

Geography  
Chapter - 1

# ***THE EARTH IN THE SOLAR SYSTEM***

# CLASS VI CH 1 THE EARTH IN THE SOLAR SYSTEM NCERT

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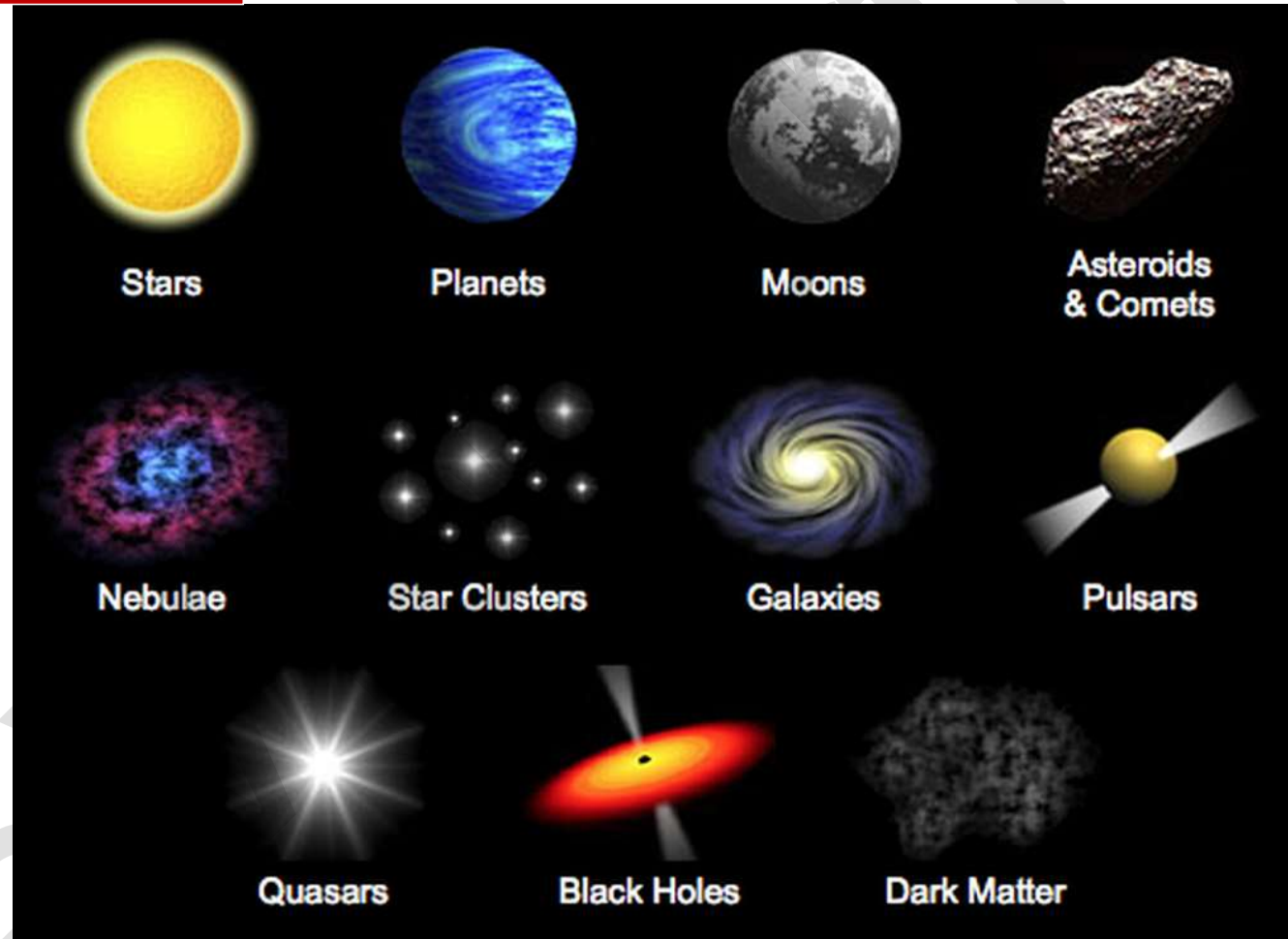
- Along with these bright objects, you may also see the moon on most of the days.
- It may, however, appear at different times, in different shapes and at different positions.
- Do you wonder why can't we see the moon and all those bright tiny objects during daytime?



