

CONTENTS



UNIT-I : HISTORY

Chapter-1	When, Where and How?	5
Chapter-2	The Earliest Societies	13
Chapter-3	The First Farmers and Herders	21
Chapter-4	The First Cities	28
Chapter-5	Changes and Development with the Arrival Aryans	40
Chapter-6	The Deccan and the Southern India	51
Chapter-7	New Empires and Kingdoms	62
Chapter-8	Culture and Science	74

UNIT-I : GEOGRAPHY

Chapter-9	Earth in the Solar System	83
Chapter-10	Utility of Globes and Maps	93
Chapter-11	Latitudes and Longitudes	101
Chapter-12	Rotation and Revolution	108
Chapter-13	Realms of the Earth	116
Chapter-14	India : Our Motherland	127

UNIT-III : CIVICS

Chapter-15	Understanding Diversity	138
Chapter-16	Diversity, Discrimination and Equality	144
Chapter-17	Government	151
Chapter-18	Urban Local Self-Government	159



When, Where and How?

Key Highlights

- ❖ Importance of the past in understanding history.
- ❖ Dating past events in a chronological order.
- ❖ Geographical factors influencing the history of a place.
- ❖ Major sources of ancient history.

Let's Start With



O My God! There are number of old things such as pieces of pottery and coin. I have even got tools and stones. To which era they might belong?

HISTORY

THE IMPORTANCE OF PAST IN OUR LIVES

Lives of our ancestors was different from our grand parents lives of our grand parents are different from our parents. The study of this constant change taking from generation to generation is history. History systematically explains the record of past event. To understand the present, we need to study and understand the past.

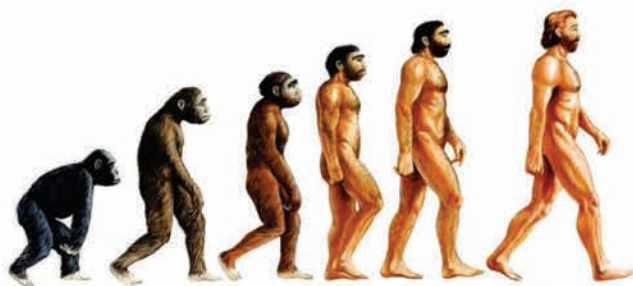
But it is almost impossible to get written records of all past events that happened thousands, or maybe millions of years ago. People probably did not know how to read or write. So, we do not have written records of that period. This period is known as **prehistory**.

EVOLUTION OF MAN

Evolution is the process of change over time, over thousands and millions of years. The earth has existed for millions of years. By doing research on the layers of rock, we can find out about its past. We know that living things have changed over time, because we can see their remains in these rocks. These remains are called **fossils**.



MAKING OF PAST EVENTS ON A TIME SCALE



Successive stages of man's evolution from ape-like creature to modern man with upright posture

The reference point from which historians count dates is the birth of Christ. The dates of years before Christ's birth are counted backwards and referred to as **BC** (Before Christ) or **BCE** (Before Common Era). For instance, any event that happened ten years before the birth of Christ is said to have taken place in 10 BC. The bigger the number when the date is BC it means it has happened that much earlier. The years after Christ's birth are noted as **AD** (Anno Domini, which in Latin means 'in the year of the Lord'). These years are counted forwards, i.e., AD 99 comes before AD 100.

To arrange historical events in a chronological order, historians refer to a **timeline**. A timeline is a description of historical events in a chronological order.

GEOGRAPHICAL FRAMEWORK

Geographical factors have a great influence on the history of a country. The Indian subcontinent has distinct geographical features.

1. The vast northern Indo-Gangetic plains around which humans settled first, was very fertile. Thus, many kingdoms emerged in these plains.
2. The southern peninsular was divided into smaller regions by mountains, plateaus and river valleys.

We know the dates of past events, and the sequence in which they occurred. We can then have an idea of what happened first, and which event happened after that.

Chronology is the order in which a series of events happened. Historians use chronology as the first step towards understanding historical events. In this way they can put all the past events in a proper order.



Major rivers mountains in India

3. The Great Himalayas in the north acted as a barrier between India and Central Asia. But people did use the passes in the mountains as routes of contact.

These routes of contact were used for different purposes.

- These routes were used by traders to travel.
- People from cold, arid places came here through them, in search of livelihood. Many tribes entered India from the northwestern side (present day Pakistan-Afghanistan) through these mountain passes.
- Religious leaders used these routes to spread their messages.
- Kings and rulers undertook war campaigns to expand their empires through them.

Some traders returned home; while others settled down to make India their homeland. They exchanged many ideas, traditions and ways of doing things. They taught as well as learnt from the people living here. This exchange of ideas resulted in the development of a unique culture. Many ideas were retained and others were changed. This is how India's unique culture developed.

