

1 Our Earth in the Solar System

Get Going

Look at the picture.
Circle the correct words.

1. It is day / night.
2. There are stars / flowers in the sky.
3. We see the Sun / the moon in the night sky.



The night sky

The Universe

Have you ever heard of the word 'space'? The Sun, the Moon, the stars and the planets are located in space. All these things in space make up our universe. The universe also consists of dust, gases, pieces of rock and many other things. You will read about this later. Our universe is very big.

FAST FACT

Scientists believe that the universe was created by an explosion called the **Big Bang**. The Sun, stars and the planets were created out of this explosion.

The Sun, the Moon, planets and stars are called **heavenly bodies**.

Did you know that the Sun is actually a very big star? Many such stars, clouds and gases together form a **galaxy**. There are different galaxies in our universe. The Sun is a part of a galaxy called the **Milky Way**. There are billions of stars in the Milky Way.



The Milky Way

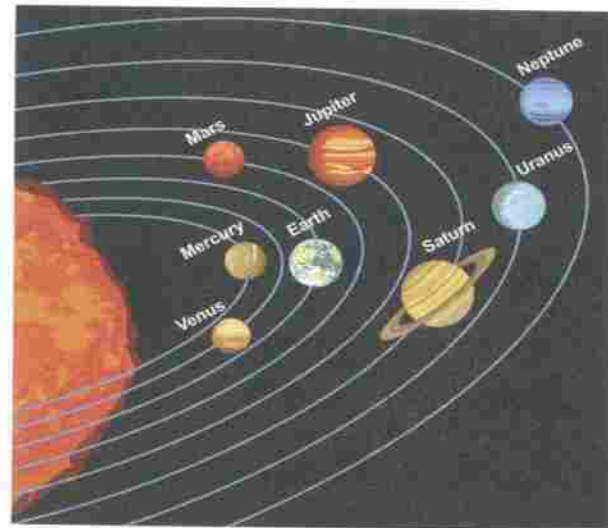
The Solar System

As you know, the Sun is a star. It is a huge ball of very hot gases. The Sun is the source of light and energy in the solar system. This has made life possible on Earth. Eight heavenly bodies, called planets, move around the Sun. Our Earth is one among those planets. The Sun and the eight planets make the solar system.

Planets

The word 'planet' means a wanderer. The eight planets, in the order of increasing distance from the Sun, are **Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus** and **Neptune**.

Planets move around the Sun in fixed paths called **orbits**. Each planet takes different duration of time to move around the Sun once. Our Earth takes a little over 365 days. We call this period of time a **year**.



The Solar System

Planets do not have light of their own. They receive light from the Sun.

Earth: The Blue Planet

Look at the picture of the solar system given above. The Earth is the third planet from the Sun. Do you know what makes our Earth a special planet? It is the only known planet which is home to all living things. This means, it is the only planet that supports life.



The Earth

About three-fourths of the Earth's surface is covered with water, and one-fourths by land. The surface of the Earth is surrounded by a blanket of air called the **atmosphere**. Land, water and air are the three things necessary to support life. Can you guess why our Earth is also called the 'blue planet'?

Shape of the Earth

For thousands of years, people believed that the Earth was flat like a saucer. So, people were scared that if they went too far, they would fall off the Earth's edge.

Around 500 years ago, a Portuguese sailor named Ferdinand Magellan started on a long journey from Spain, and kept sailing. After about three years, his ships reached the same place from where they had started. This proved that the Earth is round like a ball.

Photographs of the Earth taken from space also show that it is not flat. Neither it is a perfect sphere. It is shaped like an orange as it is slightly flattened at the top and the bottom.

Spot Check

Fill in the blanks.

1. The Sun, the Moon, the planets and the _____ are located in space.
2. The _____ is very big.
3. The Sun and the _____ planets make the solar system.
4. The _____ is the only planet that supports life.
5. Ferdinand Magellan proved that the Earth is _____.