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## Celestial bodies

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## **Celestial bodies**

- The Sun, the Moon and all other objects shining in the night sky are called Celestial Bodies.
- The moon, stars and planets cannot be seen during the daytime because the very bright light of the Sun does not allow us to see them.

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### ■ Celestial Bodies can be classified as:

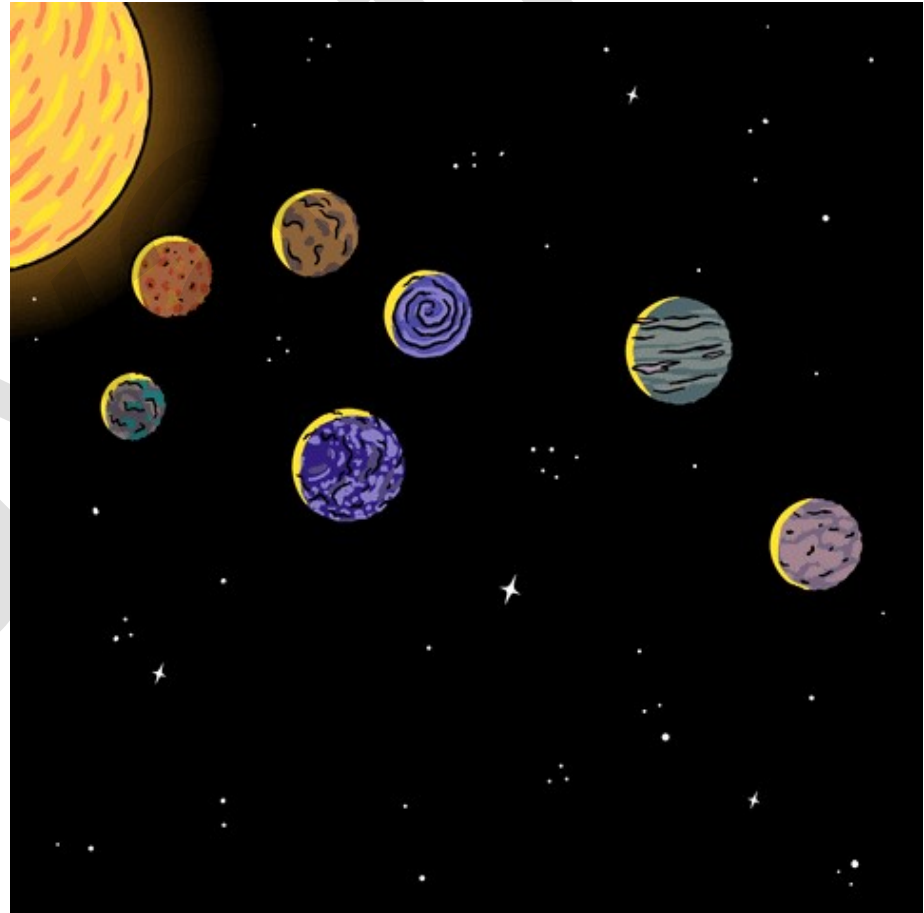
- Those which emit their own heat and Light – Star (Example, SUN, Proxima Centauri )



