

UNIT

1

Our Earth



Learning Objectives



Students can:

- ❖ know about the Universe.
- ❖ understand the Solar System.
- ❖ understand Our Earth.



Imayan is waiting for his **father** after returning from school in the evening. His **father** is an employee in a reputed bank.

Imayan : Come Daddy! (Imayan ran and hugged his father)

Father : Imaya.... Had your snacks?

Imayan : Yes, I had! My social teacher is going to teach about earth tomorrow. Please tell me about the earth.

Father : Ok. I will tell you.

Imayan : How did the Earth form?

Father : Approximately 4.54 billion years ago, Solar System was a cloud of dust and gas known as **Solar Nebula**. Due to an explosion, these particles collapsed and began to spin having the sun at centre. The bigger particles which revolve around the sun are called **planets**. Thus the planet Earth formed.

Solar Nebula



Imayan : Will you explain about Universe, Daddy?

Galaxy



Father : The **Universe** is a vast expansion of space. The Universe consists of billions of **galaxies, stars, planets, dwarf planets, comets, asteroids, meteoroids** and **natural satellites**. The exact size of the universe is still unknown. Scientists believe that the universe is still expanding outward.

Imayan : What is a galaxy, daddy?

Father : A **Galaxy** is a huge cluster of stars. Our galaxy **Milky way** is one among the countless of galaxies in the Universe.

Milky way Galaxy



Imayan : Ok Daddy. What is **Solar system**?

Father : **Solar system** consists of the sun, the eight planets, their moons, dwarf planets, asteroids and comets. These objects are gravitationally bound.

Imayan : Very interesting dad. Tell me about our **Solar System**.

Father : There are 8 planets in our solar system. They are:

- | | |
|-----------|-----------|
| ① Mercury | ⑤ Jupiter |
| ② Venus | ⑥ Saturn |
| ③ Earth | ⑦ Uranus |
| ④ Mars | ⑧ Neptune |



Solar System





The **Rocky-inner planets** are Mercury, Venus, Earth and Mars. They are called **Terrestrial planets**. The outer planets are **Gaseous planets**. They are Jupiter, Saturn, Uranus and Neptune. The **frozen planets** are Uranus and Neptune.

Imayan : Dad..... Where is our **Earth** in the **Solar System**?

Father : The Earth is the **third planet** from the sun and the **fifth largest** in solar system.

Imayan : It is said that the earth is rotating itself and at the same time revolving around the sun. Is it true?

Father : Yes, Earth has **two movements**. They are:

- ① **Rotation**
- ② **Revolution**



Rotation

The movement of the earth on its axis is called **rotation** of the earth. **Day and night** are caused due to the earth's rotation.

Day and night



Revolution

The movement of the Earth around the Sun on its axis which is tilted about $23\frac{1}{2}^{\circ}$ is called **revolution** of the earth. **Seasons** are caused by Earth's revolution.



1

Summer
(March to May)



2

South West Monsoon
(June to September)







3


North East Monsoon
(October and November)



4


Winter
(December to February)





ACTIVITY
Let us do

Make the model of a Globe.





Father : Life is possible only on the Earth because of the presence of **land**, **air** and **water**.

Imayan : Oh! I see. What is the distance between the sun and the earth?

Father : The distance between the sun and the earth is nearly 150 million kilometres.

Imayan : Say some more interesting facts about Planets Dad....

Father : Mercury and Venus lie near to the sun. Next to Earth is Mars, Jupiter, Saturn, Uranus and Neptune. The planets nearer to the sun are very hot. The planets away from the sun are very cold. **Mercury** is the **smallest** planet. **Jupiter** is the **largest** planet.



Venus is called **Earth's twin**. **Mars** is described as the **Red planet**. **Earth** is called the **Blue planet**. **Saturn** is the **Ringed planet**.

Imayan : Wow! Amazing! Where do we live on the Earth?

Father : We live on the surface of the Earth. It is made up of 7 continents and 5 oceans.

Imayan : 7 continents! What are they?

Father : Listen. They are:

Asia, **Africa**, **North America**, **South America**, **Antarctica**, **Europe** and **Australia**.

Imayan : Which is the biggest continent?

Father : The **Asia continent**, where we live is the **biggest** of all. **Australia** is the **smallest** one. Antarctica is a snow covered landmass.



A4 NoSE

(A1) Asia, (A2) Africa, (A3) Antarctica,
(A4) Australia, (No) North America,
(S) South America, (E) Europe.





Continents and Oceans





The surface of the Earth is classified into different landforms such as **mountains, plateaus, plains, coastal plains, valleys, deserts** and **islands**. The **highest peak** on the earth is **Mount Everest** (8848m) in the **Himalayas**.

Imayan : What are the **five oceans** Daddy?

Father : **Pacific Ocean, Atlantic Ocean, Indian Ocean, Southern Ocean** and **Arctic Ocean**. 71% of the Earth is covered by water and 29% is covered by landmass. About 96.5% of water is saline, 2.5% of water is fresh and 1% of water is easily accessible.



The average depth of the oceans is 3800m. The deepest point on the Ocean is **Mariana Trench** which is located in the **Pacific Ocean**.

Imayan : Thank you, Daddy. Today I have learnt a lot about the earth from you. Now I am going to study and do my home work.

Father : Ok, Imaya. Go and study.



Glossary

Particles : very small pieces

Saline water : salty water

Trench : a long ditch



Recap

- The Universe consists of billions of galaxies, stars, planets, dwarf planets, comets, asteroids, meteoroids and natural satellites.
- The Earth is the third planet from the sun and the fifth largest in the solar system.





EVALUATION



I. Fill in the blanks.

1. The distance between the earth and the sun is _____.
2. _____ are caused due to the revolution of the Earth.
3. The continent _____ is covered by ice.
4. The biggest continent is _____.
5. _____ is described as Red Planet.
6. _____ percentage of our earth is covered by salt water.

II. Match the following.

1	Smallest continent	Earth's revolution
2	Blue planet	Australia
3	Neptune	Earth
4	Seasons	earth's rotation
5	Day and night	Farthest planet

III. Answer the following.

1. What do you know about Universe?
2. Define solar system.
3. How did the Earth form?





4. Distinguish between Rotation and Revolution.
5. How many oceans are there on the Earth?

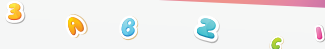
V. Answer in detail.

1. Write about the Solar System.
2. Write about the Planet Earth in detail.
3. Explain about the continents.



**Fun With
ACTIVITY**

Project



Collect and stick the images of the planets.