. These clouds are called

(a) Comets ☐

(b) Ursa Major ☐

(c) Nebula ☐

B. Fill in the blanks.

1. A galaxy is a group of billions of and of dust and gases.
2. Stars are huge heavenly bodies made up of hot
3. The groups of stars forming different patterns are called
4. Our Earth is surrounded by a blanket of air called the

C. Write 'T' for true and 'F' for false statements.

1. The Earth is the fourth planet from the Sun. ☐
2. Venus is the brightest and hottest planet of the solar system. ☐
3. Phases of moon are caused due to revolution of the moon around the Sun. ☐
4. Comets are also called shooting stars. ☐

Answer The Following

A. Multiple Choice Questions (MCQs)— Tick (✓) the correct options.

1. The Sun belongs to the galaxy.

(a) Hedron ☐

(b) Plume ☐

(c) Milky Way ☐

2. The planet closest to the Sun is

(a) Earth ☐

(b) Mercury ☐

(c) Jupiter ☐

B. Short Answer Questions

1. Write a short note on the formation of the universe.
2. What are satellites?
3. Which is the most famous comet? What is special about it?
4. What are meteorites?

C. Long Answer Questions

1. Which planet in the solar system supports life? How?
2. Discuss the salient features of our planet Earth.
3. What are planets? List all the planets according to their distance from the Sun and write their distinctive features.
4. What do you understand by the terms 'waning' and 'waxing'?

D. HOTS (Higher Order Thinking Skills) Questions

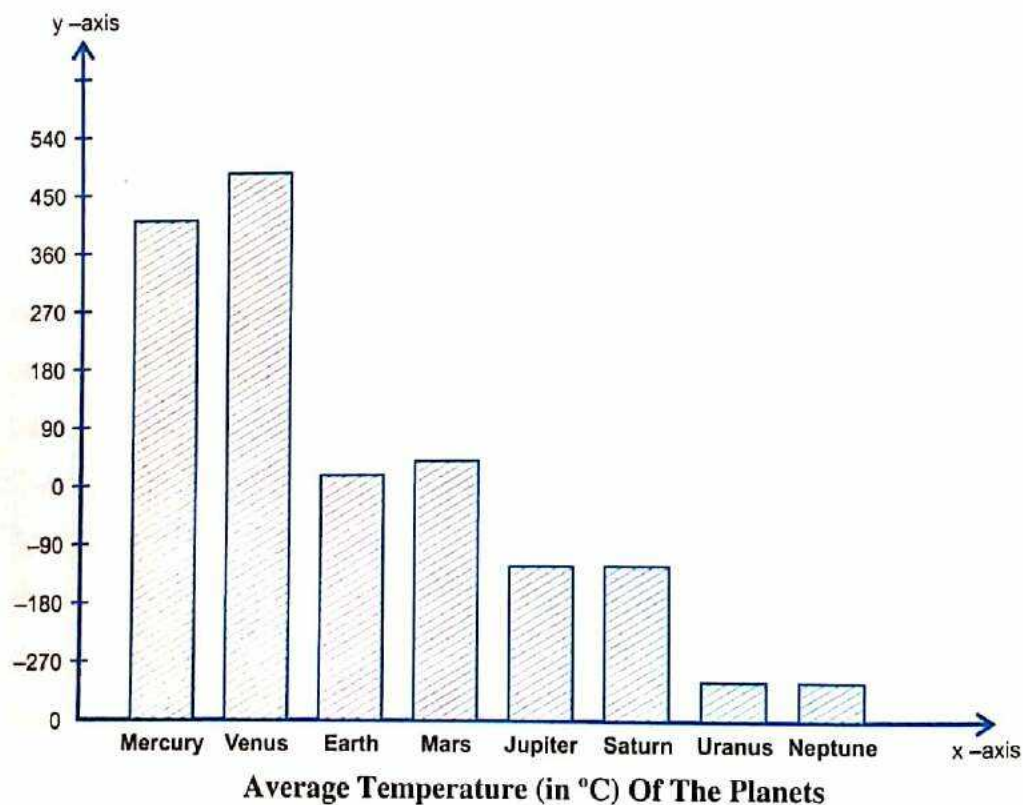
1. How does an artificial satellite differ from a natural satellite?
2. Why can the moon not support life?

E. Value Corner

The Sun and other heavenly objects together make up a joint family. Do you think, living in a joint family is good? Why/Why not?

Activity

- Draw a neatly labelled diagram showing the solar system.
- Indian lunar mission 'Chandrayaan I' found a large quantity of ice on the moon. Form groups of 4 or 5 students in your class and discuss: **Possibilities of human settlement on the moon in future.**
- **Study the bar graph given below and answer the following questions:**
 1. Which is the hottest planet?
 2. Which is the coldest planet?
 3. Which planet has temperature between -90°C to 90°C ?
 4. What is the approximate temperature of Venus?
 5. What is the average temperature of Mercury and Earth?
 6. Which two planets have the same temperature?



- **Make your own solar system:**

Solar System Model

Nicolaus Copernicus (1473-1543) was an astronomer who developed the Copernican system, a model of the solar system in which all the planets orbit the **Sun** **Maturas**.

Materials Required :

- (a) A round piece of cardboard about 1 ft. across
- (b) Lots of colours of oak tag (or construction paper)
- (c) Scissors
- (d) A tape
- (e) Sketch pens, crayons or pencil

Procedure :

- Draw a line from top to bottom and left to right. The meeting point of the line will be the position of the Sun.
- Using a compass, draw 8 circles around the centre. These will be the orbits of the planets.
- Punch a series of holes in the cardboard using a large nail.
- Cut circles from oak tag to represent the Sun and each of the planets according to their size (refer page 106). Don't forget to make beautiful rings around the Saturn.
- Tape a length of string to each planet. Lace the other end of each string through the correct hole in the cardboard circle. Tape the end of the string to the top side of the cardboard. Adjust the length of the strings so that the planets (and the Sun) all lie in the plane.
- To hang your model, tie three pieces of strings to the top of the cardboard and then tie these three together. Tie them to a longer string. Your solar system is ready, you can hang it in your room.
- You can get more ideas from any of the following websites:
 - <http://www.howtodothings.com/education/how-to-make-a-solar-system-model>
 - http://www.show.com/how_4710124_maps-solar-system-school-project.html
 - <http://howtomakestuff.com/2008/04/09/school-projects-5/>

- Collect the following information regarding planets and complete the table given below.

Planet	Diameter in kilometres	Time Taken		Distance from Sun in Kilometres	
		one rotation	one revolution	Maximum	Minimum
Mercury					
Venus					
Earth					
Mars					
Jupiter					
Saturn					
Uranus					
Neptune					

Surfing is Interesting

- Go to www.si.edu and www.nasm.edu and see the pictures of the universe.
- Visit www.nasa.gov/worldbook/moon_worldbook.html to read about the moon.

Life Skill

- Wake up early in the morning and see the Sun rising. Spending time with nature helps us to relax.
- Observe the sky at night. Try to locate the Pole Star with the help of pointer stars. You can take the help of your elders. Also, try to locate some of the constellations.



The Globe— Latitudes And Longitudes



Key Terms

axis	: an imaginary line joining the two poles	local time	: the time according to the longitude of a place
Equator	: an imaginary line that divides the Earth into two equal halves, known as hemispheres	longitude	: a set of imaginary circular lines drawn vertically from the North Pole to the South Pole
Greenwich Meantime	: the local time of Prime Meridian or 0° longitude	Poles	: end points of the axis
latitude	: the imaginary lines parallel to the Equator, running from west to east	Prime Meridian	: the 0° longitude passing through Greenwich near London
		Standard Time	: the local time of the standard meridian of a country

Use Cordova Smart Class Software on the smart board in class to make learning enjoyable.

Our Earth is a unique planet. Photographs taken by astronauts and orbiting satellites prove that the Earth is spherical in shape but it is not a true sphere. It is slightly bulging at the Equator and flattened at the poles. The polar diameter (12,712 km) and circumference (40,000 km) are slightly less than the equatorial diameter (12,756 km) and circumference (40,090 km).

The spherical representation of the Earth is called the **globe**. The globe is a small model of the Earth which represents continents, oceans, countries, etc. It is very easy to locate a place on a flat surface with reference to another place. But it is difficult to locate a place on a globe because of its spherical shape. Thus, to find the location or direction of a place we need certain points of reference and lines.

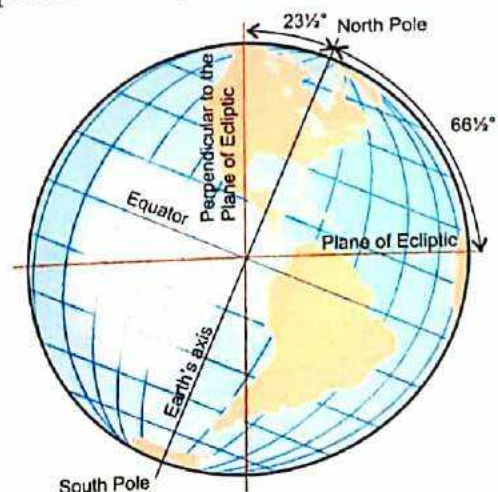
The Earth rotates or spins upon an imaginary axis. It is inclined at an angle of $23\frac{1}{2}^\circ$. We find two poles situated at the end points



The Globe

of the axis. The pole pointing towards the Pole Star (North) is called the **North Pole**. The pole opposite to it is called the **South Pole**. Between the North Pole and the South Pole, there lies an imaginary line called the **Equator**. It divides the Earth into two equal parts or hemispheres.

The part of the Earth above (north of) the Equator is called the **Northern Hemisphere**. The part of the Earth below (south of) the Equator is called the **Southern Hemisphere**. India is in the Northern Hemisphere while Australia is in the Southern Hemisphere. Thus, there are three reference



Axis, Poles And The Equator

points for describing the location of a place on the surface of the Earth:

1. The North Pole
2. The South Pole
3. The Equator

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

1. A spherical representation of the Earth is called a
(a) map ☐ (b) globe ☐
(c) sphere ☐
2. The imaginary line that divides the Earth into two equal parts is known as the
(a) hemisphere ☐ (b) Equator ☐
(c) axis ☐

PARALLELS AND MERIDIANS

A globe has two types of circles. The first type of circles run from west to east and are parallel to the Equator are called **parallels** or **latitudes**. The second type of circles run from north to south and pass through the North Pole and the South Pole. Half of these circles between the North Pole and the South Pole are called **Meridians** or **longitudes**.

The parallels and the meridians intersect each other at right angles (90°) and the network of these lines on a globe is called the **Earth's grid**. These lines help to locate the position and direction of a place on a globe.

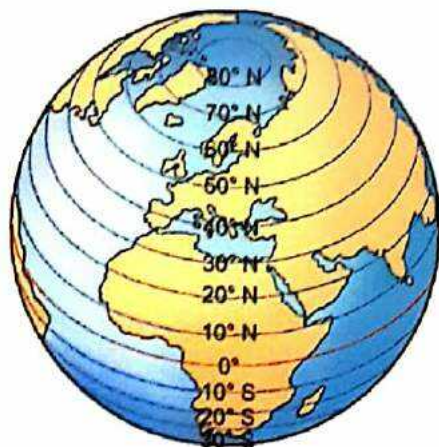
LATITUDES OR PARALLELS

The imaginary lines that run from west to east and are parallel to the Equator in the form of circles and lie on both sides of the Equator are known as **latitudes** or **parallels**. The latitude of a place is its angular distance, north or south of the Equator. It is measured in **degrees** ($^\circ$). Each degree is divided into 60 equal parts called **minutes** ($'$). A minute is further divided into 60 equal parts called **seconds** ($''$).

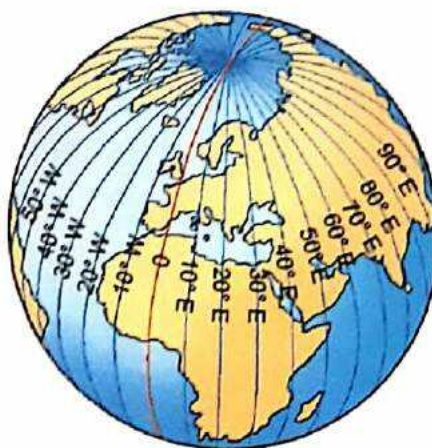
The Equator represents the zero degree latitude. Therefore, **all parallels north of the Equator are called North Latitudes**. All parallels south of the Equator are called **South Latitudes**. Therefore, the value of every latitude is followed by the letter 'N' or 'S' for north and south, respectively.

There are 90 parallels in the Northern Hemisphere and 90 in the Southern Hemisphere. These imaginary lines are used as reference points to locate a place on the globe. Thus, there are 181 parallels, including the Equator. **Cities and towns that are near to the Equator are said to be in the low latitudes**. The places near the poles are said to be in the **high latitudes**.

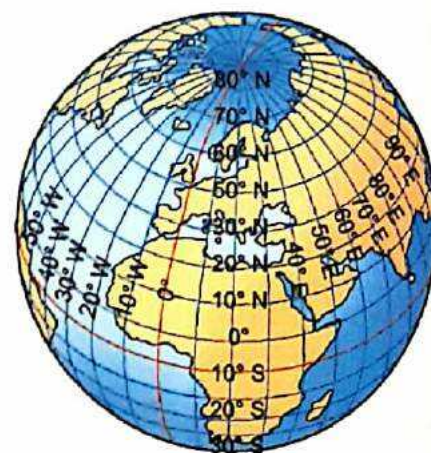
All parallels or latitudes are in the form of complete circles. The **Equator is the longest parallel**. The length of the parallels starts decreasing as one moves away from the Equator towards the poles and vice-versa. The farthest latitudes, the North Pole (90°N) and the South Pole (90°S), are in the form of imaginary points.