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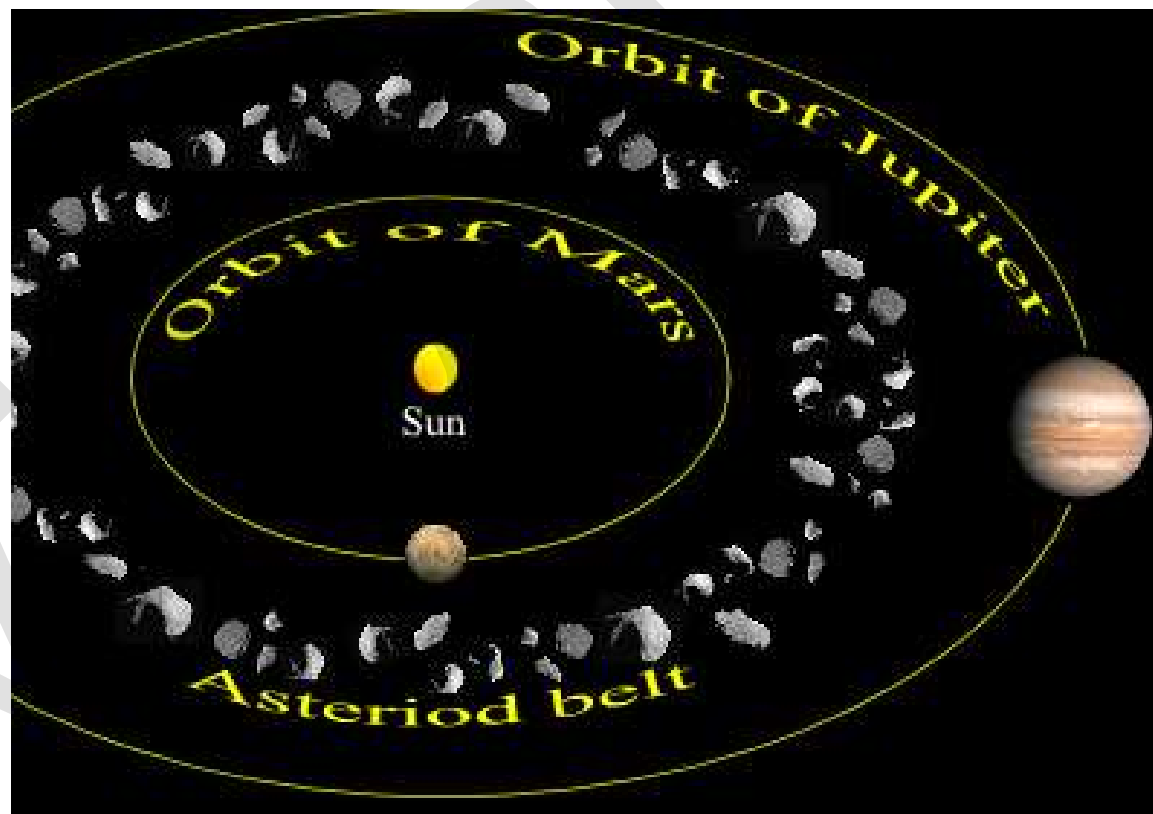
- Those which don't emit their own light – Planets
  - ✓ Planets are derived from Greek Word “Planetai” which means Wanderer.



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





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- objects that revolve around planets – satellite.  
( example – moon)



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- small chunks of ice and rock that come from the outer edge of the solar system.
  - ✓ When it comes closer to the sun, the ice on them vaporizes, creating a beautiful tail behind them.



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## ☐ Stars





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## ☐ Stars

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- Some celestial bodies are very big and hot. They are made up of gases. They have their own heat and light, which they emit in large amounts. These celestial bodies are called stars
- The sun is star and there are billions of stars in the universe.





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## ■ constellation

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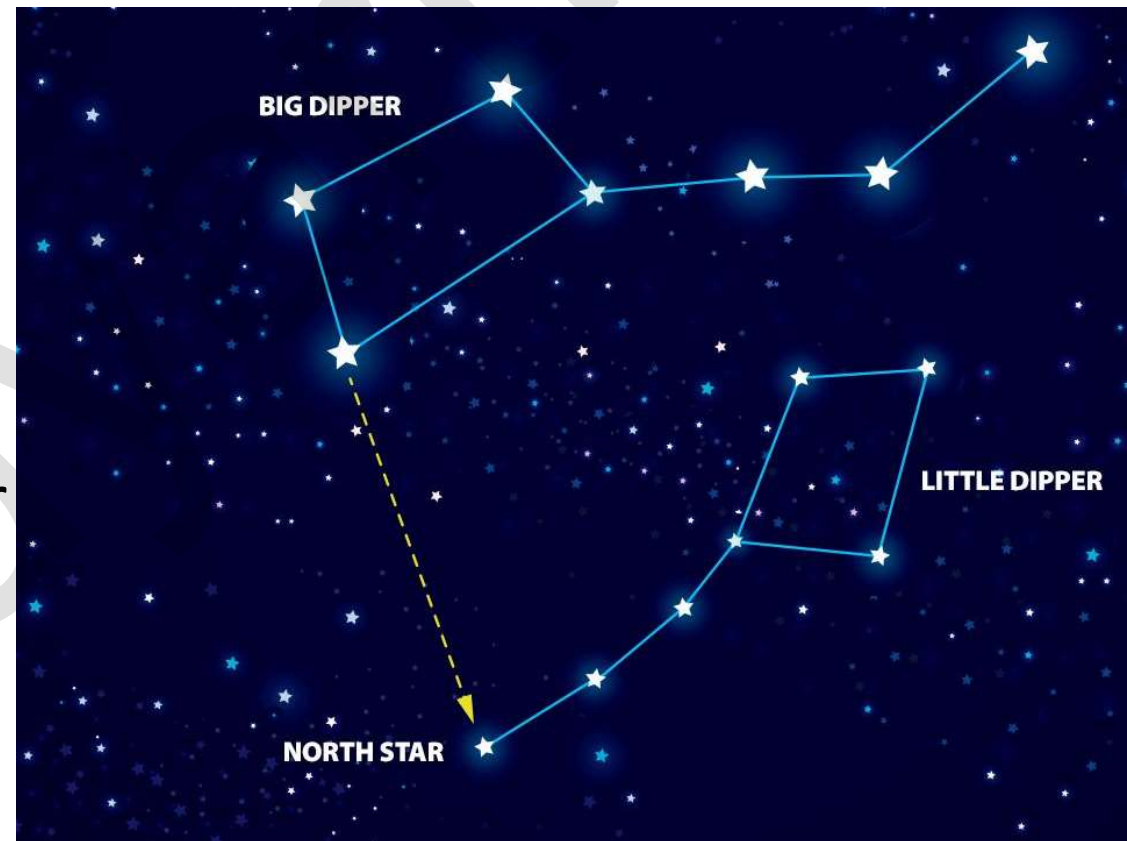
## ■ constellation

