
Chapter 1

The Earth in the Solar System

❖ Celestial bodies

- The sun, moon, stars, planets and other objects in space are known as celestial bodies.
- Stars are celestial bodies that are made up of gases and emit their own heat and light.
- A group of stars forming a definite pattern is called constellation.
- The Pole Star, which can be located with the help of the *Saptarishi*, indicates the north direction.
- The celestial bodies which do not have their own heat and light and are lit by the lights of other stars are called planets.

❖ The Solar System

- The solar system is made up of the sun, eight planets, satellites and some other celestial bodies called asteroids and meteoroids.
- The Sun: It is the star at the centre of the solar system which binds it together. It is huge and made up of extremely hot gases. It is 150 million km away from the earth.
- Planets: There are eight planets which revolve around the sun in their definite paths known as orbits.
 - The planets are arranged from the Sun in the order of Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.
 - Pluto was classified as a dwarf planet in August 2006.
- The Earth: Earth is the fifth largest planet and the third nearest planet to the Sun.
 - It is called the blue planet because two-third part of its surface is covered with water.
 - It is the only planet to contain life in it as it is neither too hot nor too cold and oxygen is available here.
 - It is slightly flattened at the poles and this shape is described as a Geoid.
- The Moon: It is the only natural satellite of earth. It revolves around the earth in 27 days.
 - Its diameter is one-quarter that of the earth and distance is 3, 84,400 km from the Earth.
 - The moon does not contain water and air and its surface has mountains and depressions.

-
- Asteroids: They are numerous tiny bodies revolving around the sun between the orbits of Mars and Jupiter. They are supposed to be parts of a planet which exploded many years back.
 - Meteoroids: They are small pieces of rocks which move around the sun. Sometimes they come close to the Earth and are burnt from the heat produced due to friction with air. Falling meteors produce a flash of light and create hollows on the Earth's surface.
 - Galaxy: Galaxy is a huge system of stars and clouds of dust and gases. The Earth and the solar system exist in the Milky Way Galaxy.
 - The Universe: Millions of galaxies make up the Universe.