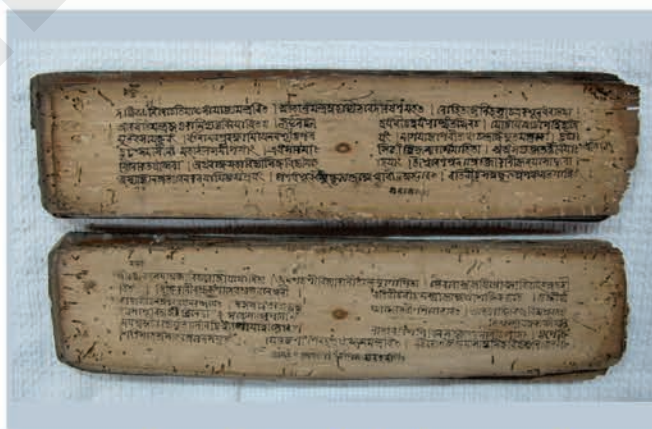
All early civilizations developed along river valleys. Farming resulted in the production of more food than was required. Traders travelled to different cities to sell their surplus produce. Towns and cities developed. Craftsmen began to create better crafts, writing skills developed and the use of the wheel made transportation faster.

AVAILABLE SOURCES OF HISTORY

Historians have to use evidence or clues to write history and give us a complete picture of the past. Where do they get these clues and evidence from? There are several sources from which we may get information about the past. Two main types of source material are **literary** and **archaeological**.

Literary Sources

Literary sources refer to any written accounts. Before paper was used, books were written on palm leaves or on the bark of the birch tree. Religious books, accounts of foreign travelers, and writings on cave walls or stone tablets contribute to literary sources. Each of these tell us about the social, political, economic and cultural conditions during the time in which they were written. Most ancient books found in North India were written in Sanskrit, Pali or Prakrit. Tamil was mainly used in South India.



An ancient palm-leaf manuscript

Several literary sources from the ancient period are written in scripts that are no longer used and are therefore, unknown to us. For example, the Harappans used a pictographic script which historians have not yet been able to decipher.

LITERARY SOURCES	
Indigenous works of Indian writers.	These include Akbarnama and other works written by Indian writers.
Foreign works written by travellers who visited India during different periods.	These include works such as the Indica by the Greek author Megasthenes, the writings of Fa Hsien and other travellers.
Secular or non-religious texts	The Arthashastra by Kautilya and Meghadootam by Kalidasa are examples of secular literature
Sacred or religious texts	The Vedas are considered as sacred texts

ARCHAEOLOGICAL SOURCES

Archaeological sources are objects from the past which have survived till now. These could be ruins of buildings, pieces of pottery, tools, coins, jewellery or pieces of stone. These objects reveal the level of development of the society, and the expertise of craftsmen of that time.

- **Coins:** They give us information about the economy of kingdoms, prevalent arts and reigning kings. The study of coins is called **numismatics**.
- **Monuments:** They are great source of information. Much of our information about art and architectural style are drawn from the study of monuments.
- **Inscriptions:** These are records engraved on pillars, stone walls and clay tablets. Scribes carved the writings onto stone surface using chisels and hammers. They usually give details of battles won or instructions from ruler to the common people. Study of inscriptions is called **epigraphy**.



Fact File

In 1822, the French scholar Jean—Francois Champollion deciphered the hieroglyphic script, by successfully reading the inscription of the Rosetta Stone. It was a piece of rock that had been inscribed with tiny writings. When scholars examined it, they found that it contained the same passage in three ancient scripts: Egyptian hieroglyphics, a simple Egyptian script and Greek. Since scholars could read the Greek and Egyptian writings, they were finally able to decode the hieroglyphics.



○ **Artefacts:** These include pottery, seals, ornaments, tools, weapons, etc. Seals and pottery provide information about trade links between two places. Through tools, weapons and ornaments we learn about the lifestyle of people who lived during that time.

Archaeological objects are usually found during excavations at historical sites. Experts known as **archaeologists** study such objects. They give us a lot of information, such as the time period they belong to and how people lived at that time. They even study grains, plant remains and the bones of animals found at excavated sites. These can provide further details about food, livelihood and religious beliefs of the people of those times.

Use of Historical Sources for Writing History

Literary and archaeological sources both provide information required to write history. Historians study both literary and archaeological sources to reconstruct the events of the past, using clues provided by the various sources. History is thus a sequence of events ascertain in the light of their study by historians. To accurately interpret history, historians must consider all sources available and must not impose their own thoughts or ideas on the information they provide. They should use both types of sources to confirm their interpretation and ensure a fair treatment.



Ashoka's Brahmi script



Egyptian hieroglyphic script

Word Treasure

- Epigraphy* : study of inscription
Chronology : is the order in which a series of events happened.

Exercises

1. Answer the questions by choosing the most appropriate alternative from those given below.

- a. People who study excavated objects are known as
 i) cartographer ☐ ii) historian ☐
 iii) archaeologist ☐ iv) none of these ☐
- b. The people archaeologist study history through two main resource archaeological and



- i) Literary ☐ ii) ☐ ins ☐
- iii) timeline ☐ iv) numismatics ☐
- c. The term used for the order in which a series of events happened is
- i) history ☐ ii) chronology ☐
- iii) fossil ☐ iv) archaeology ☐
- d. Most ancient books in the South were written in
- i) Prakrit ☐ ii) Tamil ☐
- iii) Pali ☐ iv) Hindi ☐

2. Answer the following questions in detail.

- Why is it important to date events in history?
- Give two reasons why the Ganga Valley saw the influence of big cities.
- Mention any two archaeological sources of ancient Indian history.
- Explain with examples various types of literary sources.
- What do you mean by chronology? How is the birth of Christ used as reference point in history?