- A constellation is a group of stars that appears to form a pattern or picture like Orion the Great Hunter, Leo the Lion, or Taurus the Bull.
- Constellations are easily recognizable patterns that help people orient themselves using the night sky.

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- One of the most easily recognizable constellation is the Saptarishi (Saptaseven, rishi-sages). It is a group of seven stars.
- It forms a part of Ursa Major or Big dipper Constellation.



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## □ The North Star



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# CLASS VI CH 1 THE EARTH IN THE SOLAR SYSTEM NCERT

## □ The North Star

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- The North Star or Pole Star – aka Polaris – is famous for holding nearly still in our sky while the entire northern sky moves around it.
- That's because it's located nearly at the north pole, getting its name north star.
- The North star indicates the north direction.
- In earlier days, people used to determine directions during the night with the help of stars.

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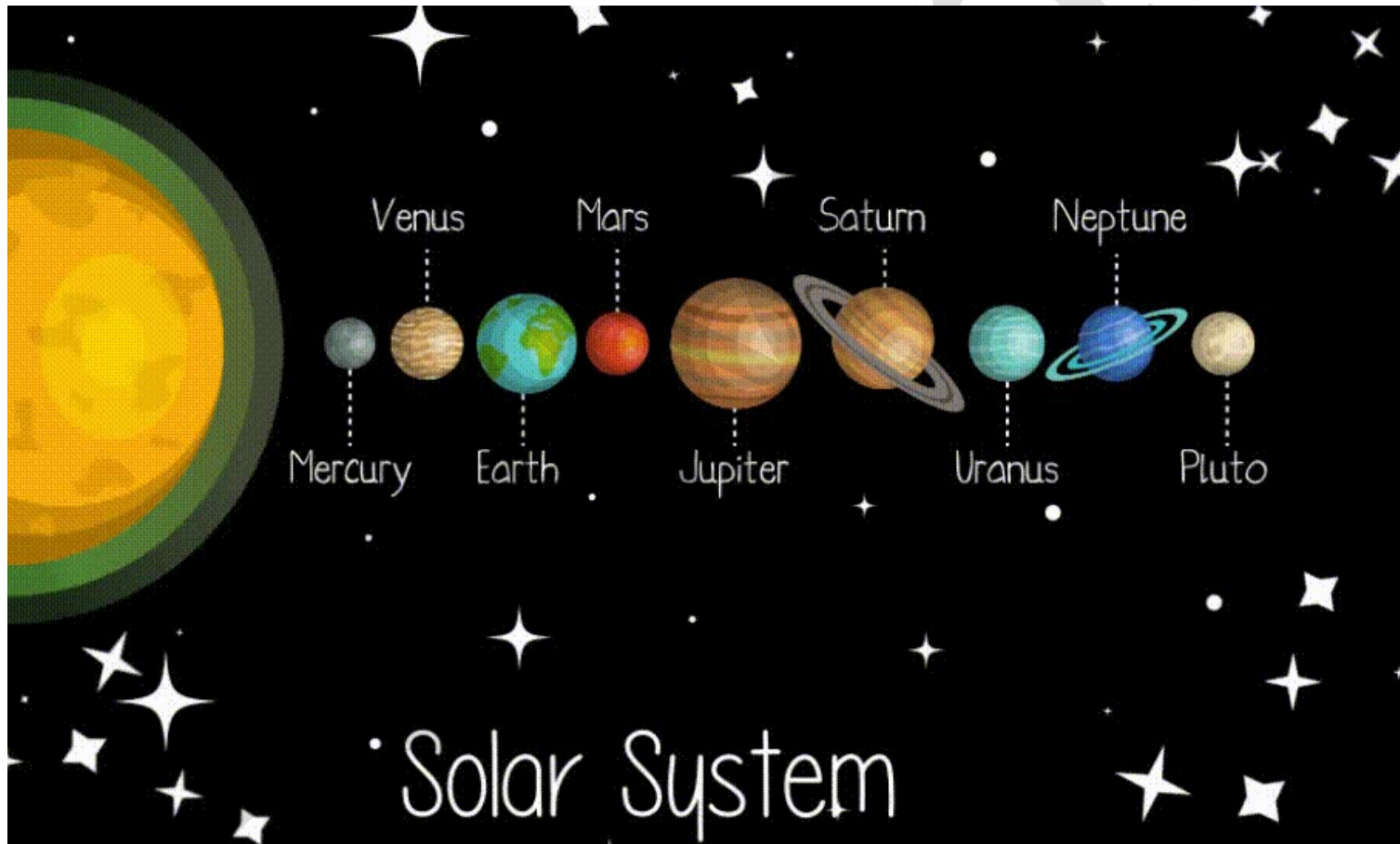


