

## Lesson 2: About Earth

The earth is the only planet in our solar system which supports life. The presence of air, water, sunlight, etc. makes the earth livable or habitable.

**Shape of the earth:** The earth is spherical in shape. But in earlier times, people thought that the earth was flat as it seemed to meet the sky at the horizon.



**The Earth**

About 500 years ago in 1519, a Portuguese sailor, Ferdinand Magellan wanted to prove that the earth was round. He started his journey from Spain to travel around the world. He kept on sailing westwards in the same direction continuously for three years. Finally, the ship reached the same place from where he had started after travelling for 67000 kms. Thus, Ferdinand Magellan proved that the earth was spherical in shape.

The earth is not exactly round. It is slightly flattened on the top and bottom. These flattened portions of the earth are called poles.



**Ferdinand Magellan**

**Movements of the Earth:** The earth has two types of movements. That is rotation and revolution.

Rotation of the earth: The movement of the earth on its own axis is called rotation. It is like a huge spinning top. It spins on its axis from west to east. It takes about 24 hours to complete its one rotation.



**Rotation of the earth**

Revolution of the earth: The Earth moves around the sun along a fixed orbit. This movement is called revolution. It takes 365  $\frac{1}{4}$  days to complete one revolution. The revolution of the earth causes different seasons.



**Revolution of the earth**

**Air:** The earth is surrounded by a layer of air called the atmosphere. This air enables us to breathe. The gases support life on the earth. The earth's atmosphere has the right temperature for life to exist as the earth is neither too far nor too close to the sun.

The earth's atmosphere is made up of gases such as-

Nitrogen (78%) Oxygen (21%) Carbon dioxide and other gases (1%)

**Water:** About 70%-75% of the earth's surface is covered with water . We need water for drinking , bathing , cooking and many other domestic purposes. There are big water bodies present on the earth. Many aquatic plants and animals live in water. There are five oceans in the world. Pacific Ocean is the largest ocean on the earth. Rivers, lakes, ponds, etc. are other sources of water. It is the only substance found on the earth naturally in three forms solid, liquid and gas.

**Land:** It is the solid surface of earth that is not covered by water. The land is made up of rocks. It provides us minerals, soil for cultivation and building materials. The land surface of the earth has many special features such as mountains, hills, plateaus and plains.

### **Assessment Zone**

#### **QI. Tick the correct option. (To be done in the book)**

1. Atmosphere
2. Flat
3. Portuguese
4. Seasons
5. West to east

#### **QII. Fill in the blanks.**

1. Life
2. 70% to 75%
3. Rotation
4. Ferdinand Magellan
5. Blue

#### **QIII. Mark the statements as True or False.**

1. False
2. False
3. True
4. False
5. True

#### **QIV. Answer the following questions briefly. (To be done in the copy)**

A1. The earth is surrounded by a layer of air which is called atmosphere.

A2. The movement of the earth around the sun is called revolution.

A3. The earth takes  $365 \frac{1}{4}$  days to complete one revolution.

A4. The spinning of the earth on its axis is called rotation.

A5. The earth takes 24 hours to complete one rotation.

#### **QV. Answer the following questions. (To be done in the copy)**

A1. There are many water bodies present on the earth. They are lakes, rivers, ponds, seas, oceans, etc.

A2. We experience different seasons due to the revolution of the earth around the sun.

A3. The earth is the only known planet to have water. About 70% to 75% of earth's surface is covered with water. There are various water bodies present on the earth like rivers, lakes, seas, oceans etc. Water is required to sustain life.

A4. The earth rotates on its axis from west to east. This movement causes day and night.

A5. Land surface of the earth has many special features like mountains, hills, deserts and plateaus. It is made up of rocks and provides us minerals, soil for cultivation and building materials.

**Note:**

- Do not worry if you don't have the books and copies.
- Write down the answers in a rough copy and learn.
- Read the lesson from the pages that I will attach .

## 2 About Earth

**Let's Learn**

- Shape of the earth
- Movements of the earth
- Air
- Water
- Land

The earth is our home. It is the only known planet in our solar system which supports life. Human beings, animals, birds and insects live on the earth. Millions of trees or small plants also grow on this planet. The presence of air, water, proper sunlight, etc. makes the earth livable or habitable.

**Infohive**  
The earth is not exactly round. It is slightly flattened on the top and bottom. These flattened portions of the earth are called poles.

**Shape of the earth**  
The earth is spherical in shape. The photographs of the earth taken from outer space

by the astronauts prove that the earth is round.