3. Match the following.

- | | |
|-----------------------|------------------------|
| a. Archaeology | i) Pictographic script |
| b. <i>Meghadootam</i> | ii) Megasthenes |
| c. <i>Indica</i> | iii) digging |
| d. Sumerians | iv) Kalidasa |

4. Fill in the blanks.

- The period for which we do not have written records is known as
- Literary sources refer to accounts.
- In 2500 BC, cities in were already flourishing.
- To arrange historical events, historians refer to
- Before paper, books were written on leaves.

5. Help me classify the type of historical sources.

- Writing on stone surfaces = ... (archaeological/literary)
- Books written by hand = ... (archaeological/literary)
- Ruins of buildings = ... (archaeological/literary)
- Vedas = ... (archaeological/literary)
- Writings of Fa Hsien = ... (archaeological/literary)
- Portrait of the King on the coin = ... (archaeological/literary)



6. Give one word answer.

- a. I can be engraved on rocks and pillars.
- b. I am written on the leaves of palm trees.
- c. I wrote the *Arthashastra*.
- d. I study objects from an archaeological site.
- e. The French found me in Egypt in 1822.
- f. I stretched from west to east.



Value Based Questions

Do you think it is possible that historians may give incorrect information sometimes? What do you think could happen as a result? Held a class discussion on this.

Activity Zone

- a. Close your eyes and go back to the ancient Egyptian time. Pretend that there is no form of writing. How will you send a message to someone staying far away?

Make a chart using pictures of familiar objects corresponding to the sound and write a secret message for your friend. Let them decipher or decode the message.

- b. Being an archaeologist

Imagine you are an archaeologist working on an archaeological site. How will you use the following equipments?



i) Camera



ii) Magnifying glass



iii) Measuring tape



iv) Shovel



v) Trowel



vi) Bulldozer



FLOW CHART

1. About History

What is history and why is the past important?

- History is a systematic record of past events; to understand the present, we need to study and understand the past.
- There are two periods in history.
 - **prehistory**: the period when man had no knowledge of reading and writing.
 - **history**: the period for which written records are available.

2. Evolution of man

- Before man appeared on Earth, many living organisms such as plants, fish, reptiles and birds appeared.
- All these have evolved over the years slowly and gradually.

STUDY OF HISTORY

5. Sources of History

- **Literary sources**
 - Religious literature — Vedas, Upanishads, Ramayana, Mahabharata.
 - Secular literature — accounts of foreign travellers, biographies, etc.
- **Archaeological sources** — Coins, monuments, inscriptions, artefacts.

3. Influence of Geography on history

- Humans first settled around the fertile Indo-Gangetic plains.
- The passes in the mountains served as pathways through which ideas, traditions and cultures were exchanged.
- These routes were used by the traders, religious leaders; while some traders just traded and returned home, few settled down in India.

4. Study of History

- History is studied in a chronological order.
- The dates of years before Christ's birth are referred to as **BC**.
- The years after Christ's birth are referred to as **AD**.
- The historical events are arranged in a chronological order into a **timeline**.





Earth in the Solar System

Key Highlights

- ❖ What are celestial bodies and galaxies?
- ❖ Solar system and the various components of the solar system.
- ❖ Understanding planets, satellites, asteroids, meteors and comets.

Celestial is the word given to all objects belonging to space. The sun, moon, stars and planets including our earth, are celestial bodies which we can see. There are many other celestial bodies that lie far away from us.

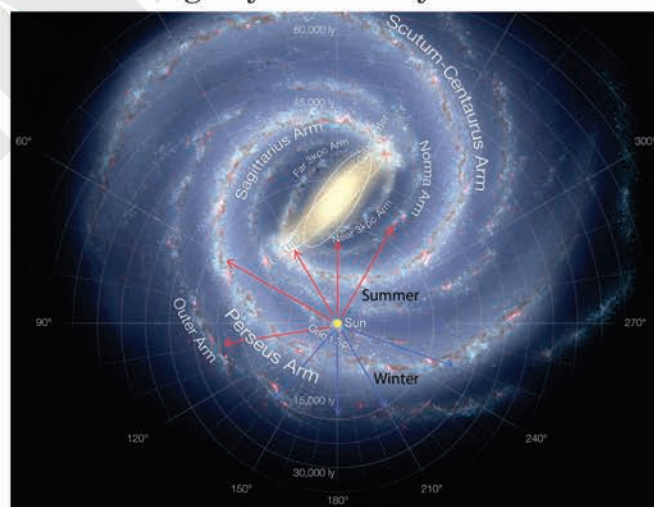
Astronomers are people who study celestial bodies and their movements. Astronomy is the branch of science which deals with the study of celestial bodies.

Different types of galaxies

A massive, gravitationally-bound cluster of stars, gas and dust is called galaxy. Galaxies vary in size and form. Three types of galaxies have been identified so far, namely, spiral, elliptical and irregular galaxies. The earth lies in a spiral galaxy called the Milky Way. It is estimated to have about 100 to 400 billion stars.

Light year is the unit used for measuring distances in space which is extremely vast. A light year is the distance travelled by light in one year. For example, Andromeda, the closest neighbour of our own galaxy, is about 2.5 million light years away from us.

