

GEOGRAPHY

Our Solar System

Celestial Bodies

The Solar System is a family of eight planets, natural satellites, asteroids, meteoroids many other celestial bodies. Our Solar System is a part of the **Milky Way Galaxy**. Millions of galaxies make the **Universe**. All the objects including the Sun and planets which shine in the sky at night are called **celestial bodies**. These are also known as heavenly bodies. Some of the celestial bodies are:

The Sun

- It is in the centre of the Solar System.
- The Sun is the source of light and heat for the solar system.
- The Sun binds the entire solar system.
- It is made up of extremely hot gases.
- We do not feel the extreme heat of the Sun as it is far away from the Earth.
- The Sun is about 150 million kilometres away from the Earth.



All the objects in the sky are called celestial bodies.

The Stars

- Stars are hot and very big in size.
- They appear small to us as they are very far away from us.
- The Sun is a star.
- Stars have their own heat and light.
- Various patterns are formed by different groups of stars. These patterns are called constellations.
- Some known constellations are the Ursa Major (Big Bear) and the Saptarishi (Little Bear). Saptarishi is a group of seven stars which can be recognized easily and is part of the Big Bear.
- The North Star, also known as the Pole Star, indicates the north direction.
- In the ancient times, people tried to find out the location of places with the help of the Pole Star.

The Moon

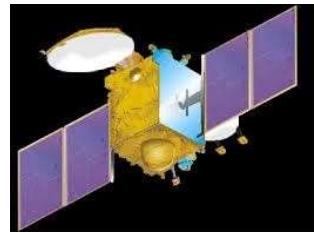
- The Moon is a natural satellite of the Earth.
- The Moon moves around the Earth in about 27 days. It takes the same time to rotate on its axis. This is the reason why only one side of the Moon is visible to us from the Earth.
- The Moon neither has water nor air. Thus, life is not possible on it.
- We can see the Moon only once in a month. This is called the full moon night or Poornima.
- About fifteen days after the full moon day, we are not able to see the moon. This is called New moon night or Amavasya.



Full Moon

Satellites

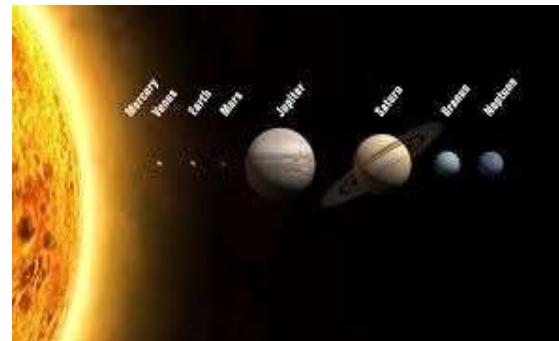
Satellites are celestial bodies which move around the planets. The Moon is a natural satellite which revolves around the Earth. An artificial satellite is a man made satellite which is constructed by scientists to gather information about various planets including the Earth. Some of the artificial satellites are INSAT, EDUSAT etc.



An artificial satellite

Planets

- The word 'planet' comes from the Greek word 'planetai' which means 'wanderers'.
- There are eight planets in our Solar System, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.
- Mercury is the planet nearest to the Sun and it takes only 88 days to revolve around the Sun.
- All the planets move around the Sun in fixed paths called orbits which are elongated in shape.
- Venus is also known as the 'Earth's twin' as its shape and size are very much similar to the Earth.
- Jupiter is the largest planet in the Solar System.
- Pluto, which was the ninth planet, is now considered to be a dwarf planet.



The eight planets

Difference between Stars and Planets

| Stars | Planets |
|---|--|
| Stars have their own light. | Planets do not have the light of their own. They shine by reflecting the light of the Sun. |
| There are billions of stars in the sky. | There are only eight planets. |
| Stars twinkle | Planets do not twinkle |
| Stars have high temperatures. | Planets have low temperature. |

Earth

- The Earth is the third nearest planet to the Sun and the fifth largest planet in size.
- The Earth is a little flattened at the pole and therefore its shape is described as Geoid.
- The Earth has water and air, which includes the life supporting gas oxygen, and thus it is the only planet which has conditions which favour life.
- Due to the above reasons, the Earth is known as the unique planet in the Solar System.
- As two thirds of the Earth's surface is covered with water, it appears blue from outer space. Thus, it is also known as the blue planet.



The Earth is also known as the blue planet as more than two thirds of its surface is covered with water.

Asteroids and Meteoroids

Asteroids are small bodies which move around the Sun. They are found between the orbits of Mars and Jupiter. Many scientists have claimed that these asteroids are the parts of a planet which might have exploded many years ago.

Meteoroids are small pieces of rock which revolve around the Sun. Sometimes, these meteoroids may come near the Earth. Most of them get burned as they enter the Earth's atmosphere due to friction. At times they may strike the Earth's surface creating a hollow depression on the ground.



A meteorite