

# **The Earth in the Solar System**

## **Class 6**

### **Social Science Geography Chapter 1(Notes)**

#### **Solar System**

The sun, eight planets, satellites, asteroids and meteoroids form the solar system.

#### **The Sun**

The sun is in the center of the solar system.

It is made up of extremely hot gases.

The sun is about 150 million km away from the earth.

#### **Planets**

There are eight planets in our solar system.

The nine planets are Mercury, Venus, Earth, Mars, Jupiter, Uranus and Neptune

Planets move around the sun in a fixed orbit.

Mercury is the nearest planet.

Neptune is the farthest planet.

A new planet 2003 UB313 has been discovered. It is bigger than Pluto , which was once a planet and is farthest from the sun.

#### **Earth**

It is the third nearest planet to the sun and fifth largest planet of our solar system.

The earth is a unique planet because it supports life.

It is also called the blue planet.

Its shape is Geoid.

#### **The Moon**

It is the only satellite of the earth.

Its diameter is one-quarter of the earth. ‘

It is about 3.84,400 km away from us.

It moves around the earth in about 27 days.

Only one side of the moon is visible to us on the earth.  
No life exists on moon as it has neither water nor air.

### **Asteroids**

They are numerous tiny bodies which move around the sun between the orbits of Mars and Jupiter.

The largest asteroid is the Ceres.

### **Meteoroids**

The small pieces of rocks which move around the sun are called meteoroids.

Our solar system is a part of the Milky Way galaxy.

Milky Way galaxy was named Akash Ganga.

There are millions of galaxies that make the Universe.

The Stars and the MOON are celestial bodies which are visible only at night in the sky. During daytime, the power of the sun's light renders them invisible.

The moon appears differently on different nights—like the Full Moon only once a month, on the poornima night whereas on the fifteenth night after that, there is no moon in the sky (amavasya).

Some celestial bodies are big and hot since they are made of gases. They are called Stars. The sun is also a star. We do not feel the heat and light of the stars other than the sun since they are very far away from us.

Groups of stars that are visible in definite patterns are called Constellations.

Ursa Major (the Big Bear), The Small Bear (Saptarishi), etc are some well-known constellations.

The Pole Star is known to retain the same position every night in the sky. It is also called the North Star since it helps in knowing the North direction.

**All the planets of the solar system are listed below: (in the order of their distance from sun)**

Mercury (planet nearest to the Sun)

Venus

Earth  
Mars  
Jupiter  
Saturn  
Uranus  
Neptune

Till August 2006, Pluto was also a planet. But it is now recognised as a “dwarf planet”.

**Celestial Body:** An object in the universe (but not on the earth) is said to be a celestial body. Examples are sun, earth, moon, stars, etc.

**Star:** A celestial body that is characterized by being very hot and big, and made of gases is a star. A star typically has its own heat and light.

**Full Moon Night:** A night when the moon is visible from the earth as a full sphere is called the Full Moon night, and it occurs once a month.

**New Moon Night:** The fifteenth night after the Full Moon night, when the moon is not visible at all in the sky, is called the New Moon night.

**Constellation:** A group of several stars which can usually be recognized by a definite pattern is called a constellation. An example is Ursa Major.

**Planets:** A celestial body which revolves around a particular star in an orbit, and gets all its light from that star, is called a planet. Earth is a planet.

**Satellites:** A celestial body which revolves around a planet in a particular orbit is called a satellite. The moon is a satellite of the Earth.

**Orbit:** The particular and definite elliptical path in which a planet (or satellite) always remains, is called the orbit of that planet (or satellite).

**Sun:** The Sun is a star that acts as the “head” of the solar system and around which all planets revolve: Note that the sun is not at the center of the orbit, instead it is like in the figure above.

**Inner Planets:** The Inner Planets are the planets that orbit around the sun between the sun and the asteroid belt, that is, are close to the sun. These are: Mercury, Venus, Earth and Mars.

**Outer Planets:** The Outer Planets are the planets that orbit the sun beyond the asteroid belt, that is, are very far away from the sun. These are: Jupiter, Saturn, Uranus and Neptune.

**Geoid:** The shape of the earth is called a geoid. A geoid is spherical except for the flattening at two places diametrically opposite to each other.

**Poles:** The two places diametrically opposite to each other and which lie on the axis about which a spherical body rotates are called poles.

**Asteroids:** A large number of tiny celestial bodies which move around the sun, and are mainly present in a belt between the orbits of Mars and Jupiter, are called Asteroids.

**Meteoroid:** Small pieces of rocks which move around the sun are called meteoroids.

**Galaxy:** A galaxy is a collection of innumerable stars. Most stars have their own families like the solar system. The Milky Way is the galaxy in which we live.

**Universe:** The Universe is the largest unit in which we live. It is a collection of galaxies. There is only one Universe and everything that exists in this Universe itself.

## Worksheet

### I. Choose the correct answer:

a) How many planets are there in the solar system?

i. 8

ii. 9

b) Where is the sun in our solar system?

i. Center

ii. Outside

- c) Which is the nearest planet to the sun in the solar system?
  - i. Venus
  - ii. Mercury
- d) How many days the moon takes to move around the earth?
  - i. 27 days
  - ii. 28days
- e) What are the small pieces of rocks which moves around the sun called?
  - i. Asteroid
  - ii. Meteoroid

**II. Fill in the blanks:**

- a) ..... and ..... are celestial bodies which are visible only at night in the sky.
- b) The moon is about ..... kilometres away from us.
- c) ..... is also called the blue planet.
- d) ..... is the eighth planet of our solar system.
- e) Planet moves around the ..... in a fixed orbit.

**III. Right whether the following are true or false :**

- a) Only one side of the moon is visible to us from the earth.
- b) Ursa major and The Small Bear are well-known meteoroids.
- c) The polestar is known to retain the same position every night in the sky.
- d) The stars are visible in the morning.
- e) Our solar system has seven planets altogether.

**IV. Give one word for the following:**

- a) it is made up of extremely hot gases.
- b) It is a unique planet because it supports life.
- c) It is the only satellite of the earth.
- d) It is the largest asteroid.
- e) It appears differently on different nights.

**V. Define the following: (learn and then write).**

- a) Orbit
- b) Constellation

- c) Satellites
- d) Full moon night
- e) Stars
- f) New moon night
- g) Planets
- h) Poles
- i) Galaxy
- j) Universe

**VI. Write the answers in short:**

- a) what are inner planets?
- b) Name the planets of our solar system in order.
- c) What are asteroids?
- d) Which planet is known as a 'draft planet'?
- e) How far is the earth from the sun?

**VII. Draw and colour a neat diagram of our solar system.**