Astronomers estimate that there are about 170 billion galaxies in the observable universe, separated by vast distances in space. Some 15 billion years ago, the universe was very small and very hot. An explosion known as the **Big Bang** started off the process of expansion and change from an extremely dense and hot state. After the explosion, atomic particles came together to form helium and hydrogen gases. Over millions of years these produced the galaxies,



Milky Way



the stars and the universe as we know them today. This process is going on even today. The galaxy to which our solar system belongs is called **Akash Ganga** or **Milky Way**. At night, it appears as a white band in the sky. It is a spiral galaxy.

Let's Think



Are clouds, rainbows, halos and other phenomena seen in the sky considered celestial objects?

SUN - A STAR AND OTHER STARS

Stars are very big celestial bodies, but they look small because they are very far from us. They are made up of hot glowing gases. They produce their own heat and light. The best known example of a star that lies closest to our planet is the sun. Other than our sun, the Alpha Centauri, group of three stars including Proxima Centauri is nearest, being about 4.3 light years away from the sun.

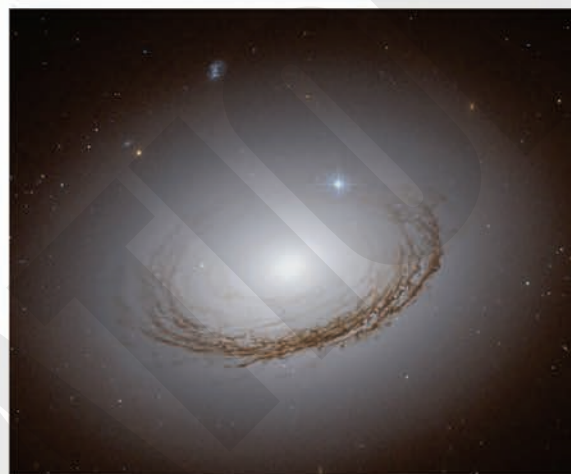
Most stars make a recognizable pattern as a group. Groups of stars laid out collectively to form certain patterns in the sky are called **constellations**. Some 88 constellations have been identified and named so far.

The ladle-shaped **Big Dipper** is part of the constellation Ursa Major or **Great Bear**. The two stars Dubhe' and 'Merak' on the Ursa Major 'Polaris', the Pole Star (the *Dhruva Tara*).

The Orion (containing a hunter's figure), Leo (having the appearance are called 'Pointers' since, a line drawn through them points us to Elliptical galaxy of a lion), and Scorpion or Scorpius (having a scorpion's appearance) and Crux (the appearance of a cross) are other constellations formed with some bright stars.

Star twinkle while planets don't. If we observe the sky on successive evenings, we find that stars do not move with respect to each other. Planets appear to be moving with respect to stars.

The sun, with a diameter about 100 times that of the earth, is about 150 million km away from the planet. Even though light travels at a tremendous speed of about 3,00,000 km per second, it takes about 8 minutes and 20 seconds to



Elliptical Galaxy



Big Dipper



reach the earth from the sun. The surface temperature of the sun is $6,000^{\circ}\text{C}$ which increases to 20 million degrees Celsius in the interior. Over 99% of the mass of the solar system is contained in the sun.

OUR SOLAR SYSTEM: The Sun and Its Planets

The word 'Solar' is related to the sun. The family of the sun is called the solar system which includes eight planets and their satellites. Besides, there are many **comets**, countless **asteroids** and **meteors**. The movement of a celestial body around a host is called 'revolution'. All planets revolve around the sun in elliptical paths called **orbits**. Originally, our solar system included nine planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune and Pluto. However, in 2006, the International Astronomical Union (IAU) reclassified Pluto as a **dwarf planet**. Hence, our solar system now has eight planets.



The solar system

The word 'planet' is originally a Greek word which means 'wanderer'. Planets have various composition and size with a spherical shape. They are opaque bodies with no heat or light of their own. They are visible because they reflect the light of the sun. They also 'rotate on their axis' at different speeds. All planets except Venus and Uranus spin in the same direction on their axis.

Out of the eight planets of our solar system, the first four are **inner planets**, i.e.,



Mercury, Venus, Earth and Mars. They are made up of rocks, which is, why, they are called **Terrestrial Planets**. The **outer planets** include Jupiter, Saturn, Uranus and Neptune. They are mainly gaseous in nature and are called **Jovian planets**.



Fact File

On April 24, 2007, astronomers discovered the most earth-like extra solar planet called **Gliese 581c**. The planet revolves around its sun-Gliese 581.

Mercury is the smallest planet in the solar system. It does not have an atmosphere. It lies closest to the sun and has the shortest orbit around the sun. It takes only 88 days to complete one revolution and nearly 59 days to complete one rotation. Its surface has many craters like those on our moon.

Venus is the hottest planet. It has carbon dioxide in its atmosphere that hides its surface from view. A blanket of sulphuric clouds and gases in its atmosphere trap its heat just as the glass roof of a greenhouse prevents the heat accumulated in the day. It is the brightest object in the sky seen without a telescope and often referred to as **Morning Star** or **Evening Star**. Venus is identical to the earth in size. So, it is called **earth's twin**.

Our home planet is Earth. Its atmosphere is rich in oxygen and nitrogen. 71% of it is covered with water, and it is the only planet which is known to have life on it. Earth is the third nearest planet to the sun and fifth largest in size in the solar system.