Parallels



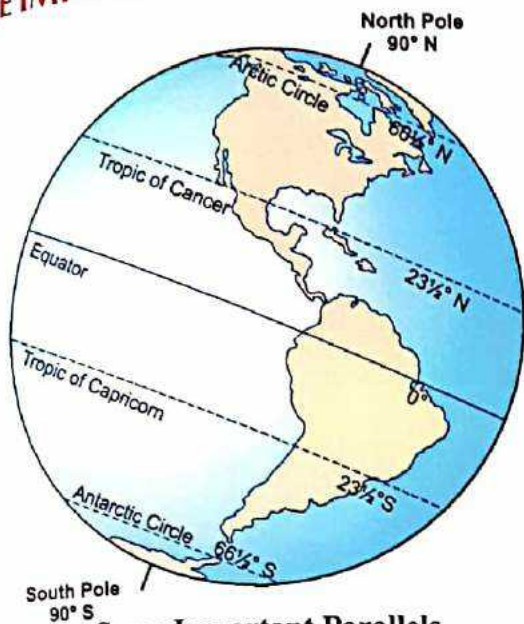
Meridians



Earth's Grid

The distance between any two parallels at an interval of one degree shown on the globe is 111 km. All of them are located at an equal distance from each other.

SOME IMPORTANT PARALLELS



Some Important Parallels

We know that the Equator is a very important reference line. Besides the Equator, there are some other parallels which are important because they divide the Earth into different zones. They are:

- (1) The Tropic of Cancer ($23\frac{1}{2}^{\circ}\text{N}$)
- (2) The Tropic of Capricorn ($23\frac{1}{2}^{\circ}\text{S}$)
- (3) The Arctic Circle ($66\frac{1}{2}^{\circ}\text{N}$)
- (4) The Antarctic Circle ($66\frac{1}{2}^{\circ}\text{S}$)

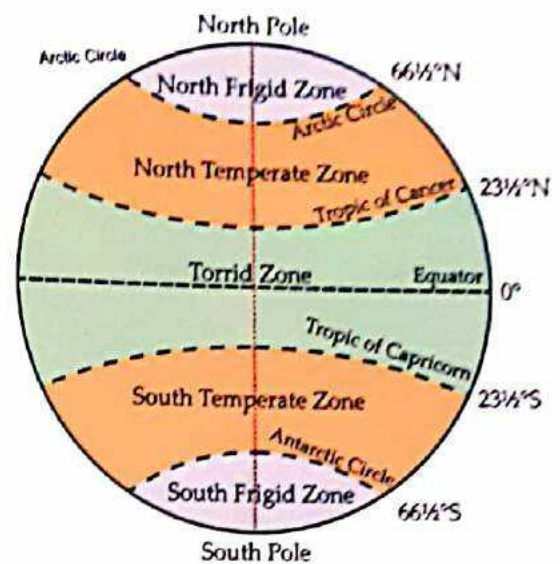
Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

1. Lines running parallel to the Equator are called
 (a) longitudes ☐ (b) latitudes ☐
 (c) time line ☐
2. The total number of parallels are
 (a) 90 ☐ (b) 41 ☐
 (c) 181 ☐

HEAT ZONES OF THE EARTH

The above mentioned parallels help us to divide the Earth into three heat zones. The places and



Different Heat Zones

cities that lie in different heat zones have different types of climates. It is so because different heat zones receive different amounts of sunlight due to the spherical shape of the Earth. Therefore, those places that receive the greatest amount of sunlight are hotter than those places that receive less amount of sunlight.

Torrid Zone

The word 'torrid' means 'hot'. All places located between the Tropic of Cancer and the Tropic of Capricorn experience vertical rays of the Sun twice in a year. Therefore, this region receives the maximum amount of sunlight and is called the **torrid zone**. The climate in this region is very hot.

Temperate Zone

There are two temperate zones— (1) the **north temperate zone** and (2) the **south temperate zone**. These zones receive slanting rays of the Sun, so they receive less heat. The north temperate zone lies in the Northern Hemisphere between the Tropic of Cancer and the Arctic Circle. The south temperate zone is located in the Southern Hemisphere between the Tropic of Capricorn and the Antarctic Circle.

Frigid Zone

The word 'frigid' means cold. The places at the poles, that remain frozen throughout the year, come in the frigid zone.

There are two frigid zones in the world– (1) the **north frigid zone** and (2) the **south frigid zone**. The north frigid zone lies between the Arctic Circle and the North Pole. The south frigid zone lies between the Antarctic Circle and the South Pole.

Both frigid zones are located at the greatest distance from the Sun. These areas receive extreme slanting rays of the Sun, due to which they are extremely cold.

Wonderful To Know

Africa is the only continent through which three major parallels pass—the Tropic of Cancer, the Equator and the Tropic of Capricorn.



Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

1. The zone that lies between the Tropic of Cancer and the Tropic of Capricorn is called the zone.

(a) frigid ☐ (b) torrid ☐

(c) temperate ☐

2. Total number of heat zones of the Earth are

(a) two ☐ (b) three ☐

(c) four ☐

MERIDIANS OR LONGITUDES

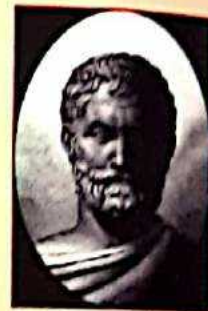
Longitudes or meridians are a set of imaginary lines running from the North Pole to the South Pole. They are used as points of reference for locating places in east and west.

The meridian passing through Greenwich (a place few kilometres east of London in the UK) is known as the **0° Meridian**. It is also known as the **Prime Meridian**. Actually, the longitude of a place is the angular distance of that place lying east or west of the Prime Meridian. The Prime Meridian

divides the globe into Eastern and Western Hemispheres. For example, if a person is in the Eastern Hemisphere, then his/her longitude is measured in degrees east. If one is in the Western Hemisphere, then his/her longitude is measured in degrees west. There are 180 meridians to the east and 180 meridians to the west sides of the Prime Meridian. Therefore, in total there are 360 meridians or longitudes. At the Equator, the distance between two meridians is the greatest i.e., about 111 km. The distance between the meridians decreases as one travels towards the poles and vice-versa. All the meridians meet at the poles.

Wonderful To Know

Eratosthenes was the Greek geographer who invented the system of longitudes and latitudes to locate places on the Earth. He was the first person to calculate the circumference of the Earth. He also coined the term geography.



LOCATING PLACES ON THE GLOBE

Look at the globe given on page 116, the latitudes and longitudes are drawn upon it. They intersect each other and form a network on the surface of the globe. This network is known as **grid**. We can find the location of any place on the globe with the help of the grid. To locate the exact position of any

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

1. The word 'frigid' means

(a) hot ☐ (b) cold ☐

(c) wet ☐

2. The places that remain frozen throughout the year come in the zone.

(a) temperate ☐ (b) torrid ☐

(c) frigid ☐

place, we should know its position in terms of latitude and longitude.

Look at the location of New Delhi on the globe. The latitude of New Delhi is 28.38°N and its longitude is 77.12°E . So, the point of intersection of 28.382°N and 77.122°E is the location of New Delhi.

LONGITUDE AND TIME

We calculate the time according to the position of the Sun. The position of the Sun and the Earth keeps on changing due to the rotation of the Earth upon its axis. One rotation of the Earth upon its axis gives us the measure of the day.



Longitude And Time

There are 24 hours in a day. Due to the rotation of the Earth, the Sun appears to move across the sky from east to west. But actually, the Earth rotates from west to east direction and completes one circle which has 360 degrees. Thus, the Earth rotates through 360° of longitudes in about 24 hours. Therefore, our Earth rotates through 15° of longitudes in one hour and 1° of longitude in four minutes. As the Earth rotates, every meridian faces the Sun, once in every 24 hours. When the Sun shines exactly overhead or is at the highest point in the sky, it is midday or 12 noon at that meridian.

Wonderful To Know

The word 'Meridian' is derived from the Latin word 'Meridianus' which means midday. AM stands for **ante-meridian** which means before noon. PM stands for **post-meridian** which means afternoon.



The longitude passing through Greenwich has been taken as the standard meridian by all the countries of the world. When it is midday or noon time in Greenwich, all the places along the Prime Meridian have noon time. It also means that if any meridian is facing the Sun, all the cities located on that meridian will have noon time.

The Earth keeps on rotating on its axis from west to east. Therefore, the cities and places located towards the east of the Prime Meridian have sunrise earlier than those cities which are situated towards the west.

Cairo (31°E longitude) experiences sunrise before Canton (81°W longitude) and Kolkata (88°E longitude) experiences sunrise before New York (74°W longitude). Thus, the cities towards the east of Greenwich are ahead of the Greenwich time. Cities located west of the Prime Meridian will experience noon after Greenwich. Therefore, they are said to be behind the Greenwich time.

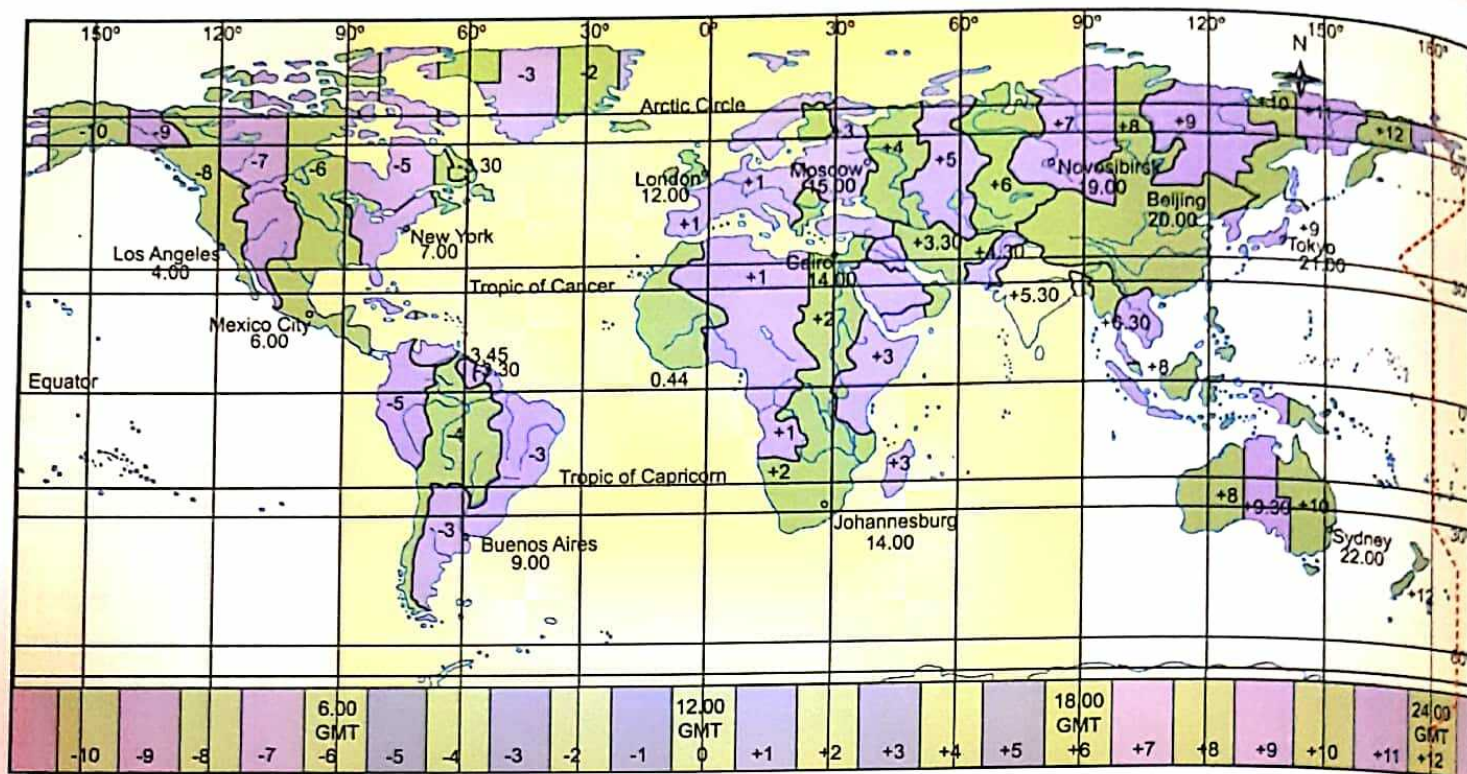
Thus, we observe that the difference in time between any two places is due to the fact that they are located at different longitudes or meridians.

LOCAL TIME AND STANDARD TIME

The local time of an area depends on its longitudes. But it differs from place to place because these places are situated on different longitudes. This causes a great inconvenience for the country as a whole.

To overcome this problem, the time of a central place situated on a particular meridian is taken as the uniform time for the whole country. This is called the **standard time** of that country. In India, the time of Allahabad city which is situated at $82\frac{1}{2}^{\circ}\text{E}$ longitude is used as the standard time for the whole country. Thus, the meridian $82\frac{1}{2}^{\circ}\text{E}$ is known as the Standard Meridian of India.