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## ☐ The Solar System



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## The Solar System

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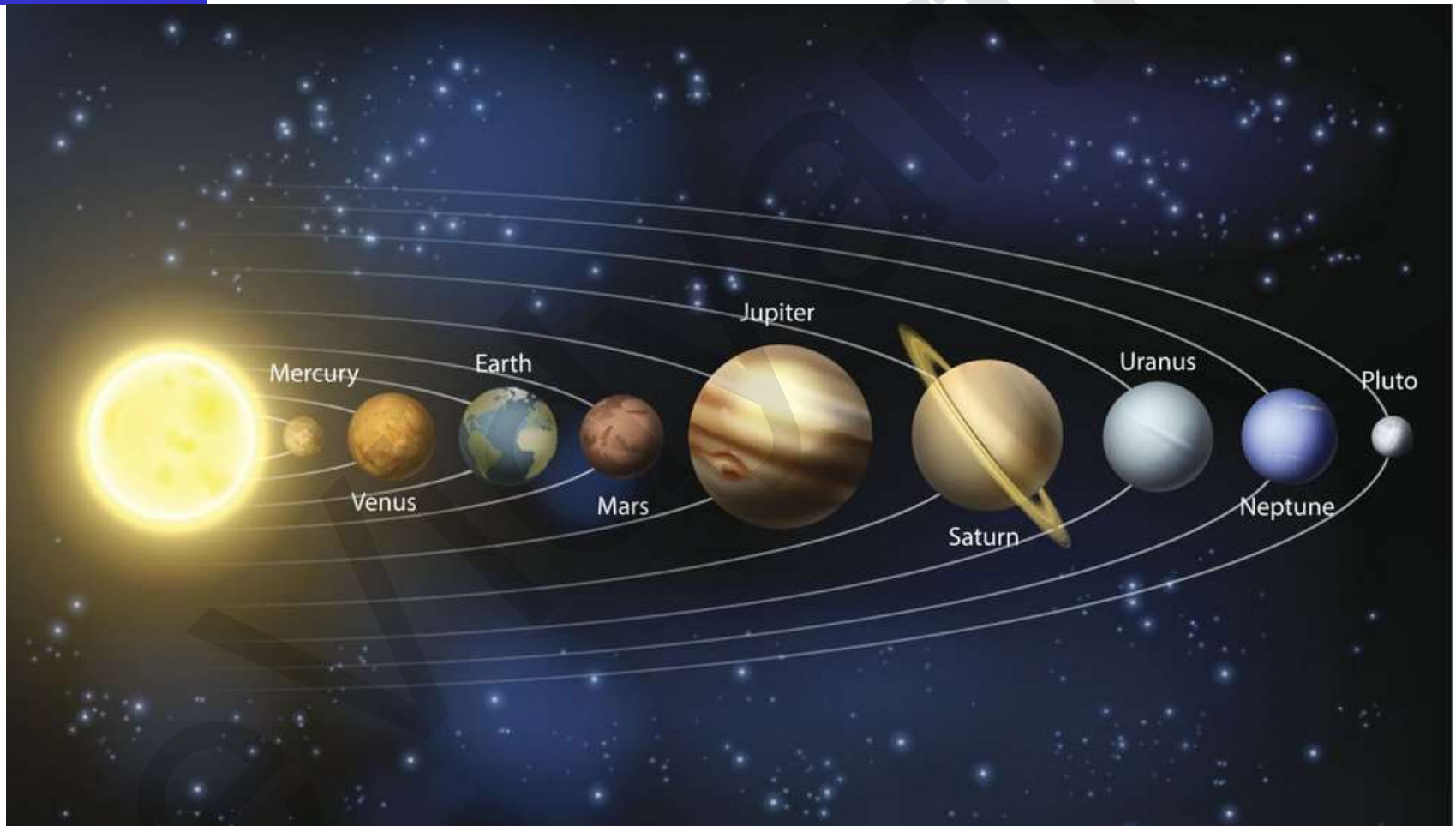
- The Sun, eight planets, satellites and some other celestial bodies known as asteroids and meteoroids, form the Solar System.
- Starting with Solar System, Solar is derived from “Sol” which means “Sungod” in roman. As a result, all the words from ‘solar’ means related to sun
- There are eight planets in the Solar System. From closest to farthest from the Sun, they are mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune.