Mars looks red as it has red oxide in its soil and is called the **Red Planet**. Its atmosphere is very thin, mainly carbon dioxide with traces of water vapour and other gases. Its surface is pockmarked with volcanic craters. A year on Mars is equal to two earth years.

Jupiter is the largest in size. Its mass is twice that of all the other planets put together. Jupiter spins much faster than any other planet, i.e., once in 9 hours and 55 minutes.

Saturn has beautiful rings that can be seen through a telescope. They are made of dust particles, rock and ice. It is such a light planet that it is said if this ringed planet fell into a huge body of water, it would float!

Uranus and Venus rotate from east to west unlike other planets which rotate from west to east. The sun as seen on these planets rises in the west and sets in the east.

Neptune is the eighth planet from the sun and the farthest. It is the fourth largest



planet in the solar system. Its atmosphere contains hydrogen, helium and some methane which gives it a bluish colour.



Fact File

An easy way to learn the names of the planets is: 'My Very Educated Mother Just Showed Us Nightingales.' The first letter of every word tells you the sequence of planets as they appear in solar system. Mercury Venus Earth Mars Jupiter Saturn Uranus Neptune.

THE EARTH AND ITS MAJOR FEATURES

The earth is **geoid** (earth-shaped) in shape, i.e., it is bulging at the Equator and flat near the poles. This is because of the high speed at which it rotates on its axis. The earth takes nearly 24 hours (actually 23 hours 56 minutes and 4 seconds) to complete one rotation.



Earth

- Planet of the solar system where life exists.
- Active planet with volcanoes and earthquakes.
- Planet with liquid water which makes it appear blue in colour from space. Hence it is called 'watery planet or blue planet.'
- Its distance from the sun is almost 150 million km. As a result, it is neither as hot as Mercury and Venus nor as cold as Neptune. The combination of an ever-changing surface and presence of air and water along with moderate temperatures has made it possible for the existence of life on earth.

SATELLITES

The word **satellite** means 'attendant'. A celestial or artificially projected entity that circles around planet is called satellite. Celestial satellites are also called **natural satellites** or **moons** because like other celestial bodies such as planets, stars, etc., they have existed in space for millions of years. Just as planets revolve around the sun, a satellite moves around its 'host planet'. They are opaque and do not have their own heat or light, but reflect the light from the sun. Every natural satellite also rotates on its axis.

Almost all the planets in the solar system have one or more natural satellite except Mercury and Venus.

Objects placed in a planet's orbit by human efforts are called **artificial satellites**.



MOON

The only natural satellite of Earth is Moon. Fifth largest among all natural satellites of the solar family, it is earth's closest neighbour in space (nearly 3,84,400 km away).

The moon completes one revolution around the earth in 27 days and 8 hours. It spins on its axis in about the same time that it takes to complete an orbit of the earth. As a result, we always see the same face of the moon from earth and never get to see its other side. The moon shines because it reflects the light of the sun. The time taken for the reflected light to reach us on earth is very small.

Phases of the moon or its different shapes when we see it is lit part at night as it moves around the earth in about 29 days.

All the space missions sent to moon revealed that it is a dead, barren and airless world, dotted with circular depressions called craters formed by impact of meteoric bombardment. It has many mountains and plains on its surface. Temperatures on the surface of the Moon vary from above 105°C during the day to as low as -155°C at night.

American astronaut Niel Armstrong was the first man to step on the surface of the Moon on July 29, 1969.

Other Celestial Bodies

Asteroids : These are a swarm of rock pieces that lie in the belt between the orbits of Mars and Jupiter. Like the planets, they also revolve around the sun. They are believed to be fragments of a planet which exploded and disintegrated after its birth. Out of over 1,00,000 asteroids, nearly 4,000 have been identified. However, their total mass is not more than a few hundredth of the mass of the Moon. Ceres is the largest asteroid nearly 700km across in diameter.

Meteors : The other name used for them is shooting stars. Meteors resemble flashes of light in the sky. When a small piece of rock and dust (meteoroid) is drawn from its revolution around the sun into the earth's atmosphere at a speed of about 70 km per second, it burns. Friction with the atmosphere begins at about 1,000 km above the earth's surface.



Phases of the moon



Surface of the moon

The burning pieces cause a flash of light. Some meteors may not burn out completely and thus reach the earth's surface. They are called **meteorites**.

Comets: The word 'comet' originates from the Greek word *Kome*, which means 'hair of the head'. They sometimes appear in the sky as beautiful, shining bodies. They are made up of ice, gas and dust. As they approach the sun, the frozen surface starts to evaporate, forming a cloud of gas and dust with two tails. That is how a comet is formed.



Halley's Comet

Solar winds force the gas back along with some dust to form a glowing tail. Comets visit the solar system from time to time from far beyond the orbits of Neptune and Pluto. Some appear at very regular intervals such as the Halley's Comet which reappears every 76 years. Comet Encke takes 3.3 years to orbit the sun. Comet Klemola visits the solar system once in every eleven years.



Word Treasure

- dwarf planet** : a planet that is smaller than the others and much larger than a satellite or moon.
- Astronomical Unit or AU** : is the average radial distance between earth and sun which is about 150 million km.