As Allahabad is located on an eastern longitude, it experiences sunrise ahead of Greenwich. For every degree of longitude, there is a difference of 4



World Time Zones

minutes. Therefore, the Indian standard time is $82\frac{1}{2} \times 4$ minutes = 330 minutes ahead of GMT or we can say Indian Standard Time is ahead of GMT or Greenwich Mean Time by 5 hours and 30 minutes.

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

- The Earth rotates through 360° of longitudes in about

(a) 24 hours	☐	(b) 5 hours	☐
(c) 365 days	☐		
- The Standard Meridian of India is

(a) $82\frac{1}{2}^\circ\text{E}$	☐	(b) $82\frac{1}{2}^\circ\text{S}$	☐
(c) $82\frac{1}{2}^\circ\text{W}$	☐		

TIME ZONES

Some countries are very big. For example, the USA, Canada, Australia and Russia. A large number of longitudes pass through these countries. Thus, one standard time for these countries is impossible for practical purposes.

Therefore, to solve this problem, the International

Prime Meridian Conference, held in 1884, agreed to divide the whole world into 24 standard time zones of one hour each. Each zone runs from north to south in the form of a narrow belt. In most cases, the west-east boundaries of every zone have been adjusted with the political boundaries of the countries.

The meridian or longitude that passes through the middle of each time zone has been chosen to represent the standard time of that time zone. In most of the cases, the standard time of time zones is ahead or behind GMT by exact number of hours. Only in the case of a few countries, the difference is half an hour. Some countries of the world fall under a number of time zones because it is not possible to select one time zone due to its large area, like Russia which has 11 time zones, while Canada has 6 time zones.

INTERNATIONAL DATE LINE

The 180° meridian is called the **International Date Line**. 180°E and 180°W is the same meridian. But it is not a straight line. It is drawn on the map in a zig-zag manner to accommodate countries or

groups of islands on one side of it. If we cross this line from west to east, we adjust our watches by

adding a day. But we subtract a day when we cross the International Date Line from east to west.

Points To Remember

- A spherical representation of the Earth is called a globe.
- Three reference points describing the location of a place on the surface of the Earth are—the North Pole, the South Pole and the Equator.
- Heat zones of the Earth include—torrid zone, temperate zone and frigid zone.
- The meridian passing through Greenwich is known as the 0° Meridian or Prime Meridian.
- We calculate the time according to the position of the Sun.
- The meridian $82\frac{1}{2}^\circ\text{E}$ is known as the Standard Meridian of India.
- The 180° meridian is called the International Date Line.

Exercise

Quick Revision

[Use **Cordova Smart Class Software** on the **smart board** in class to do these exercises.]

A. Multiple Choice Questions (MCQs)—Tick (✓) the correct options.

- The meridian passing through Greenwich is known as
 (a) 0° Meridian ☐ (b) latitude ☐ (c) timeline ☐
- We calculate the time according to the position of the
 (a) Sun ☐ (b) moon ☐ (c) both ☐

B. Fill in the blanks.

- The places near the poles are said to be in the latitudes.
- The places at the poles remain throughout the year.
- is the imaginary line passing through the centre of the Earth.
- The zone receives slanting rays of the Sun.
- Cairo experiences sunrise before.....

C. Match the following.

- | | |
|----------------------------|---|
| 1. International Date Line | (a) imaginary lines parallel to Equator |
| 2. latitudes | (b) 180° meridian |
| 3. longitude | (c) $82\frac{1}{2}^\circ\text{E}$ |
| 4. Prime Meridian | (d) the 0° longitude |
| 5. Allahabad | (e) $23\frac{1}{2}^\circ\text{N}$ |
| 6. The Tropic of Cancer | (f) imaginary lines running from North Pole to South Pole |

Answer The Following

A. Multiple Choice Questions (MCQs)–Tick (✓) the correct options.

1. The world has been divided into.....time zones.

(a) 15 ☐

(b) 20 ☐

(c) 24 ☐

2. The standard meridian of India passes through

(a) Delhi ☐

(b) Haridwar ☐

(c) Allahabad ☐

B. Differentiate between the following.

1. latitudes and longitudes

2. torrid zone and frigid zone

C. Short Answer Questions

1. Name five countries located in the Northern Hemisphere.

2. Write about standard time with reference to India.

3. Define (the Earth's) grid.

4. What is International Date Line?

D. Long Answer Questions

1. Write the main features of the parallels.

2. Why do different heat zones have different climates? Write briefly about the temperate zone.

3. Discuss the importance of longitudes.

E. HOTS (Higher Order Thinking Skills) Questions

1. What would have happened if the International Date Line passed through Greenwich?

2. Why does the time of a place not depend on its latitude?

F. Value Corner

The local time of the Standard Meridian of a country is known as Standard Time. What is time to you? Do you think you utilise your time to its fullest? How? Explain.

Activity

- Observe the globe and note the latitude and longitude of the following cities in the chart given below.

Cities	Latitude	Longitude
Chennai		
Delhi		
New York		
Sydney		
Pune		
Singapore		
California		
Shanghai		

Let us understand this concept of time with the help of an example. There are two places — place 1 and place 2, located at 120° E and 120° W longitudes, respectively. The time at the Greenwich or Prime Meridian is 12 noon. Find the local time at place 1 and place 2.

At Place A

- The difference of longitude between place 1 and the Prime Meridian (Greenwich) is 120 degrees towards the east.
- Therefore, the difference of time between place 1 and the Prime Meridian is 120×4 minutes = 480 minutes or 8 hours.
- As place 1 is located towards the east of the Prime Meridian, the local time at place 1 will be 8 hours ahead of the Greenwich Mean Time (GMT), i.e. 8.00 pm.

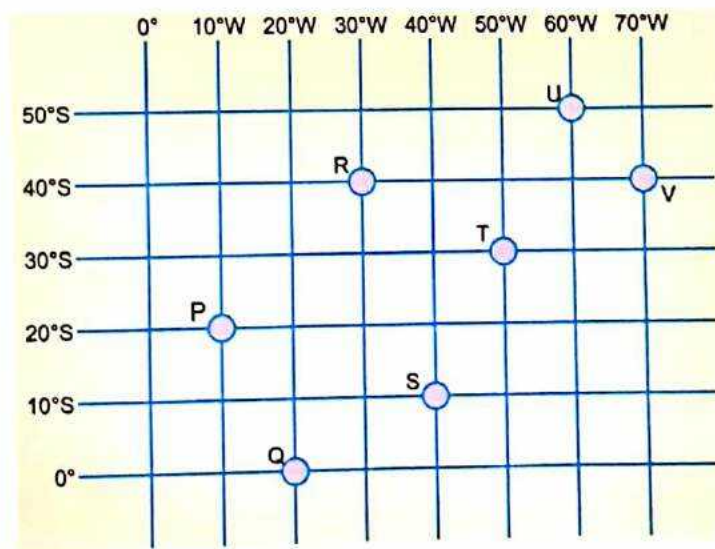
At Place B

- The difference of longitude between place 2 and the Prime Meridian is 120 degrees towards the west.
- Therefore, the difference of time between place 2 and the Prime Meridian is 120×4 minutes = 480 minutes or 8 hours.
- As place 2 is located towards the west of the Prime Meridian, the local time at place 2 will be 8 hours behind GMT, i.e. 4.00 a.m.

Now, find the time of places in the following latitudes. The time at Greenwich is 12 noon.

20° E 140° W 125° W 109° W 135° E 95° W 65° E

- Observe the given figure and write the geographical locations of the stations P, Q, R, S, T, U and V.



- Find the names of the states of India which lie on the Tropic of Cancer. Give a glimpse of their specialities — culture, capital, rivers or any other unique features. You may put the information in a colourful folder.

- Making A Spinning Globe

Material required:

- (a) plastic ball (b) knitting needle

Procedure :

Pierce a plastic ball with a knitting needle as shown in the figure. The two points through which the needle passes, are considered as the North Pole (at the top) and South Pole (at the bottom), respectively. Now, suppose that the pin needle is the axis around which the Earth rotates. Now, spin the ball from west to east while holding the bottom of the needle.



Surfing is Interesting

To know more about latitudes and longitudes, please visit :

<http://www-istp.gsfc.nasa.gov/stargaze/Slatlong.htm>

To read more about time zones, please visit:

http://en.wikipedia.org/wiki/Time_zone

To know more about heat zones please, visit :

http://en.wikipedia.org/wiki/Geographical_zone

To play a game on latitude and longitude, please visit:

<http://www.kidsgeo.com/geography-games/latitude-longitude-map-game.php>

Life Skill

- To become more organised in life, divide your time and work. Make a timetable of your daily routine.
- 'Around the World in Eighty Days' is a classic adventure novel by Jules Verne. In this novel, the main character Phileas Fogg and his attendant Passepartout attempt to circumnavigate the world in just eighty days to win a bet set by Fogg's friends. Read the novel to find out whether Fogg could circumnavigate the world on time and win the bet after crossing the International Date Line.

The Mystery Of The Midnight Sun

Snigdha went to a library and read about the 'Land of the Midnight Sun'. She approached her grandmother to know more about it.

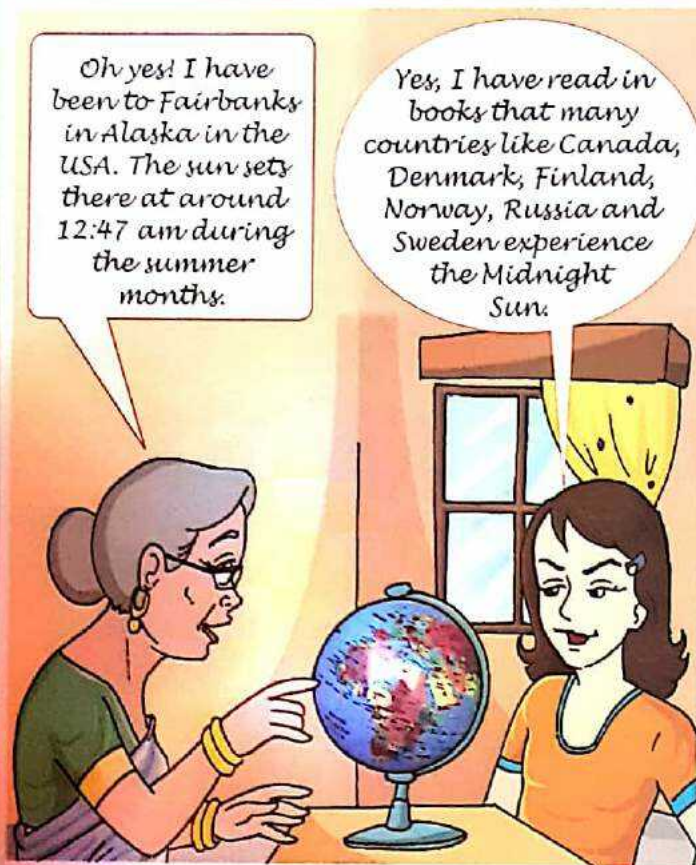
Grandma, do you know that Greenland is known as the 'Land of the Midnight Sun'?

Yes, Snigdha, I know. In fact, there are many countries that experience the Midnight Sun.

Grandma, please tell me the mystery of the Midnight Sun. I have heard that the Sun never sets for many days at a stretch in such countries. Is that so?

Yes, Snigdha. The Midnight Sun is a natural process occurring in summer months at the Arctic circle and at the Antarctic circle. The Sun is visible even at midnight. It happens in the areas near the poles only.

That's so amazing Grandma, have you visited such a place?



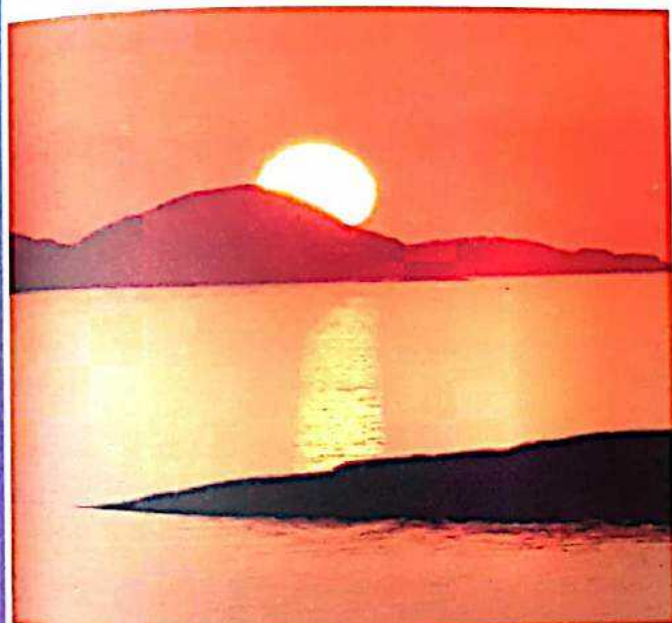
Midnight Sun In Alaska

Singitha, you must visit Norway during summer vacation between May 14 to July 29.

Indeed Grandma! I too want to visit the land of the Midnight Sun soon.



Yes, we will surely plan it some time. But till then I will learn more about these places through the internet, Grandma.



During summer, the sun does not set above the Arctic Circle. In fact, this phenomenon is what helps to define the Arctic Circle. Like the equator, the Arctic Circle is an imaginary line. It is defined as the latitude above which the sun does not set on the day of the summer solstice.