The Horizon

If we stand on the top of a hill or a tall building, we can see that the sky and the land seem to meet at a point. This point is known as the **horizon**. Remember, the land and the sky do not actually meet at the horizon. They only appear to meet as the Earth is spherical, and we cannot see the land beyond the horizon.

The Moon: Our Nearest Neighbour

You must have noticed the Moon in the sky at night. It is a heavenly body which moves around our Earth, just as the Earth moves around the Sun. The Moon is the natural **satellite** of the Earth.

The Moon is actually a big ball of rock and dust. It is much smaller than the Sun. It appears to be about the same size as the Sun because it is much closer to the Earth than the Sun.

Other planets in the solar system too have their own moons. The moons move around those planets.

Word Bank

orbit: the fixed path on which a planet moves around the Sun

atmosphere: the layer of air surrounding the Earth

horizon: the imaginary point where the land and the sky appear to meet

satellite: a heavenly body which moves around a planet

In a Nutshell

- ❖ All things in space make up our universe.
- ❖ The Sun, the stars, the planets and their moons are a part of the Milky Way galaxy.
- ❖ The solar system is made up of the Sun, the planets, the Moon and other heavenly bodies.
- ❖ The Earth is the only planet where life is known to exist.
- ❖ The Earth and the sky appear to meet at a point known as horizon.

Exercises

A. Circle the correct answers.

1. The Sun, the Moon and the planets are called (*heavenly / universal*) bodies.
2. In our Solar System, there are (*nine / eight*) planets.
3. (*Jupiter / Earth*) is called the Blue Planet.
4. The shape of the Earth resembles (*an orange / an apple*).
5. The Moon is the Earth's (*star / satellite*).

B. Match the following.

Column A	Column B
1. Milky Way	a. air, water, land
2. The Moon	b. Galaxy
3. Orbit	c. layer of air surrounding the Earth
4. Atmosphere	d. Satellite
5. Three things that support life	e. a planet's fixed path

C. Write T for true and F for false.

1. The Earth is mostly covered with land. _____
2. Mars is the planet that lies closest to the Sun. _____
3. The Earth and the sky appear to meet at the coast. _____
4. The Moon is a satellite of the Sun. _____
5. The Sun is a star. _____

D. Answer in one or two words.

1. The planet farthest from the Sun. _____
2. A huge ball of very hot gases. _____
3. The fixed path on which a planet moves around the Sun. _____
4. The Portuguese sailor who proved that the Earth is round. _____
5. Our nearest neighbour. _____

E. Answer the following in detail.

1. What makes the Earth a special planet?
2. What did Ferdinand Magellan find out about the shape of the Earth?
3. What do you know about the Moon?

F. Think and answer.

1. What would happen if there was no Sun in the solar system?
2. Does Jupiter take more time than the Earth to orbit the Sun? Give reasons for your answer.

EXPERIENTIAL LEARNING

Activity

A. Quiz Time: Take turns with your partner to answer the following questions.

1. Who was the first Indian to travel to space?
2. Name the planets with rings.
3. Which planet is also known as the 'morning star'?
4. Which planet is also called the 'red planet'?
5. Which planet takes the longest time to travel around the Sun?

- B.** The Sun is the actual superstar of our solar system. Give reasons.
- C.** Pluto was earlier a planet. Why is it now considered a dwarf planet?

Project

Make a chart showing the Sun and the eight planets. You can use thermocol cut-outs for making the Sun and the planets. Label all the members of the solar system. Display your chart in the class.

Life Skills

Take three small potted plants. Do the following:

- Do not water the first pot for four days.
- Keep the second pot in shade for five days.
- Cover the third potted plant with a polythene bag.

Record your observations. Does this say something about the importance of sunlight, air and water for plants?

Values

The Earth is the only planet which has life on it. Save the Earth.

Webquest

Visit <http://learnenglishkids.britishcouncil.org/en/short-stories/planet-earth> to learn more about the Earth.