Exercises

1. Answer the questions by choosing the most appropriate alternative from those given below.

a. The planet that travels fastest in its axis

i) Earth

☐

ii) Uranus

☐

iii) Jupiter

☐

iv) Saturn

☐

b. Comet originates from the Greek word

i) kome

☐

ii) craters

☐

iii) geoid

☐

iv) asteroids

☐

c. The planet that is known as the Morning or Evening Star is

i) Mercury

☐

ii) Venus

☐

iii) Mars

☐

iv) Saturn

☐

d. The largest asteroid with a diameter of 700 km is

i) Pluto



ii) Mercury



iii) Ceres



iv) Phobos



e. The planet that has the four largest satellites in the solar system is

i) Saturn



ii) Mars



iii) Jupiter



iv) Uranus



2. Short answer questions.

- How are planets and stars different?
- Explain why planet Venus is called the Morning star and also earth's twin.
- What is a constellation? Which two group of stars point to the Pole Star?
- Why are meteors called 'shooting stars'?



- 'The earth is a unique planet'. Justify giving reasons.
- Scientists have determined that both Moon and earth have many craters formed by the impact of meteoric bombardment. Why don't we see these craters easily on earth?

3. State whether the following statements are true or false.

- Comet Klemola visits the solar system little over every 3 years or so.
- The gravity of the earth keeps all the planets in their orbits.
- Ganymede is also known as *Akash Ganga*.
- All planets revolve on their axis from west to east except Uranus and Venus.
- Life is possible on earth because of suitable air, water and temperature.
- The four 'inner planets', namely Mercury, Venus, Earth and Mars are the rocky or terrestrial planets.

4. Fill in the blanks.

- is the planet nearest to the sun with the shortest orbit.
- is the only star in our solar system.
- A day is of shortest duration on planet
- are known as shooting stars.
- Comet visits the solar system once in every eleven years.

5. Identify the following.

- Planet smallest in size.
- Third largest planet
- Galaxy to which our earth belongs.



- d) Largest planet
- e) Unit to measure distances in space.
- f) Ringed planet

6. Table: Solar System Data

Object	Distance from sun in million kms	Rotation period in earth days	Revolution period in earth days	Moons
Sun	-	27 days	-	-
Mercury	57.9	243 days	88 days	0
Venus	108.2	243 days	224.7 days	0
Earth	149.6	23 hrs 56 min 4 seconds	365.26 days	1
Mars	277.9	24 hrs 37 min 23 seconds	687 days	2
Jupiter	778.3	9 hrs 50 min 30 seconds	11.86 years	62
Saturn	1,427	10 hrs 14 min	29.46 years	31
Uranus	2,869	17 hrs 14 min	84 years	27
Neptune	4,496	16 hrs	164.8 years	18
Earth's Moon	149.6	27 days 8 hrs	27.3 days	-

Study the table given above and answer the following questions:

- a) Which planet takes the longest to revolve around the sun?
- b) Which planet is the farthest from the sun?
- c) Identify the planet that takes longer to rotate than to complete one revolution.
- d) Which planets have more satellites—Terrestrial or Jovian?



Value Based Question

Is the heavy cost incurred in space exploration justified for a developing country like India where so many people die of hunger each year? Give at least two reasons to justify your answer.

Activity Zone

a) Learn about the Solar System

- ◆ Divide the class in various groups and assign one planet each to the group.
- ◆ Let each group prepare a report on the features, structures, conditions, etc of the planet.
- ◆ You can also add interesting pictures of the planet and mention any news or recent development related to it.



- b) Observe the night sky in the northern hemisphere. Try to spot the North Star (Polaris) with the help of Big Dipper in the constellation Great Bear or Ursa Major. [Note: We will find that in the course of the earth the Big Dipper rotates around the North Star. Its pointers, Dubhe and Merak, continue to point to the pole star]. Keeping this in mind, answer why we always keep a track of North Star.

FLOW CHART

Galaxies

- A **galaxy** is a massive, gravitationally bound cluster of stars, gas and dust
- Galaxies vary in size and form; spiral, elliptical and irregular galaxies; earth belongs to spiral galaxy–Milky Way
- Distances in space are measured in **light years**; a light year is the distance covered by light in one year

Satellites

- **Satellite** means 'attendant'; small celestial body or man-made device that revolves around a planet
- **Celestial** satellites are called natural satellites as well as moons
- Satellites which are created and designed by scientists to orbit the earth for gathering information are called **artificial** satellites

Stars and the sun

- **Stars** are big celestial bodies made up of hot glowing gases and produce their own heat and light
- **Constellations** are groups of stars connected together to form certain shapes in the sky
- The sun, a star, is about 150 million km away from the earth.