North of the Arctic Circle, periods of constant sunshine last for up to six months of the year at the North Pole. The opposite is also true for parts of the year, though. Above the Arctic Circle, the sun never rises on the day of the winter solstice. Hence, it is always day for half of the year and always night for the other half of the year.

There are several countries with areas within or that border the Arctic Circle. Many people call such areas "the land of the midnight sun," because in summer, the sun can often be seen past midnight. Some of these areas include the northmost parts of Canada, Greenland, Finland, Norway, Sweden, Russia, Alaska and Iceland.

This phenomenon occurs because the Earth is tilted on its axis by $23\frac{1}{2}$ degrees. This means that the sun only rises and sets once each year.

Of course, these phenomena are not limited to only northern areas. They also occur in southern regions near the Antarctic Circle.

People living in these areas eventually get used to the constant sunlight/darkness for long periods of time.



Key Terms

aphelion : position of the Earth on 4 July of every year when the distance between Earth and Sun is maximum (151 million km)

equinoxes : the positions of the Earth in its orbit on 21 March and 23 September

perihelion : position of the Earth on 4 January every year when the distance between the Sun and the Earth is minimum (146 million km)

revolution : movement of the Earth around the Sun in a period of one year

rotation : the spinning of the Earth upon its axis in about 24 hours

seasons : divisions of the year marked by distinct weather patterns

solstices : the positions of the Earth in its orbit on 21 June and 22 December

Use Cordova Smart Class Software on the smart board in class to make learning enjoyable.

In ancient time, it was believed that the Earth is in the rest position and other celestial bodies move around it. However, **Nicolaus Copernicus** proved that the Earth only appeared to be **stationary**. He further added that the Earth not only spins on its own axis but also moves around the Sun.



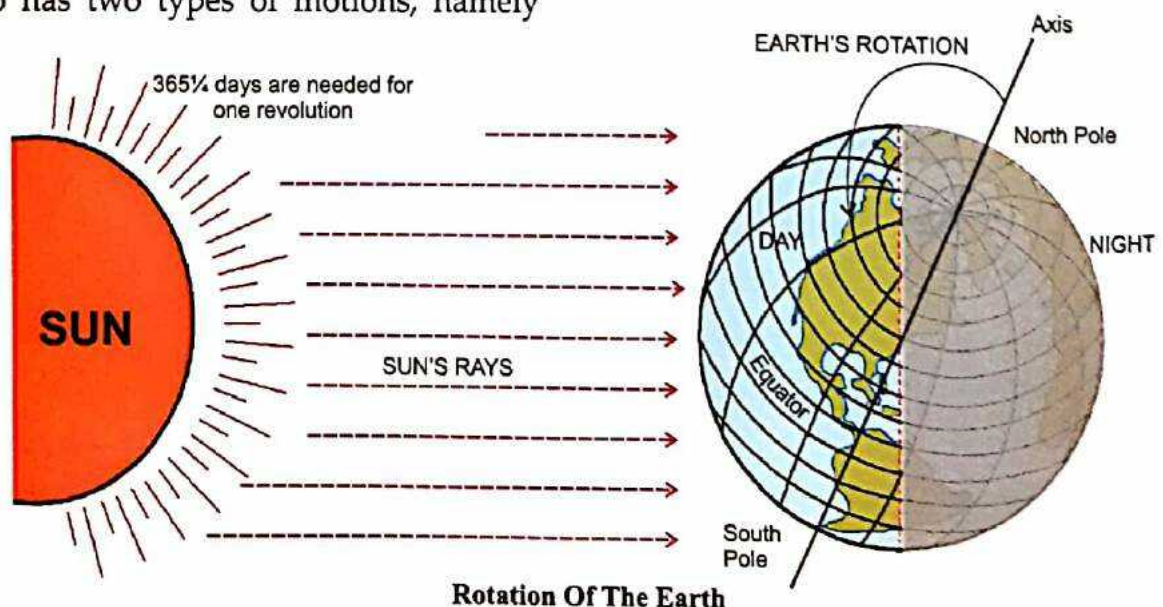
Nicolaus Copernicus

Like every other planet of the solar system, our Earth also has two types of motions, namely

rotation and revolution. Rotation is the movement of the Earth on its own axis while revolution is the movement of the Earth around the Sun in a fixed path called its orbit.

Wonderful To Know

Aryabhata was born in Kusumpur, in 5th CE. Kusumpur is the old name of Modern Patna. He is one of the greatest Mathematicians and astronomers who is supposed to be the first person to discover that it is not the Sun which rotates around the Earth but the Earth which moves around the Sun. He had written a book 'Aryabhattiyam' or 'Surya Siddhant'.

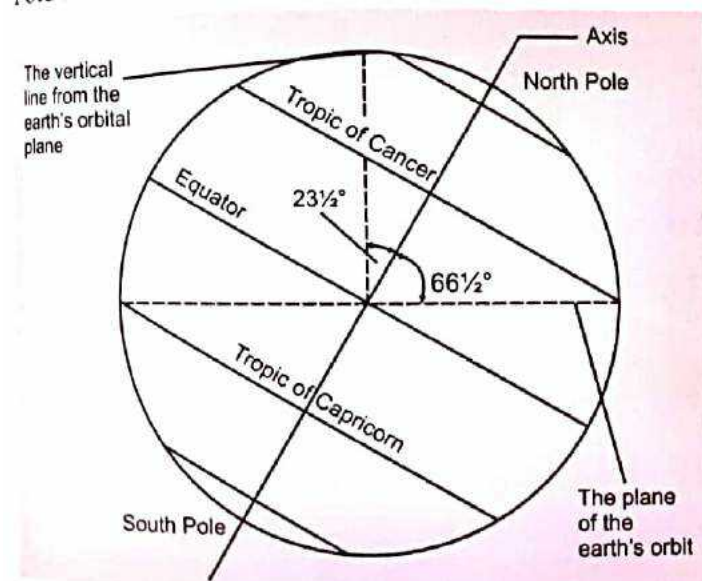


ROTATION OF THE EARTH

The Earth rotates upon its imaginary axis like a top or a potter's wheel from west to east. You must have seen trees and houses running in the opposite direction while travelling in a train. We know that in reality, they are fixed and our train is moving. Similarly, the Sun and the other celestial bodies appear to move in the sky from east to west direction. But it is the Earth that is moving, not the Sun.

The Earth's axis is not perpendicular to the direction of Sun rays nor to the plane of the Earth's orbit. It is inclined from the vertical line at an angle of $23\frac{1}{2}^{\circ}$. It makes an angle of $66\frac{1}{2}^{\circ}$ with its orbital plane which is formed by the orbit of the Earth around the Sun.

Thus, the Earth always remains tilted to one side while moving around the Sun. This tilt is called the **inclination of the Earth's axis**. The inclination is always in the same direction, i.e., towards the Pole Star.



The Tilted Axis Of The Earth

The Earth takes about 24 hours or one day to complete one rotation. Therefore, the rotation is called the **daily motion** of the Earth. It is also known as the **Earth Day**.

Wonderful To Know

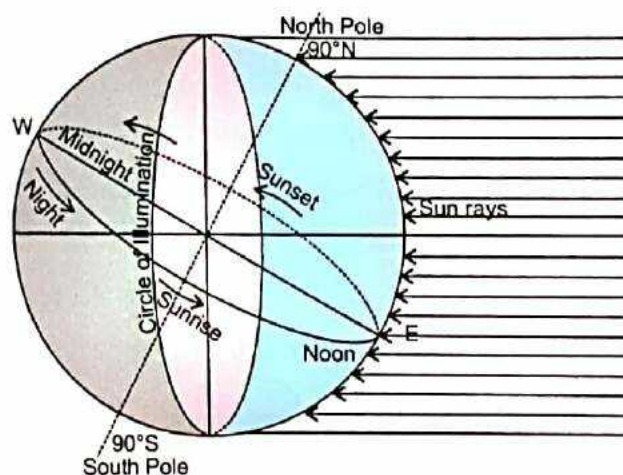
The rotational speed of the Earth at the Equator is about 1,675 km per hour, while it is zero at the poles.

Effects Of Rotation Of The Earth

1. Due to the rotation of the Earth, day and night occur. A day consists of 24 hours.
2. As the Earth rotates, it appears that the Sun, the moon and the stars are moving from east to west. The concept of direction based on sunrise and sunset has been given by it.
3. Bulging of the Earth at the Equator and flattening at the poles are also caused due to the rotation.
4. Movements of winds, oceans, currents and tides are also caused due to rotation.

The Circle Of Illumination

We get heat and light from the Sun. The Earth is spherical in shape. Due to this, only one-half of it, that faces the Sun, gets illuminated. The other half that does not face the Sun, remains in darkness.



The Circle Of Illumination

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

1. The movement of the Earth that causes day and night is called
 (a) revolution ☐ (b) motion ☐
 (c) rotation ☐
2. The Earth rotates on its imaginary axis from
 (a) west to east ☐ (b) east to west ☐
 (c) north to south ☐

Therefore at a time, one hemisphere of the Earth which receives sunlight, experiences day. The other hemisphere, away from the sun, experiences night.

The imaginary line that separates the lighted part of the Earth from the dark one is known as the **Circle Of Illumination**.

Let us understand the concept of **day and night** with the help of an activity.

- Place a globe in front of a candle, in a dark room.
- Light the candle and you see half the globe light up, while the other half remains in darkness.
- Mark a point 'P' on the dark part of the globe. Now, rotate the globe from west to east through 90° .
- As you rotate the globe, the point 'P' begins to get some light from the candle.
- This light can be experienced before the actual sunrise. This is called **dawn**.
- Now, move the globe further from west to east. You will observe that now 'P' has sunrise.



Bright Light Before Sunset



Twilight is the diffused light after sunset.

- On further rotation, 'P' will face the candle. This will be noon time, when no shadow is formed.
- As we continue to rotate the globe, 'P' will experience a loss of light. This is sunset.
- At this position, there will be some light which is called **twilight**.
- When 'P' reaches (exactly) the opposite side of the candle, there is complete darkness. This is **midnight**.

Duration Of Day And Night

The duration of day and night keeps on changing throughout the year. This happens due to the inclination of the Earth's axis. Therefore, for one-half of the year, the Earth comes in such a position that the North Pole is inclined towards the Sun and the South Pole is away from it. When the North Pole is inclined towards the Sun, a big part of the Northern Hemisphere receives sunlight. This results in longer days and shorter nights in the Northern Hemisphere. At this time, the Southern Hemisphere has shorter days and longer nights.

Similarly, during the other half of the year, a large part of the Southern Hemisphere receives sunlight due to inclination towards the Sun. This results in longer days and shorter nights in the Southern Hemisphere. During this time, the days are shorter and the nights are longer in the Northern Hemisphere.

The places at the Equator always have equal days and nights because the Sun shines vertically at the Equator throughout the year.

Thus, we can say that days and nights are unequal because of the tilted axis of the Earth.

Wonderful To Know

The day and night at the North and South Poles are of six months duration.

REVOLUTION OF THE EARTH

While rotating on its axis, the Earth also revolves around the Sun. This motion of the Earth is known as **revolution**. The time taken by the Earth to complete one revolution around the Sun comprises one year. Therefore, revolution of the Earth is also known as the **annual motion**. The Earth takes 365 days, 5 hours, 48 minutes and 56 seconds to complete one revolution around the Sun. But for our convenience, we count only 365 days in a year. The balance of remaining six hours is adjusted as one extra day every fourth year.

which is added to the month of February of that particular year. Therefore, every fourth year, February has 29 days and that year has 366 days. Such a year is called a **leap year**. The extra day in the month of February is called a leap day.

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

- The Earth takes about hours to complete one rotation.
 (a) 30 ☐ (b) 24 ☐
 (c) 20 ☐
- It is also called 'annual motion'.
 (a) rotation ☐ (b) revolution ☐
 (c) aphelion ☐

Effects Of Revolution

The revolution of the Earth around the Sun directly or indirectly affects the life on the Earth and causes various natural phenomena. Different effects of the Earth's revolutions are:

- Difference in the duration of day and night.
- Difference in the distribution of heat over the surface of the Earth.
- It causes the cycle of seasons.

The change in the seasons is one of the major effects of the Earth's revolution.

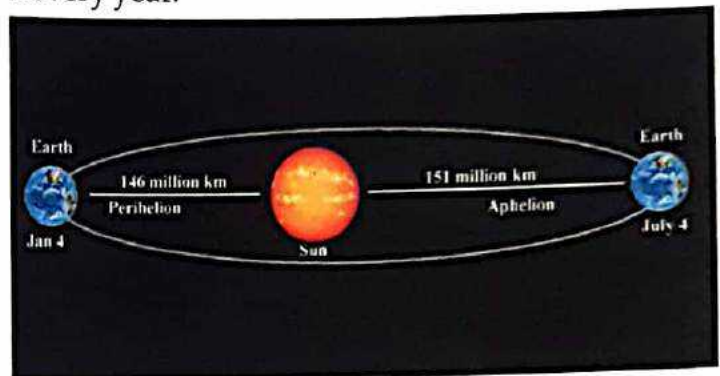
Aphelion And Perihelion

The Earth revolves around the Sun along a fixed path called **orbit**. The length of the Earth's orbit is about 938 million km. The shape of the orbit is not round, it is **elliptical** or **oval** like an egg. Therefore, it is also known as an **ellipse**. Since the orbit is elliptical and the Sun is located at one focus of the ellipse, the distance between the Earth and the Sun changes throughout the year.