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## ■ The Sun

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## ■ The Sun

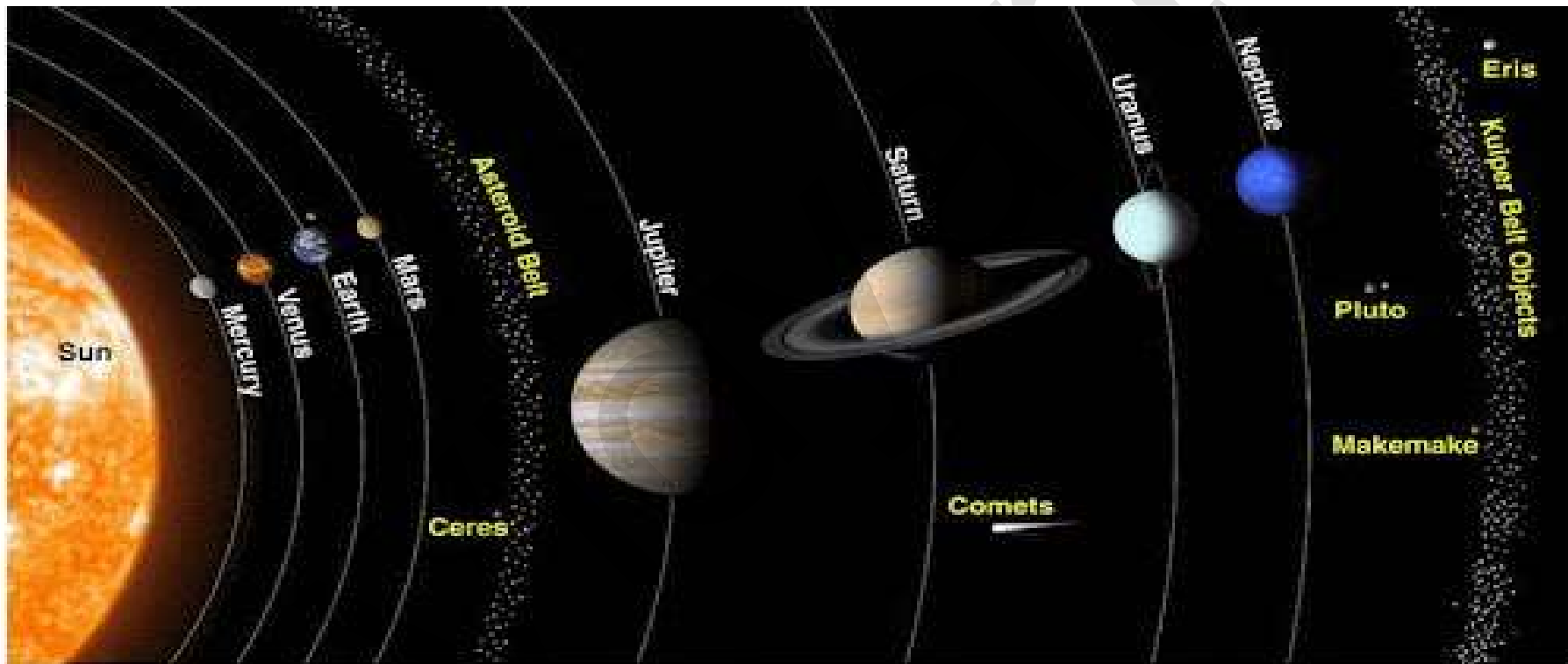
- The sun is in the center of the solar system.
- It is made up of extremely hot gases.
- The sun is about 150 million km away from the earth.
- The Sun is in the center of the solar system. It is huge and made up of extremely hot gases.
- It provides the pulling force that binds the solar system.
- It is the ultimate source of heat and light for the solar system.