CELESTIAL BODIES

- **Celestial bodies** are all the heavenly bodies belonging to space
- **Astronomy** is the branch of science that studies celestial bodies

Moon

- Fifth largest natural satellite in the Solar System; only one natural satellite of earth
- Completes one revolution around the earth in 27 days and 8 hrs
- Moon is a dead, barren and airless world, dotted with circular depressions called **craters**

The Solar System

- The family of the sun is called the **Solar System**; it includes eight planets, dwarf planets, satellites, comets and asteroids
- The planets revolve around the sun in an anti-clockwise direction and move in an **orbit**

Other Celestial Bodies

- **Asteroids** are swarms of rock pieces that lie in the belt between the orbits of Mars and Jupiter; fragments of a planet which exploded and disintegrated after its birth
- **Meteors**, also called **shooting stars**, resemble flashes of light in the sky; small pieces of rock and dust (**meteoroid**) drawn from its revolution around the sun into the earth's atmosphere that burn; some may not burn out completely and reach the earth's surface and are called meteorites
- **Comets** are made up of ice, gas and dust; the frozen surface starts to evaporate, forming a cloud of gas, dust and two tails as they approach the sun

Planets

- Planet is a Greek word which means 'wanderer'; planets rotate on their axes at different speeds; do not have their own heat or light
- Mercury, Venus, Earth, Mars are **inner** or **terrestrial** planets; made up of rocks
- Jupiter, Saturn, Uranus and Neptune are **outer** or **jovian** planets; mainly gaseous in nature

The Earth

- **Geoid** in shape; takes nearly 24 hrs to complete one rotation
- The earth is the only planet of the solar system where life exists; marked with active volcanoes and earthquakes; appropriate distance from the sun and atmosphere support plant and animal life



Understanding Diversity

Key Highlights

- ❖ Defining diversity
- ❖ Importance of diversity
- ❖ Major features of social and cultural diversity in India

Let's Start With



At the Annual Day function kids wore traditional dresses of the state they belonged to and greeted their teacher in native language. Though they were studying in the same class, kids were surprised to know about the diversity present in our country.

MEANING OF DIVERSITY

Diversity could be interpreted as the variation one finds around itself in language, food, dances and many other things. People when work or study may follow same type of dressing and manners but in their homes and native place they speak their language and dress according to the taste they prefer. There is diversity in the environment as well as in human beings. It is this variety that makes our world such an interesting place.

Diversity and Various form of Inequalities

Apart from differences in physical appearance, mother tongue and religion, there are other kinds of differences as well. There are many kinds of inequalities—economic, social and even political. Difference in income levels leads to economic inequality. Some people are poorer than others and do not have the resources and opportunities that others enjoy. A prime example of social inequality in India is the caste system, which, for a long time, was the basis of the social structure in many parts of India.



How Diversity Enriches Us...

Variety is the spice of life. Leading same type of life would have made our world boring and no new invention, discovery or art form could have taken place in absence of diversity.

For example two close neighbours and friends John and Sourabh work together in a nationalized bank. They travel in the same bus from home to work place. During tea break they share different snacks with each-other. Sourabh has home-made Kachori and John has fruit-cheese cake.

In lunch Sourabh do not have the non-veg meal that John loves to have. John respects Sourabh's customs and understands his vegetarian taste. John is Christian and celebrate X-mas and Sourabh happily invite John on Diwali and Holi.

Thus, we see that India is a land of diversities. Many different social groups can be found in India. They speak different languages, eat various kinds of food, have different habits and believe in different faiths. Yet they are all proud to be Indian.

Let's Think

How many students in your class can speak different languages?

INDIA: A LAND OF DIVERSITIES

From early times, people travelled to different regions for several reasons. It could have been in search of food and livelihood. Wars, drought or floods are the reason for large scale migration. When they settled down in new places they began to learn new ways of doing things. They also teach people some of the things they knew. This teaching and learning between groups of people brought about many new languages, dance forms, music, cuisines and religions.

People who wanted to settle in new land had to change their old lifestyles in order to adapt to new places. Thus, they formed new habits and customs. As a result, their language, food, religion and customs became a mixture of the old and the new. A series of development also get started by this.

People began to trade with other groups in different places and thus, many of them



Fact File

Urdu is an Indo-European language. It developed under Persian and Arabic rule and to some lesser degree also under Turkish influence in South Asia during the Delhi Sultanate and Mughal Empire. It is the national language of Pakistan as well as one of the 23 official languages of India.



were influenced by the lifestyle of that place. Different religions developed diverse cultures. Many historical events like the coming of the Aryans, Mughals, and British have added diversity to our culture. Historical developments shaped and influenced different social groups. These differences can be divided into economic, social and political.

Economic Diversity

Physical and climatic conditions determine the economic activities of a region. For instance, people living near the coast would be engaged in fishing, whereas those in the plains would be growing crops. People living in the hills or deserts will be engaged in other occupations. Thus, the dress, food and habits would be different depending on the regions they live in.

India is land of vast physical feature that in turn give a variety of cultures. Always adapting to change caused by internal factors or contact with external cultures and adopting new elements from other countries has made India culture rich. In the present age of airplanes and e-mails, travelling for work or leisure has become more common, faster and easier. As such, we carry our traditions to new places and also adapt to the ways of life of that place.

Social Diversity

The smallest unit of society is family. The family that consists of parents and only their children is called **nuclear family**. However, there are families where the grandparents as well as uncles, aunts and cousins live together. Such families are called **joint families**. They are more common in villages.

A group of families living in the same area or village having common interests is called a **community**. Communities living in a region with a common government is a **nation**. In India, we have many different communities. We have 23 major languages—they can be broadly divided into two groups. In the North, the source of most languages is Sanskrit whereas in the South of India, it is Dravidian.

There are different religious communities also. They have different beliefs and ways of worship. Some of these are Hindus, Muslims, Christians, Jews, Parsis, etc. Each religion has its own customs, festivals and places of **worship**. Our country being a secular state does not favour any one religion.