The Earth, while moving around the Sun in its orbit, comes nearer to the Sun. At this point, the distance between the Earth and the Sun is minimum, i.e., about 146 million km, and we say

that the Earth is in **Perihelion** ('peri' means 'near' and 'helios' means 'the Sun'). This happens on or around **January 4** of every year.

Similarly, during revolution when the Earth reaches to a point in its orbit where the distance between the Earth and the Sun is maximum (about 151 million km), the Earth is said to be in '**Aphelion**' ('ap' means 'away from' and 'helios' means 'the Sun'). This happens on or around **July 4** every year.



Aphelion And Perihelion

During every complete revolution, the distance between the Earth and the Sun varies only by about three per cent. Therefore, the average distance between the Earth and the Sun is about 148.5 million km.

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

- The point in the Earth's orbit where the distance between the Earth and the Sun is minimum is called
 (a) Perihelion ☐ (b) Aphelion ☐
 (c) Equinox ☐
- The shape of the Earth's orbit is
 (a) round ☐ (b) straight ☐
 (c) elliptical ☐

THE CYCLE OF SEASONS

The Earth completes one revolution around the Sun in one year which is divided into five seasons. They are: (1) spring, (2) summer, (3) rainy, (4) autumn and (5) winter.

The cycle of seasons is caused due to:

- the inclination of the Earth's axis at a fixed angle and direction
- the revolution of the Earth around the Sun

The picture given below shows the movement of the Earth around the Sun and position of the Earth on four selected days, i.e., 21 March (Position 1), 21 June (Position 2), 23 September (Position 3) and 22 December (Position 4).

The day on which the midday Sun shines vertically overhead at the Tropic of Cancer or the Tropic of Capricorn and the duration of day is the longest in the hemisphere, is called **solstice**. The positions 2 and 4 of the Earth are **solstices**.

The day on which the midday Sun shines vertically overhead at the Equator and the duration of day and night is equal, is called **equinox**. The positions 1 and 3 are **equinoxes**.

Summer Solstice–21 June

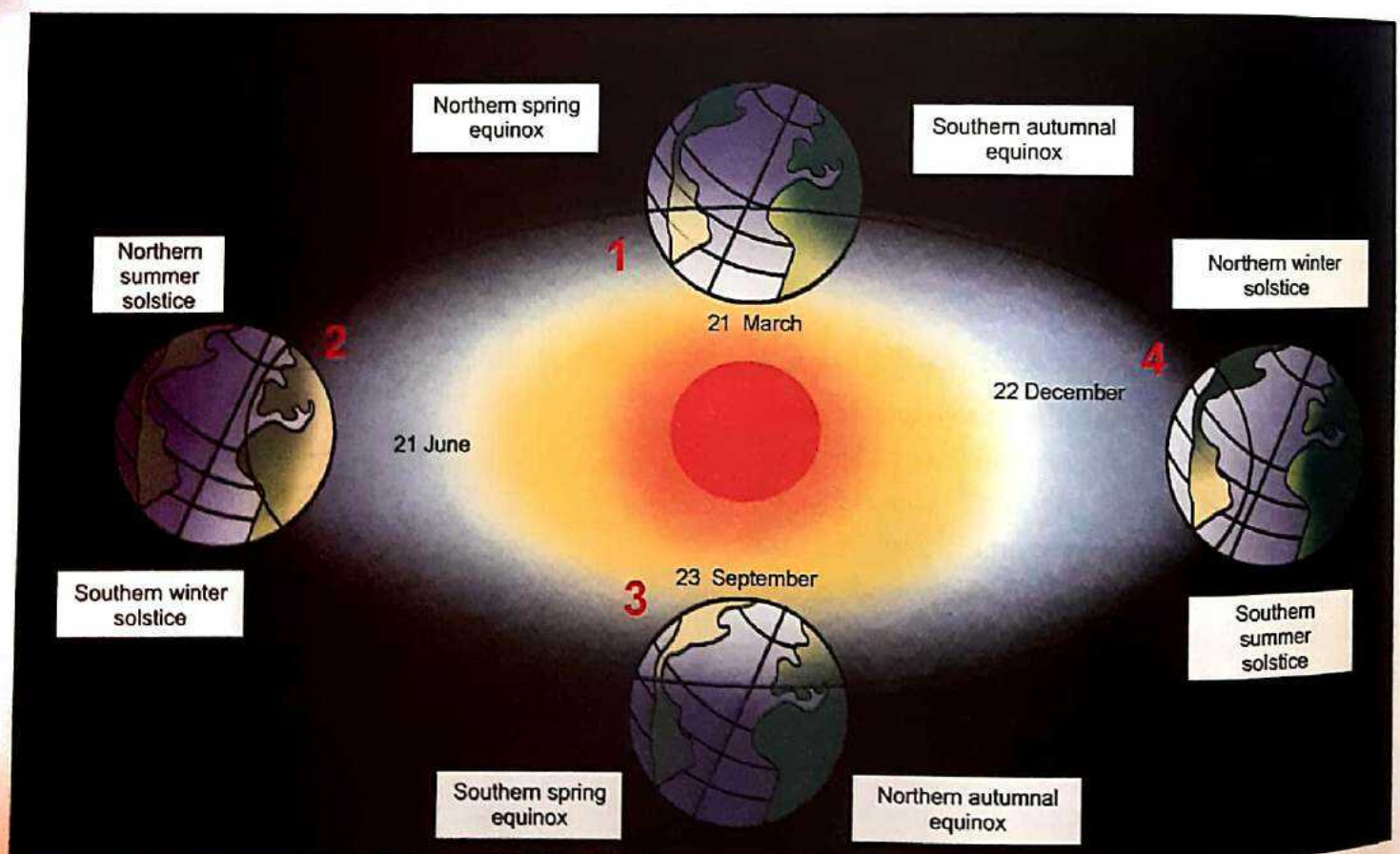
- On **21 June**, the Northern Hemisphere

experiences the longest day and the shortest night.

- The position of the Earth on 21 June is known as the **Summer Solstice** because it is summer in the Northern Hemisphere.
- In this position, the North Pole is inclined towards the Sun.
- The Sun rays fall vertically on the Tropic of Cancer. Therefore, places in the Northern Hemisphere experience summer season.
- During this time, the conditions are just the reverse in the Southern Hemisphere. It is turned away from the Sun. Therefore, it receives slanting rays. The duration of daylight is short and it is winter season in the Southern Hemisphere.

Winter Solstice–22 December

- Places in the Southern Hemisphere experience the longest day and the shortest night on 22 December.



The Phenomenon Of Seasons Caused By The Earth's Revolution

- On **22 December**, the position of the Earth is known as the **Winter Solstice** because it is winter in the Northern Hemisphere.
- In this position, the South Pole is inclined towards the Sun.
- The sun rays fall vertically over the Tropic of Capricorn. Therefore, it is summer season in the Southern Hemisphere.
- At the same time, it is just the opposite in the Northern Hemisphere which is turned away from the Sun. It receives slanting rays of the Sun. Therefore, the days are short and the nights are long. Hence, it is winter season in the Northern Hemisphere.

Spring And Autumnal Equinoxes –21 March And 23 September

- Now, observe the position of the Earth in the given picture on **21 March**. This is known as the **Spring Equinox**.
- We see that the Sun shines vertically over the Equator.
- At this position, neither of the poles are tilted towards the Sun. They lie at an equal distance

from the Sun. It results in equal days and nights at all places on the Earth. During this period, the Northern Hemisphere experiences spring season, while it is the autumn season in the Southern Hemisphere.

- Similarly on **23 September** which is known as the **Autumnal Equinox**, the Sun shines vertically over the Equator. This results in equal days and nights all over the Earth. During this day, the Northern Hemisphere has autumn while the Southern Hemisphere experiences the spring season.

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

1. The places on the Earth where days and nights are of six months' duration are the
 (a) Equator ☐ (b) Poles ☐
 (c) Greenwich ☐
2. The places upon the Earth where days and nights are of equal length throughout the year are on the
 (a) tropic ☐ (b) Equator ☐
 (c) frigid zone ☐

Points To Remember

- The imaginary circle that separates the lighted part of the Earth from the dark one is known as the Circle of Illumination.
- The Earth completes one revolution around the Sun in one year, which is divided into five seasons—spring, summer, rainy, autumn and winter.
- The two solstices which take place every year are Summer Solstice (21 June) and Winter Solstice (22 December).
- The two Equinoxes which take place every year are Spring Equinox (21 March) and Autumnal Equinox (23 September).
- The Earth always remains tilted on one side while moving around the Sun. This tilt is called the inclination of the Earth's axis.
- The Earth takes about 24 hours or one day to complete one rotation.
- The time taken by the Earth to complete one revolution around the Sun comprises one year.
- The average distance between the Earth and the Sun is about 148.5 million km.

Exercise

Quick Revision

[Use **Cordova Smart Class Software** on the smart board in class to do these exercises.]

A. Multiple Choice Questions (MCQs)—Tick (✓) the correct options.

- The longest day in the Southern Hemisphere occurs on
(a) 24 November ☐ (b) 22 December ☐ (c) 14 June ☐
- The position of the Earth in its orbit on 21 June and 22 December is called
(a) Aphelion ☐ (b) Rotation ☐ (c) Solstices ☐

B. Fill in the blanks.

- A leap year has days.
- The of the Earth causes the cycle of the seasons.
- The path along which the Earth revolves around the Sun is called
- proved that the Earth spins on its own axis.

C. Write (T) for true and (F) for false statements.

- The revolution of the Earth around the Sun causes variation in the duration of day and night. ☐
- Throughout the year, the duration of day and night is equal at the Equator. ☐
- The Earth revolves around the Sun from east to west. ☐
- The Earth's orbit around the Sun is completely round. ☐

Answer The Following

A. Multiple Choice Questions (MCQs)—Tick (✓) the correct options.

- The position of the Earth on 21 June is called
(a) summer solstice ☐ (b) winter solstice ☐ (c) autumnal equinox ☐
- The position of the earth in its orbit on 21 March and 23 September is known as
(a) tropics ☐ (b) solstices ☐ (c) equinoxes ☐

B. Differentiate between the following.

- spring equinox and autumnal equinox
- perihelion and aphelion

C. Short Answers Questions

- Define a leap year.
- What do you understand by the 'Circle of Illumination'?
- List two factors responsible for the phenomenon of seasons.
- Why do the places near the Equator have equal days and nights?

D. Long Answers Questions

- What is rotation? Discuss its effects.
- What is revolution? Write down its effects.

- Define the Earth's orbit and explain the inclination of the Earth's axis.
- What are solstices? Explain the winter and summer solstices.

HOTS (Higher Order Thinking Skills) Questions

- Why are the Sun's rays never vertical on the Arctic circle?
- Why are days and nights at the North and the South Pole of six months' duration?

Value Corner

- The Earth completes one rotation in 24 hours. It moves continuously on its own axis without delay. What do you learn from this quality of the Earth?

Activity

- Record the time of sunrise and sunset of your city for ten days and observe the variation. Fill it in the table given below.

Tip: Take the help of a newspaper.

Dates										
Time of sunrise										
Time of sunset										
Length of daylight										

Also, discuss the pattern you observe in the duration of day and night.

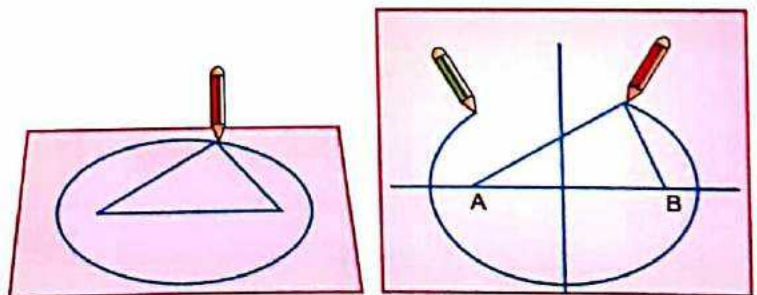
- Erik the Red, sailed from Iceland to Greenland which lies near the North Pole and is credited by some to have discovered Greenland. It is the world's largest island. It is also known as the 'Land of Midnight Sun' as the sun does not set even at midnight. With the help of internet, know more about Greenland. How do people live there? How do they work? What are their food habits? Prepare a project report and show it to your teacher.

Drawing an ellipse

Materials Required:

- nails
- drawing board
- pencil
- string

Fix two nails on a drawing board. Tie a piece of string to the nails. Place a pencil along the inner side of the string and draw a line, using the string to guide the pencil. The result on the drawing board is an ellipse.



Surfing is Interesting

- Go to www.kidsgeo.com to know more about the movement of the Earth.
- Visit <http://library.thinkquest.org> to see the diagrams for the Earth's revolution, solstices and equinoxes.

Life Skill

You are going to visit New Zealand with your family around 22 December. Make a list of things you would need for the trip.