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## ■ Planets



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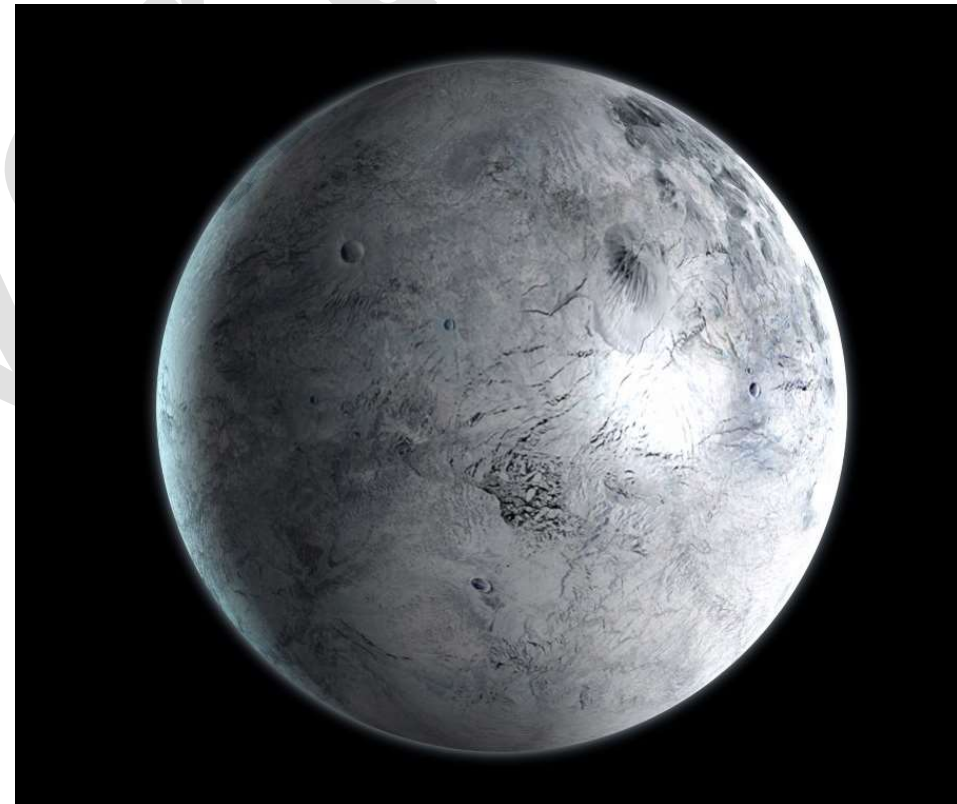
## ■ Planets

- Planets are celestial bodies that do not have their own heat and light. They are lit by the light of the stars.
- Earth is a planet too. It gets all its heat and light from the Sun, our nearest star.
- There are eight planets in our solar system.
- The eight planets are Mercury, Venus, Earth, Mars, Jupiter, Uranus, and Neptune.

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- Mercury is the nearest planet.
- Neptune is the farthest planet.
- A new planet 2003 UB313 has been discovered. It is bigger than Pluto and is farthest from the sun.
- