# Lesson: OUR SOLAR SYSTEM

## Objective

Introduce you to our solar system and get to know our 8 planets - their order, size and their names.

## What is the Solar System?

Our solar system is made up of many parts. It is a combination of a single star and planets, moons and other objects that orbit around it. Think of it like a neighborhood. The solar system is our neighborhood, but we are also part of a bigger galaxy called the Milky Way--just like a neighborhood might be part of a bigger city.

We are one of hundreds, and maybe even thousands, of solar systems in our galaxy. The Sun is our star that rotates at the very center of our solar system. It's huge, hot and very bright. The Sun gives the solar system light and heat, which both make it possible for there to be life on Earth. Around the Sun, eight planets orbit in different patterns.

## The Planets

Our solar system has eight main planets that rotate around the Sun. Planets are large bodies in space that orbit a star.

The first four planets, Mercury, Venus, Earth and Mars are much nearer the Sun than the other four planets. They are called the inner planets. The inner planets have very few moons and have rocky surfaces.

The outer planets are Jupiter, Saturn, Uranus and Neptune, are much further than the inner planets and have large number of moons.

## Moon

Moon is the natural satellite of the earth, visible (chiefly at night) by reflected light from the sun and thought to have formed about 4.51 billion years ago.

The day on which the whole disc of the moon is visible is known as the full moon day. Thereafter, every night the size of the bright part of the moon appears to become thinner and thinner. On the fifteenth day the moon is not visible. This day is known as the ‘new moon day’. The next day, only a small portion of the moon appears in the sky. This is known as the crescent moon.

Neil Armstrong was the first human to land on Moon.

## Mercury

The planet mercury is nearest to the Sun. Because Mercury is very close to the Sun, it is very difficult to observe it, as most of the time it is hidden in the glare of the Sun. It is the smallest planet of our solar system. Mercury has no satellite of its own. Mercury is 57.91 Million Kilometers from the sun.

## Venus

Venus is earths nearest planetary neighbor. Sometimes Venus appears in the eastern sky before sunrise. Sometimes it appears in the western sky just after sunset. Therefore it is often called a morning or an evening star, although it is not a star. Venus is 108.2 million kilometers from the sun.

## Earth

The Earth is the only planet in the solar system on which life is known to exist. It is an inner, rocky planet that sits at just the right distance, 149.6 million kilometers from the sun, which is how it is able to support life. The Sun is the source of almost all energy on the Earth.

## Mars

Mars is the second-smallest planet in the Solar System after Mercury. Mars appears slightly reddish and, therefore, it is also called the red planet. Mars is approximately half the diameter of Earth with a surface area only slightly less than the total area of Earth's dry land. Mars is 227.9 million kilometers from the sun.

## Jupiter

Jupiter is the largest planet of our solar system. It is so large that about 1300 earths can be placed inside this giant planet. However, the mass of Jupiter is about 318 times that of our Earth. Jupiter has a large number of satellites. It also has faint rings around it. You can easily recognize Jupiter as it appears quite bright in the sky. Jupiter is 778.5 million kilometers from the sun.

## Saturn

Beyond Jupiter is Saturn which appears yellowish in color. What makes it unique in the solar system is its beautiful rings. These rings are not visible with the naked eye. You can observe them with a small telescope. Saturn also has a large number of satellites. Saturn is 1429 million kilometers from the sun.

## Uranus

The seventh planet from the sun with the third largest diameter in our solar system, Uranus is very cold and windy. The ice giant is surrounded by 13 faint rings and 27 small moons as it rotates at a nearly 90-degree angle from the plane of its orbit. This unique tilt makes Uranus appear to spin on its side, orbiting the sun like a rolling ball. Uranus is 2817 million kilometers from the sun.

## Neptune

Neptune is the outermost planets of the solar system. They can be seen only with the help of large telescopes. Neptune is 4498 million kilometers from the sun.

## Comets

Comets are also members of our solar system. A Comet appears generally as a bright head with a long tail. The tail of a comet is always directed away from the sun. Man comets are known to appear periodically. One such comet is Halley’s Comet, which appears after nearly every 76 years. It was last seen in 1986.

## Meteors

A meteor is usually a small object that occasionally enters the earth’s atmosphere. At that time it has a very high speed. It glows and evaporates quickly. That is why the bright steak lasts for a very short time.

Some meteors are large and so they can reach the Earth before they evaporate completely. The body that reaches the Earth is called a meteorite.

## Asteroids

There is a large gap in between the orbits of Mars and Jupiter. This gap is occupied by a large number of small objects that revolve around the Sun. These are called asteroids. Asteroids can only be seen through large telescopes.