In earlier times, people were afraid to travel to distant places, as they were superstitious and were quite afraid to cross large waterbodies. They thought that the earth was flat as it seemed to meet the sky at the horizon. So, people were afraid that if they travelled too far they would reach the end of the earth and fall off the edge!

Nearly 500 years ago, a Portuguese sailor, **Ferdinand Magellan**, wanted to prove that the earth was round and not flat. So, he started his voyage from

**Magellan**

**Brain Tickler**  
What is the other name for our earth?

**The earth**

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Spain and sailed westward in the same direction continuously for three years. Finally, his ship reached the same place from where he had started after travelling over 67000 kms.

So, Magellan was successful in proving that the earth was spherical in shape. He had reached the same destination after a long and difficult journey, covering the whole Earth.

### Movements of the earth

The earth has two types of movements. It is like a huge spinning top. It spins on its axis from **west to east**. This is called **rotation**. It takes about 24 hours to complete its one rotation. The rotation of the earth causes day and night.

The earth also moves around the

days to complete its one revolution. The revolution of the earth causes different seasons.

### Air

The earth is surrounded by a layer of air called the **atmosphere**. This air enables us to breathe. The earth's atmosphere is made up of gases such as nitrogen (78%), oxygen (21%), carbon dioxide and other gases (1%). These gases support life on the earth. The earth is neither too far from nor too close to the sun. The earth's atmosphere has the right temperature for life to exist.

### Water

About 70%-75% or  $\frac{3}{4}$ th of the

#### Brain Ticker

What is summer and winter solstice?



Rotation



Revolution

earth's surface is covered with water. We need water to drink and for many other domestic purposes. There are many waterbodies present on the earth.

They are lakes, rivers, ponds, seas,

sun. It moves around the sun along a fixed orbit. This movement is called **revolution**. It takes about  $365 \frac{1}{4}$

#### Infohive

Water is the only substance found on the earth naturally in three forms: solid, liquid and gas.

oceans, etc. Many aquatic plants and animals live in water. Pacific ocean is the largest ocean on the earth.



Lake



Sea



Aquatic Life

### Land

The land surface of the earth has many special features such as

mountains, hills, plateaus and plains. The land is made up of rocks. It provides us minerals, soil for cultivation and building materials.



#### Brain teaser

What is the difference between a mountain and a hill?



Mountain



Plateau



Plains



### Recap

1. The earth is the only known planet on which life exists.
2. Portuguese sailor, Ferdinand Magellan, proved that the earth is round.
3. The earth has two types of movements— rotation and revolution.
4. A blanket of air covers the earth. This is called the atmosphere.
5. The earth's atmosphere has 78% nitrogen, 21% oxygen and 1% other gases.
6. About 70%-75% of the earth's surface is covered with water.



## Assessment Zone

### I. Tick (✓) the correct option.

- The earth is surrounded by a layer of air called the:  
a. atmosphere  b. hydrosphere   
c. space  d. biosphere
- Earlier, people believed that the earth was:  
a. square  b. round   
c. flat  d. none of these
- The sailor who proved that the earth is round was a/an:  
a. Indian  b. Spanish  c. Portuguese  d. Roman
- The revolution of the earth causes:  
a. days  b. months  c. nights  d. seasons
- The earth spins on its axis from:  
a. east to west  b. west to east   
c. north to south  d. south to north

### II. Fill in the blanks.

- The earth is the only known planet where \_\_\_\_\_ exists.
- About \_\_\_\_ to \_\_\_\_ of the earth's surface is covered with water.
- The earth's movement on its axis is called \_\_\_\_\_.
- \_\_\_\_\_ is the name of a Portuguese sailor who proved that the earth is round.
- The earth is also called the \_\_\_\_\_ planet.

### III. Mark the statements as True (T) or False (F).

- The earth is one among many other planets which support life.
- Only plants can survive in water.
- The earth spins from west to east on its axis.
- The rotation of the earth causes different seasons.
- The earth takes about 365 1/4 days to complete one revolution of the sun.

**IV. Answer the following questions briefly.**

1. What is atmosphere?
2. What is revolution?
3. How much time does the earth take to complete one revolution?
4. What is rotation?
5. How much time does the earth take to complete one rotation?

**V. Answer the following questions.**

1. Which waterbodies are found on the earth?
2. How do we get seasons?
3. Write a few lines about the presence of water on the earth.
4. How do we get days and nights?
5. Write a few lines about the land surface of the earth.



**Activity Zone**

**Think it over**

VI. What would happen if the earth started rotating backwards?

VII.



**Group Discussion**

On the basis of the earth's rotation, discuss the occurrence of day and night.

**Project Work**

VIII. Make a working model of the earth's revolution/rotation.