Puzzle: Let's Find a Hidden Treasure

Rohan is cleaning his storeroom. He comes across some old papers under the cupboard. Suddenly, he sees a piece of paper that contains a clue to some hidden treasure. The written instructions in the paper are as follows:

King Rajwardan has buried all his diamonds and gold in a temple on an island and all the jewellery is kept in an iron box which has two locks. The keys of the locks are kept in two different villages. To find the keys and reach the island you have to take the following route:

Walking along the road north of Hastinapur, you will come across the Varsha river. After crossing the river you will find another road. East of the road you will find Inamgaon. South of Inamgaon you will find a *peepal* tree. Inside a hole in this tree you will find a box in which the first key is kept.

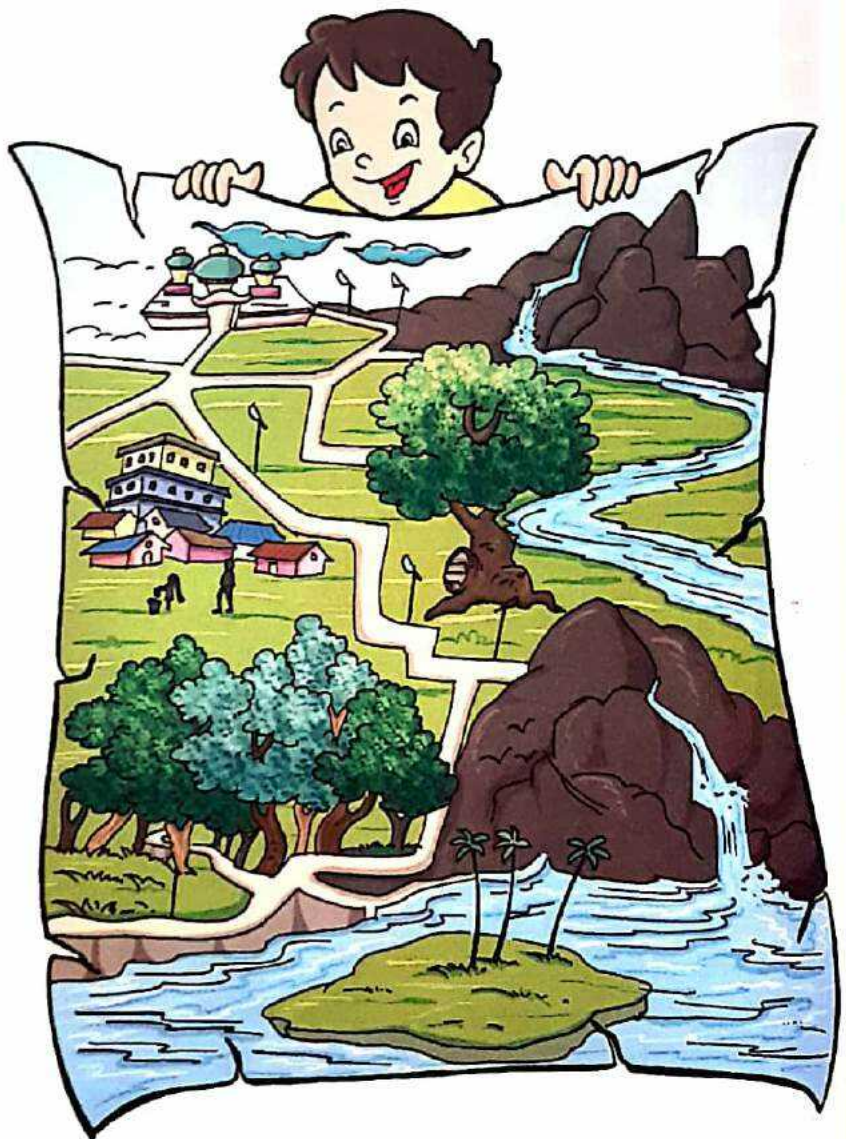
Walking further north on the same road, you will reach a trijunction. There you must turn west. After walking west for some time, you will once again come to the Varsha river. West of the Varsha river and north of the road, there is a village called Ramgarh. East of this village there is a rock, underneath which is the second key.

After walking for some time on the road west of Ramgarh you will come to a dense jungle. Without entering the jungle turn north and walk straight till you reach the edge of a lake. There is a small island in the lake. This island is covered with trees and bushes. Amidst them there is a temple. Near the temple wall you will find a huge boulder. Across the boulder, you will find a tunnel leading to the chamber which has the trunk full of my jewels.

Rohan also found another piece of paper containing a map. There were several villages shown on the map, but their names were not mentioned. Only Hastinapur village was named.

Draw a map and locate the road that Rohan took to find the treasure. Use arrow marks to show the road.

Locate on the map the villages of Inamgaon and Ramgarh and write their names next to them. Put an 'A' mark on the places where the keys were found. Put an 'X' mark where Rohan found the hidden treasure.



PART-III

SOCIAL AND POLITICAL LIFE

Diversity In India



Key Terms

discrimination : to make an unjust distinction in the treatment of different categories of people

diversity : a variety
lifestyle : the way of living

monasteries : communities of monks living under religious vows

staple : main or important

tradition : a long-established custom or belief passed on from one generation to another

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DIVERSITY

Diversity is the range of many people or things very different from each other.



Differences help us to learn from one another and similarities help to share. India is an example of diverse cultures and traditions. Even though India shows diversity, we Indians are united.

Both similarities and differences bring an interesting variety into our lives. Diversity is nature's way of grooming us to adjust, learn and co-exist.

REASONS BEHIND DIVERSITY

The reason behind the diverse nature of our country is its **geography**. India has mountains, rivers, thick forests and oceans. In olden times, the means of transport or communication were almost absent. Travelling from place to place was never easy. People took days or months to travel on horse back or camels and many times on foot. As a result, the people settled in a region and stayed on there for a long period of time. They developed their language, culture and traditions. This is how every region was rich in its art, literature and culture. Food habits were developed on the basis of food grown and spices used. For example, people living on the coasts were either fishermen or traders as the sea offered fish and business through waterways. So, fish became their staple diet along with rice, tapioca, coconuts and bananas.

This gave rise to a diverse culture of people of different states or regions. **The history of a place is the story of such generations that settled down in different places and enriched the culture and traditions.** Similarly, the **climate** of a place also gives rise to diversity. Climate influences clothing, food, dances, music and other aspects of human cultural life.

ECONOMIC DIFFERENCES

Economic differences between people mean the differences in amount of money or wealth they have.

People are rich if they have lots of money. People are poor if they have little money, which is not enough to give them food and a decent living.

The differences in the amount of money are visible in differences in clothes, lifestyle and even food habits. Economic differences lead to inequality, making some people rich and many poor.

SOCIAL DIFFERENCES

Caste system and gender bias are two major social differences. They create inequality in the society. Caste system in India became an evil, when the society was divided into castes during ancient times. For instance, a person born into a cleaner's family could not rise to the position of a teacher. After independence, our government made laws to show that all human beings are born equal and they should enjoy equal opportunities. But, even today in many villages and towns the evil of caste system is followed.

There is another evil in Indian society – **discrimination against the girl child**. A girl child is treated like a burden. Even today, in villages and also in some towns, the birth of a girl child is not welcomed.

This is called gender bias. Now, the government has made laws to protect the girl child and stop gender discrimination.

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

- Diversity is nature's way of grooming us to adjust, learn and
(a) co-exist ☐ (b) co-educate ☐
(c) co-operate ☐
- The geography of our country is an important factor behind our
(a) unity ☐ (b) diversity ☐
(c) tradition ☐

UNITY IN DIVERSITY

How?



Why?



Rise In Mixed Influences

Unity amongst people living in different regions or states came along slowly. To begin with, **natural** disasters like **droughts** or even **wars**, forced people to leave their homes and settle down in new places. A new place gave them a new lifestyle and challenges. But, they adjusted well by learning and teaching. This gave rise to a mixed bag of new cultures.

Influence Of Foreigners

History is the story of the past. **Indian history** tells us about **foreign influences** that added to our diversity.

India was visited by foreign students like **Hieun Tsang** and many others. These foreigners brought their own culture and tradition with them. They **influenced our culture** and we influenced theirs. Their religions, languages and dresses were introduced in our land. Urdu language was born

from the blend of Hindi and Persian languages.

Food and architecture showed the same influence. Mughlai food and the architectural wonders like the Taj Mahal are proofs of Persian influences.



Hieun Tsang

Freedom Struggle

India's freedom struggle is the best example of unity in diversity.

In fact, Pandit Jawaharlal Nehru was the one who gave the slogan **Unity In Diversity** which describes India most beautifully. Our **National Flag**, **National Anthem**, **National Bird** and **National Flower** are all symbols of this unity.



Pt Jawaharlal Nehru

The British thought that because Indians were from diverse backgrounds they could be divided easily. Indians showed that diversity was not a weakness, but a source of their strength. Despite different cultural, religious and regional backgrounds, Indian men and women came together in large numbers to fight for freedom. They marched and struggled together against the British rule.

Globalisation

The 20th century has shown a great deal of progress in communication, technology and transport. This has made it possible for us to overcome geographical boundaries and change our lifestyle. A global network has been formed that links economies, societies and cultures. Information and ideas are being spread across the world as a result of globalisation.

Kerala : A Case Study

Kerala is a narrow coastal state. It lies between the Arabian Sea and Western Ghats on the West

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

1. India was visited by foreign students like
(a) Marco Polo ☐ (b) Hieun Tsang ☐
(c) Pablo Picasso ☐
2. Information and ideas are being spread as a result of
(a) globalisation ☐
(b) nationalisation ☐
(c) industrialisation ☐

Coast of India. This state is known for its wide range of vegetation. Rice, coconut and a variety of spices grow here. In fact, spices like clove, pepper and cardamom, have made this state an attractive place for traders since ancient times.

Jewish and Arab traders regularly came down to Kerala to trade in spices. Apart from this, cash crops such as tea, coffee, rubber and tapioca are also grown here. Cash crops are exported to other countries. They earn a good income for the state.

Fishing is also an important occupation and it supports a large part of the population. The fishing nets used here are called *cheena-vala*



Fishing In Kerala

(Cheen refers to China) as they look similar to the ones used by the Chinese. Even the frying vessel is called *cheenachatti*.

Kerala is an example of foreign influence. When we study the history of this state, we come to know that **Jews, Europeans and Arabs** came here to have trade relations. Slowly, they settled down and started spreading the teachings of their religions. Over a period of time, this added to the ethnic diversity of the state. St Thomas, brought **Christianity** to Kerala. **Vasco-da-Gama**, a Portuguese sailor, also landed on the Kerala coast. He opened the doors to **spice trade** between India and the Western world. **Ibn Batuta**, a Muslim Moroccan traveller, has also written about Muslims living in Kerala. It is because of all these influences that people of Kerala practise a variety of religions.



Scenic Beauty Of Kerala

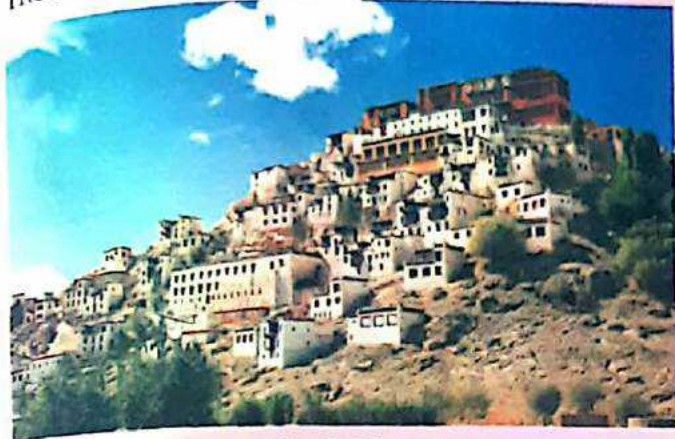
Ladakh: A Case Study

Ladakh is a cold desert. It lies in the mountains in the eastern part of Jammu and Kashmir. There is no rainfall. Such desert conditions do not allow agriculture, though a few trees are able to grow in this cold desert. People depend on the melting snow during the summer months for drinking water.

The life of the people is difficult. **Wheat and barley** are the main crops grown here. **Apricots** are also grown and exported. People mainly depend on **sheep, goat, cow and yak** rearing. The sheep in this region are special because they produce **pashmina wool**. This wool is very costly. Pashmina shawls are made from it.

The wool from the sheep is collected by the people and sold to the Kashmiri traders. The Ladakh region has many passes through which caravans travel to Tibet. These caravans carry textiles, spices, raw silk and carpets.

The culture of Ladakh is a mix of both Indian as



Ladakh

well as Tibetan tradition. Tibetan influence is visible in food, music and architecture. Therefore, 'Little Tibet' is another name for Ladakh.

Buddhism is the chief religion of the state. It is an interesting fact that Buddhism reached Tibet via Ladakh. It has a number of Gompas or Buddhist monasteries. Ladakh has a very rich oral tradition of songs and poems. The Tibetan national epic 'The Kesar Saga' is performed and sung by both Muslims and Buddhists.

Result Of Diversity

Diversity in India has given us a rich taste of life. Our languages, monuments, dresses and way of life clearly show a mixture of influences.

Points To Remember

- Diversity is the range of many people or things that are very different from each other.
- Diversity is nature's way of grooming us to adjust, learn and co-exist.
- Economic difference leads to inequality, making some people rich and many poor.
- The diverse nature of our country is due to its geography.
- Information and ideas are being spread as a result of globalisation.
- Diversity in India has given us a rich taste of life.

Exercise

Quick Revision

[Use **Cordova Smart Class Software** on the **smart board** in class to do these exercises.]

A. Multiple Choice Questions (MCQs) – Tick (✓) the correct options.

1. India is an example of

- (a) a country unaffected by globalisation
- (b) diverse cultures and traditions
- (c) all of these

☐
☐
☐

2. Economic difference leads to

- (a) inequality, making some people rich and many poor
- (b) inequality, making some people tall and many short
- (c) none of these

☐
☐
☐

B. Write (T) for true and (F) for false statements.

1. Caste system and gender bias create equality in the society.
2. Climate of a place gives rise to diversity.
3. India's freedom struggle is the best example of unity in diversity.
4. Persian language is born from the blend of Hindi and Arabic.

☐
☐
☐
☐

Answer The Following

A. Multiple Choice Questions (MCQs) – Tick (✓) the correct options.

1. The reasons for diversity are

(a) geography, history and climate

☐

(b) history and climate

☐

(c) climate and geography

☐

2. Foreign influences added to our

(a) struggle

☐

(b) diversity

☐

(c) none of these

☐

B. Short Answer Questions

1. What is diversity?
2. List four things that make us unique from others.
3. How did the government tackle the evils of caste system?
4. What is gender bias?

C. Long Answer Questions

1. What are the two factors that create differences in the society (with special reference to India)? How do these two factors create differences? Explain with examples.
2. What are the reasons behind India being a country with diversity?
3. How do the influence of foreigners contribute towards the diversity of a country?
4. What are the effects of globalisation on today's world?

D. Higher Order Thinking Skills (HOTS) Question

Explain how the slogan 'unity in diversity' describes India beautifully.

E. Value Corner

Write about any social difference you have seen around you. How can you, as a student, attempt to reduce such differences?

Activity

- ♦ You must be having a best friend or a very close friend. Think about him or her and fill the following information along with your own.

	Self	Your Friend
Name		
Physical Appearance		
Favourite Food		
Favourite Festival		
Favourite Hobby		
Favourite Game		

Now, do you think both of you are similar or different?

- **Make a chart comparing four states of India - one each from the north, south, east and west. Write how, despite their differences, the people of these states are similar. You may get some ideas from the following.**

States	Location	Physical	Dressing Features	Food Style	Language	Festivals	Occupation
 Kashmir	North						
 Kerala	South						
 Assam	East						
 Gujarat	West						

Surfing is Interesting

To know more about the diverse cultures of India, visit

http://india.gov.in/knowindia/culture_heritage.php

Life Skill

Imagine a place where everyone plays the same game, may be football, eats the same dish for every meal, uses the same colour for all their dresses, sings and hears the same song and even ties their hair in the same fashion. Write a story about a little princess who lives in such an environment.

Diversity And Discrimination



Key Terms

bias	: inclination for or against one thing or person	impairment	: disability of a specific kind
dominant	: more important, powerful or noticeable than other things	narrow-mindedness	: limited thinking
exploitation	: making use of and deriving benefit from a resource	provisions	: something supplied or provided
		self-esteem	: confidence in one's own abilities
		tanneries	: places where animal hides are tanned

Use Cordova Smart Class Software on the smart board in class to make learning enjoyable.

Geographical as well as historical factors encourage diversity in India. Diversity is both our strength as well as weakness. At times, we come across people who are differently-abled, look different or speak differently. We are quick to form negative opinions and attitudes about

people without understanding, why they are different from us. This is called prejudice. Thus, diversity at times leads to the formation of prejudices which are negative opinions about people or situations.

PREJUDICE



Prejudice means to judge other people negatively or to see them as inferior without actually knowing anything about them. So, there may be a negative attitude or opinion about a person or group simply because the person belongs to a specific religion, nationality, caste, gender or any other such factor. When a child from a rural set-up comes and joins a city school, at times his/her peers make fun of his/her dressing style or the way he/she speaks. This is an example of prejudice existing among urban people about people coming from small towns. Prejudice, at

times, is used as a means to boost one's self-esteem. Sometimes, prejudices overcome our sensibilities and prevent us from bonding with people who are different. It is a sign of narrow-mindedness, injustice, unfairness and intolerance. Thus, prejudice is an unreasonable dislike or preference for a particular group or person over another.

Discrimination means treating people differently or negatively on grounds of age, disability, gender, income, nationality, colour or religion. Discrimination is the result of prejudices based on diversity and inequality. Certain groups of people are not allowed to enter temples or schools, drink water from taps and wells used by others or barred from living in a particular locality. These are all examples of discrimination.

DISCRIMINATION



Discrimination takes place due to several reasons. People may differentiate because they have a prejudice against somebody or because they have stereotyped a particular group. For example, people at times tend to be biased towards villagers as they have different languages, cultural practices and lifestyles.

STEREOTYPES



Prejudice often leads to formation of stereotypes. A **stereotype** is a bunch of traits that is associated with all members of a specific social group. It influences our behaviour and thinking skills, that is, how we assess facts. Girls are friendly, warm, sensitive and emotional, while boys are ambitious, tough and dominating. This is an example of stereotype.

The biggest disadvantage of a stereotype is that it tends to ignore the uniqueness of individuals. It leads to misrepresentation of reality and even causes clashes. When we say that people belonging to a certain country, religion, race or gender are lethargic, crafty or extravagant, we are using stereotypes. On the contrary, people of any community or nation can be generous, poor or lazy. It is not fair to fit a large number of people into a set mould based on certain pre-existing beliefs. We tend to become critical of the situations that are not in agreement with our belief system and stereotypes.

Let us take the example of Rano, who is a 12-year-old girl. She does not go to school. She stays at her house to do household chores. Rano's brother goes to school because traditionally boys go out and earn money, while girls take care of the household. This is an ancient stereotype about the role of male and female members in a family. However, with changing time, women have started taking up tough tasks outside their homes.

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

- means an unreasonable dislike or preference for a particular group or person over another.
(a) Stereotypes ☐
(b) Prejudice ☐
(c) Discrimination ☐
- A stereotype is a bunch of that is associated with all members of a specific social group.
(a) emotions ☐
(b) facts ☐
(c) traits ☐

Identify some of the barriers that exist for people with special needs. Find ways in which you and the government can overcome them.

SPECIAL NEEDS

Shalini goes to school in a wheelchair and Raman uses the Braille script to read. Both are children with special needs.

Earlier, such children were called **disabled** or **handicapped**. Sometimes, the word **impaired** is also used. Impaired implies loss of a body part or its abnormality. Losing an eye in an accident is impairment. It is not necessary that the impairment interferes with the performance of the person. Disability is when a person is not able to perform an activity due to some impairment. Handicap is an outcome of the disability or impairment and restricts a person from playing the role as expected from an individual in normal conditions. Today, however, this term has changed and now they are known as **children with special needs**.

CASTE BASED DISCRIMINATION

Caste based discrimination has existed in the Indian society since ancient times. It involves division of society based on occupation. The society was divided into a hierarchy. The four castes Brahmins, Kshatriyas, Vaishyas and Shudras were placed in descending order.

Under this system, activities like cutting hair, making pots, washing and cleaning were regarded as tasks of less value. People pursuing these professions were regarded as **untouchables**. They performed the most risky forms of labour in Indian society including that of removing human or animal waste or working in tanneries.

Jyotirao Govindrao Phule occupies a unique place among the social reformers of Maharashtra. He revolted against the unfair caste system under which millions of people have suffered since ages. An incident related to caste based discrimination, which occurred in 1848, motivated him to fight for the rights of the untouchables.



Jyotirao Phule's father was a vegetable vendor. Once Jyotirao was invited to the wedding of one of his Brahmin friends. As his friend was taken in a procession, Jyotirao was also a part of the wedding procession. When his friend's relatives realised that he belonged to a lower caste, they insulted and ill-treated him. Jyotirao was so hurt that he returned home with tears in his eyes. At home, he recounted the painful experience to his father, who tried to calm him. After this incident, he decided to stand and fight for the rights of the deprived segments of the society.

This small incident from Phule's life clearly shows that caste system is so deep-rooted in our

social system, that it not only denies people to access better economic breaks, but also denies them respect and dignity that every individual deserves. Can you imagine how difficult life would be if people snigger at you because you belong to an oppressed class? Imagine the plight of people who go through this every day!

This caste system gave rise to hatred and our society weakened. It was during the freedom struggle that it was realised that this caste system divided all Indians. Being a perfect role model, Gandhiji started working for the Shudras. Gandhiji called them **Harijan** or **Children of the God**. He lived and worked with them.

Some people are discriminated on grounds of being poor as well as for belonging to a different cultural group. For example, tribals in India are the most neglected social group. Even after so many years of independence, they are economically as well as socially backward because of cultural differences.

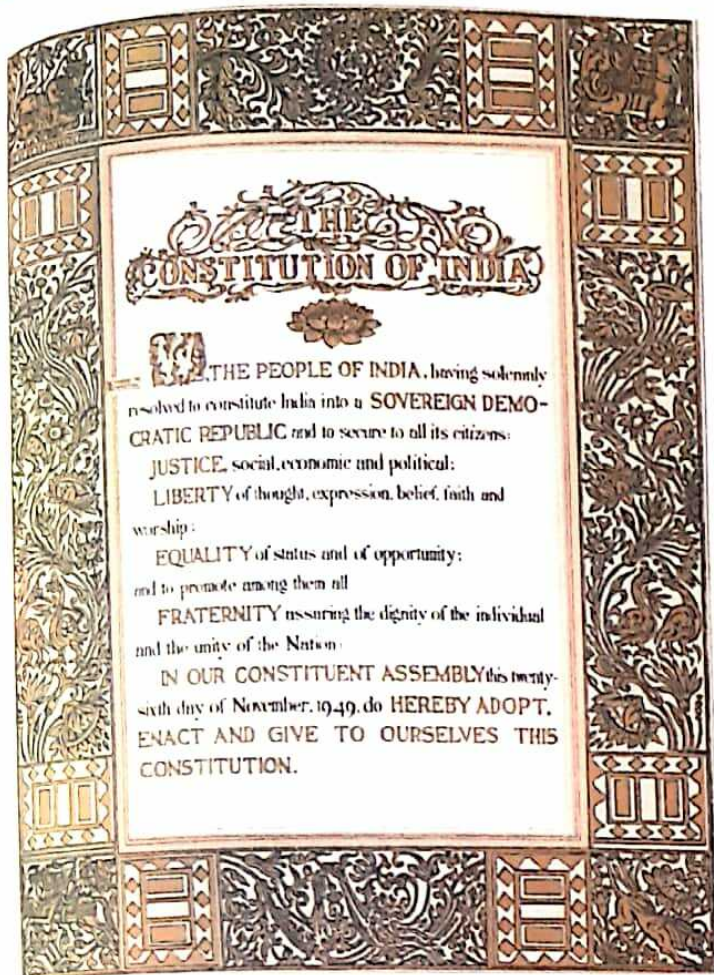
FIGHTING FOR EQUALITY

The **struggle for freedom** was also a **fight for equal status in society**. The underprivileged section wanted equal access to all resources and opportunities. Women demanded education, respect and dignity. Peasants and tribals wanted to free themselves from the clutches of ruthless land owners and moneylenders who made their life miserable.

The people who wrote down the Constitution were aware of the inequalities existing in the society. Many people like **Dr Ambedkar**, unfortunately, had first-hand experience of discrimination. Therefore, while framing the Constitution they had this vision of India wherein every individual is treated equally.

The Constitution of India provides the following:

1. **Equal rights have been given to all** and any discrimination on the basis of caste, religion, race, gender or place of birth is not allowed.



The First Page Of The Constitution Of India

2. The state has been given the power to favour disadvantaged groups that include women and children, Scheduled Castes and Scheduled Tribes, Other Backward Classes, minorities and physically challenged people.
3. All Indians are equal in the eyes of the law. Nobody should be ill-treated in the name of caste, religion, gender, etc. Practising untouchability is not allowed in our country.
4. Everyone is free to pursue the occupation of their choice and to settle in any part of the country.
5. There is also provision of protection from any form of exploitation. For example, children below 14 years of age cannot be engaged in doing work.

Points To Remember

- Prejudice means decision based on prior unproved thinking.
- A stereotype is a bunch of traits that is associated with all members of a specific social group.

6. Payment of wages should be equal as per the quantity of work.
7. Since India is a secular country, everybody is free to follow the religion of their choice, and celebrate their festivals.

When we respect every individual, we can co-exist without any conflict. Everybody can use his or her skills and talents for the betterment of society. When people are discriminated against they tend to get aggressive and unhappy. This eventually affects the unity of the country.

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

1. Discrimination is the opposite of
 - (a) equality ☐
 - (b) inequality ☐
 - (c) prejudice ☐
2. The Constitution of India gives power to the state to favour..... groups.
 - (a) advantaged ☐
 - (b) tribal ☐
 - (c) disadvantaged ☐

THE CONSTITUTION AND FUNDAMENTAL RIGHTS

In the third part of our Constitution, it is mentioned that **every citizen irrespective of caste, creed, race and religion has the right to enjoy the Fundamental Rights**. Provisions were made in the Constitution for the protection of rights of Scheduled Castes, Scheduled Tribes, Other Backward Classes, minorities and physically challenged people. To respect India's diversity, certain provisions were made to fight all kinds of discrimination.

- Discrimination means giving an unfair deal to someone who is probably capable and more deserving than anyone else.
- Caste system gave rise to hatred due to which our society weakened.
- Our Constitution gives equal rights to all and power to the state to favour disadvantaged groups.
- All Indians are equal in the eyes of the law.