Fact File

Our National Anthem, composed by Rabindranath Tagore, talks about the diversity of our country.



Similarly, Indians have diverse food habits also. These habits are dependent largely on where they live. For example, people who live on the coast eat fish and rice whereas, in cold places like Kashmir, they eat more meat and dairy products to keep themselves warm.

The environment, history and beliefs of a community also influence the way people celebrate festivals and their arts and crafts. Every region in India celebrates the harvest festival in its own style. It is known as **Baisakhi** in Punjab, **Onam** in Kerala, **Bihu** in Assam and **Makar Sankranti** in UP and Bihar.

UNITY IN DIVERSITY

The diversity of religion, language and food all that is found in our country gives our nation a very rich cultural heritage. In spite of different languages, religions and food habits, we have an underlying unity. There is also an element of interdependence among different communities which binds them together.

The village community supplies food to other towns and it depends on the urban communities to supply it with clothes, electricity, machines for agriculture, etc. Thus, they depend on each other for various needs. This interdependence is what forges a link and bond of unity.

In his book, *The Discovery of India*, Jawaharlal Nehru wrote about the variety and unity of India. He coined the phrase, '**Unity in Diversity**'. He said: '... the diversity of India is tremendous ... yet, with all the differences, people have retained their peculiar characteristics for hundreds of years...'



Word Treasure

heritage

: handed down from the past by tradition

Unity in Diversity

: co-existence of diverse cultures as a single integrated unit.

Exercises

1. Answer the questions by choosing the most appropriate alternative from those given below.

a. Which of the following factors has contributed to diversity of our country?

i) geographical



ii) festivals

iii) food



iv) none of the above



- b. Differences in race, religion, caste, etc., is termed as
 i) diversity ☐ ii) unity in diversity ☐
 iii) heritage ☐ iv) culture ☐
- c. In south of India, the origin of most languages is from
 i) Sanskrit ☐ ii) Dravidian ☐
 iii) Tamil ☐ iv) Hindi ☐
- d. Economic activities of a region is determined by and climatic condition.
 i) Physical ☐ ii) Mental ☐
 iii) Cultural ☐ iv) None of these ☐



Is India's culture ever-changing, even today?

2. Answer the following questions in about 60-80 words.

- What does diversity mean?
- What does unity in diversity teach us?
- What are the differences and inequalities among people we see outside the school?
- Why did people travel to different regions in the early times?
- What was the result of people settling down in new places?

3. Fill up the following table.

States of India	Language	Capital City	Important Festivals
Jammu & Kashmir			
Odisha			
Nagaland			
Madhya Pradesh			
Andhra Pradesh			

4. Fill in the blanks.

- Every region in India celebrates the festival in its own style.
- coined the phrase, Unity in Diversity.
- The different means of and has made cultural exchanges easier.

5. Identify the states from the following clues.

- Tamali was wearing a beautiful *mekhla*.
- A temple dedicated to Lord Brahma.
- The snake boat races here are very famous.
- Makar Sankranti is celebrated here.
- Mani enjoys the dosa and rice *idlis* that his mother prepares.





Value Based Questions

Do you think India is a better place because of its diversity? Do you think we must show respect to people who are not like us? Discuss.

Activity Zone

a) Be a Newspaper Reporter

Collect ten news items from newspaper or magazines that show that diversity is enriching. Share these with the rest of the class.

b) Diversity in the classroom

Talk to your classmates and find out about the various aspects mentioned below:

- ◆ the language spoken at their home
- ◆ festivals celebrated by them
- ◆ staple food and delicacies prepared on special occasions
- ◆ any particular way of greeting people, especially elders
- ◆ places of their origin
- ◆ the dresses they wear
- ◆ their customs

To conclude, make a report highlighting the comparative analysis of the common customs or food, etc., and also bring out the differences between them.

FLOW CHART

What Diversity Means

- There is diversity in the environment as well as in human beings
- We speak different languages at home, celebrate different festivals; sometimes we celebrate some festivals differently

Differences and Inequalities

- Inequalities or differences may be **economic, social or political**
- Some people are poorer than others and may not have access to all the resources and opportunities available
- A prime example of social inequality is the caste system

Unity in Diversity

- Diversity gives our nation a very rich cultural heritage
- Interdependence among different communities bind them together; for example, village community supplies food to the urban communities while the urban communities supply clothes and machines to the villages
- Jawaharlal Nehru, in his book, *The Discovery of India* coined the phrase **Unity in Diversity**

DIVERSITY

India—A Land of Diversities

- Different social groups are found; eat various kinds of food; believe in different ways of praying
- Different religions developed diverse **cultures**; new cultures developed due to the mixture of the old and the new
- **Economic Diversity**
 - Physical and climatic conditions determine the economic activities of a region
 - Ever-changing Indian culture due to internal forces and external elements from other countries
- **Social Diversity**
 - Smallest social group is the **family**; a family consisting of only parents and children is called **nuclear family**; a family consisting of grandparents, uncles, aunts and cousins is called **joint family**
 - Group of families living in the same area with common interests is called a **community**
 - There are different religious communities like Hindus, Muslims, Christians, Jews, Parsis, etc., with different beliefs and ways of worship
 - Food habits depend largely on the area in which people live