Exercise

Quick Revision

[Use Cordova Smart Class Software on the smart board in class to do these exercises.]

A. Multiple Choice Questions (MCQs) – Tick (✓) the correct options.

- The biggest disadvantage of stereotype is that it tends to ignore the uniqueness of
 (a) countries ☐ (b) individuals ☐ (c) religions ☐
- Which of the following is true about discrimination?
 (a) Discrimination means treating someone or some group unfairly. ☐
 (b) Discrimination is the opposite of equality. ☐
 (c) Both (a) and (b) ☐

B. Identify whether the following statements are prejudice or stereotype.

- Sahil has been advised by his parents not to eat with Rohit who belongs to a lower caste.
- People of northern India are bold and outgoing.
- Nobody talks to Krishna as he is dark.
- People of Hindi speaking regions are not very smart.

C. Match the following.

- | | |
|-----------------------------|--|
| 1. untouchability | (a) is not allowed in our country |
| 2. India | (b) is an opinion based on unproved thinking |
| 3. prejudice | (c) is a secular country |
| 4. Jyotirao Govindrao Phule | (d) are equal in the eyes of law |
| 5. all Indians | (e) a social reformer |

Answer The Following

A. Multiple Choice Questions (MCQs) – Tick (✓) the correct options.

- Girls are soft-hearted and cry easily. Boys don't cry. This is an example of
 (a) stereotype ☐ (b) prejudice ☐ (c) caste system ☐
- Which of the following respects India's diversity?
 (a) Practising untouchability is not banned. ☐
 (b) All Indians are equal in the eyes of law. ☐
 (c) No one is free to follow the religion of his/her choice. ☐

B. Short Answer Questions

1. What is prejudice?
2. Differentiate between prejudice and stereotype.
3. Mention two stereotypes related to the role of women.
4. How can we co-exist in a society without any conflict?

C. Long Answer Questions

1. What is a stereotype? What leads to its formation? What is the biggest disadvantage of a stereotype?
2. Define discrimination. Why does discrimination take place? Explain with an example.
3. How did the caste system bring inequality in our society?
4. List four provisions made in our Constitution to fight all kinds of discrimination.

D. Higher Order Thinking Skills (HOTS) Question

Why do you think it is important for all people to be equal?

E. Value Corner

Your best friend's grandmother discriminates between your friend and her brother. Do you think, this is right? What steps will you take to make her understand the importance of equal treatment?

Activity

Prepare a speech in favour of love and unity and against hatred and discrimination. You can think about incidents that made you realise that love and unity keep people smiling and hatred keeps people tense.

Surfing is Interesting

To know more about some sections of the society suffering caste-based discrimination in India, visit

http://censusindia.gov.in/Census_And_You/scheduled_castes_and_scheduledtribes.aspx

Life Skill

The Constitution of India gives equal rights to all without any bias. Prepare some rules for your classroom so as to ensure equal rights to all students. Follow your Class Constitution by considering the following points in mind:

- blackboard responsibility
- cleanliness of the classroom
- maintaining discipline

**You can add more points in your Class Constitution.*

Types Of Government



Key Terms

abide : accept or act according to rules
 authority : the power or right to give orders and enforce obedience
 electoral : related to the election of the representative
 illiteracy : inability to read and write

inherit : receive money, property, etc. from somebody on his/her death
 tenure : a period given to hold a particular post
 welfare : the general health, happiness and safety of a person or group

Use Cordova Smart Class Software on the smart board in class to make learning enjoyable.

A government is a group of people that manages the country. It is a body of people that frames policies and exercises control through various organisations and laws. It is the key to the growth and development of a nation. The government takes important decisions and performs different functions.

OUR GOVERNMENT

Our government is our leader; the chosen one, that makes policies for the welfare of the whole society. The government also makes certain rules to manage the country. It looks after our health, education, basic needs like water, electricity and law and order.

The government plays a very important role in our lives. The **functions** of the government are as follows:

- It undertakes social welfare programmes to remove poverty, unemployment, discrimination and illiteracy.
- It maintains law and order with the help of the police.
- It maintains peaceful relations with neighbouring countries.
- It protects our international borders with the help of armed forces.
- It organises relief work and gives help by

giving food, shelter and health services during natural calamity.

- It builds and maintains roads, sewage disposal system, hospitals, schools, museums, public toilets and parks and other public amenities.
- It arranges for electricity, cooking gas, drinking water, as well as water for irrigation.
- It provides services such as postal, transport, as well as means of communication.
- It builds and runs hospitals, schools and other offices and agencies free of cost or by charging a nominal amount.

Levels Of Government

India is a big country. In order to function effectively all over the country, the government operates at three different levels – **national**, **state** and **local**. At the national level, central government manages the affairs of the country. The state governments look after the welfare of the particular states. Villages, towns and cities are looked after by the local self-governments to solve various issues at the grassroot level.

Compare And Contrast

Read the statements given on the next page. Identify their level and tick (✓) the correct options.

- | | Local | State | Central |
|--|--------------------------|--------------------------|--------------------------|
| 1. the decision to provide assistance to Bangladesh | ☐ | ☐ | ☐ |
| 2. the decision regarding maintenance of law and order | ☐ | ☐ | ☐ |
| 3. introduction of a new ₹1,000 note | ☐ | ☐ | ☐ |
| 4. the decision to dig a common well | ☐ | ☐ | ☐ |

Functions Of The Government

One of the important functions of a government is to make laws and the people have to abide by those rules and regulations. The functions of the government are carried out by its three organs, the **legislature, which is the law-making organ**, the **executive, which implements these laws** and the **judiciary, which sees to it that these laws are carried out along with resolving disputes**. In our country, laws for the whole nation are made by the **Parliament, which is a legislative body** (body that passes, amends and repeals law) at the central level. **State legislative bodies make laws for particular states**. For example, you must have heard elders in the family discussing that it is now mandatory to have a pollution certificate for vehicles in Delhi. Those caught without a valid Pollution Under Control certificate, will have to pay a fine of ₹1,000. The executive or administrative branch implements the laws. The judiciary resolves disputes and ensures that the laws are followed.

Types Of Government

Monarchy is the oldest and, in the past, was the most common form of government. A monarch is the King or the Queen who is all powerful. This form of government is hereditary, which means that the son or daughter inherits the



Jalaluddin Akbar

throne of the King or Queen, after his/her retirement or death. The monarchs have ministers who advise them on all issues. But the advice of the ministers may or may not be followed. This shows that the will of the King or the Queen is all powerful.

In **dictatorship**, all decision-making powers lie in the hands of one individual or a small group of powerful people. History shows that many countries had dictators (or the rule of one individual) and his small group of supporters. The most common example of a dictator is Adolf Hitler.



Adolf Hitler

Unitary form of government is the one where there is only one government for the whole country. Great Britain and China are examples of such forms of government. In **federal form**, power is distributed between the centre and the state governments, for example, India and the USA.

Democracy

Democracy is the most popular form of government today. It is the most popular as the **supreme power lies with the common people who cast votes to elect representatives of their choice through elections**.

Multiple Choice Questions (Quick Revision)

Tick (✓) the correct options.

- Which of these is the oldest form of government?

(a) democracy	☐	(b) monarchy	☐
(c) dictatorship	☐		
- Which form of government is the most popular today?

(a) democracy	☐	(b) monarchy	☐
(c) dictatorship	☐		

The person who gets the maximum number of votes is the winner. Like this, many leaders are chosen through elections. Then, they become the decision makers, who run the country.

Abraham Lincoln defined democracy as, **the government of the people, by the people, for the people**. In other words, it is our government, as it comprises people of our choice; the government has come to power because we voted for the leaders and now they will work for the common people.

A democratic government makes the common man all powerful because if the representatives don't work then they choose someone else in the next election.

Types Of Democracy

Democracy is also of two types – **direct** and **representative**. In **direct democracy**, people make laws and policies by which they are governed. This form is suitable for a country with a small population.

The other form is **representative democracy in which elected representatives run the government**. In this type of government, the leaders chosen by us become members of a body called the **legislature**. India is a good example of a representative democracy.

Types Of Democratic Forms Of Government

In a representative type of democracy, we have two main forms of government called the **Parliamentary** and the **Presidential** form of government. These two forms are different from each other. The difference is based on the relation between legislative and executive branch of the government.

Parliamentary Form of Government: In **Parliamentary form of government**, there are two heads. The head of the government is the Prime Minister, who is directly elected by the people as the Member of Parliament.

Second is the President, the head of the state, who is indirectly elected. He or she is not elected by the

citizens as is the case with the post of the Prime Minister. The President is elected through an electoral college made up of the elected representatives who are members of Parliament. It is called **indirect** because our chosen representatives vote for him instead of us.

In the **Parliamentary form of government**, the executive is a part of the Legislative branch. The Head of the State (i.e. country) is the President who is not the Head of the Government. The Head of the Government (Prime Minister) is the leader of the majority party and controls the executive. India follows this form of government.

Presidential Form Of Government: In **Presidential form**, the legislature and executive are separate. The President, chosen independently for a fixed tenure, is not responsible to the Parliament. The President is the real Head of the State and enjoys more power. The President is only the policy maker and the legislature is the law maker. The executive, legislature and judiciary are separate. The President is all powerful. He/She is not responsible to the legislature and the electorate. He/She appoints his/her own team members or cabinet who are not members of the legislature or Parliament. The President is elected for a fixed term and can only be removed through a difficult procedure called **impeachment**.

WHO CAN VOTE

Citizens (of India) who are 18 years of age or above can cast their vote for the representative of



People Casting Their Votes

their choice. For casting vote during elections, it is important that their name should be included in the voter's list that contains names of people, who can vote. Since all citizens are equal, irrespective of caste, creed, religion or economic condition, and are given the equal right to vote, we call it **Universal Adult Franchise**. This is the best example of equality.

Writing in the journal Young India in 1931, Gandhiji said, "I cannot possibly bear the idea that a man who has got wealth should get the vote but a man who has got character but no wealth or literacy should have no vote, or that a man who

honestly works by the sweat of his brow day in and day out should not have the vote for the crime of being a poor man..."

In the earliest form of franchise, only educated or those who paid taxes were granted the right to vote. This implied that women and the uneducated did not enjoy this right. In India too, before independence a limited minority decided the fate of the vast majority. The right to vote was not granted to women for a very long time. However, our Constitution framers realised the importance of equality (political) for smooth functioning of democracy and granted the right to vote to all adult citizens of the country.

Points To Remember

- The government is a body of people that frames policies and exercises control through various organisations and laws.
- Its functions are carried out by its three organs, the legislature, the executive and the judiciary.
- Governments are of the following types: democratic, dictatorial and monarchical.
- In a Parliamentary form of government, the President is elected directly, and the Prime Minister is the leader of the majority party. In a Presidential form of government, the President is elected directly.
- Universal Adult Franchise enables all citizens who are 18 or above to elect their representatives.

Exercise

Quick Revision

[Use Cordova Smart Class Software on the smart board in class to do these exercises.]

A. Multiple Choice Questions (MCQs) – Tick (✓) the correct options.

- Which of the following is true?
 - Democracy does not believe in equality. ☐
 - We all are members of parliament. ☐
 - We select some people and give authority and power to them to run the country. ☐
- When can we lead a safe and comfortable life in our country?
 - when we have a government to dictate over us ☐
 - when we have a government to make laws to keep order and discipline ☐
 - both (a) and (b) ☐

B. Read the sentences given below. Tick (✓) the sentences that are correct.

- In the monarchical form of government, the King or the Queen has absolute power to rule the country. ☐
- The President in a Parliamentary form of government is elected directly. ☐
- In a unitary form of government, the power is distributed between the centre and the state governments. ☐
- Universal Adult Franchise is the best example of equality. ☐

Answer The Following

A. Multiple Choice Questions (MCQs) – Tick (✓) the correct options.

- Which of the following is not a job of the government?
 - It maintains law and order with the help of the police.
 - It deals with criminal cases and even solves disputes through courts.
 - Both (a) and (b)
- Democracy is the best form of government because
 - the supreme power lies with the leaders
 - the supreme power lies with the people
 - the supreme power lies with the rich and the powerful

B. Short Answer Questions

- Define government.
- What is the function of the local self governments?
- Name the three different levels at which the government operates.
- Who can vote in India?

C. Long Answer Questions

- List six welfare functions or jobs of a government.
- Differentiate between democracy, monarchy and dictatorship.
- How is Universal Adult Franchise the best example of equality?
- Why is democracy the most popular form of government? Explain.

D. Higher Order Thinking Skills (HOTS) Question

Which type of government would you prefer to have in the place you live in? Give reasons for your answer.

E. Value Corner

Do you think, it is important for the citizen of a country to be involved in decisions that affect them? Give reasons for your answer.

Activity

On a chart paper, write salient features of the following types of governments:

- Direct
- Representative
- Parliamentary
- Presidential

Life Skill

Form small groups of three to four students. Take any newspaper and go through the pages.

You will find particular pages with news of the district level, region and state level. Go through these news. You will also find that the newspaper talks about the nation. In this section, you will read about the work done by the national or central government.

Now, form the three levels of the government among the groups and discuss the issues given in the newspaper. You can also do the following:

- Identify the problems.
- Suggest improvements or solutions.
- Take decisions.
- Implement the decisions.

You will have an idea of how the government works at different levels.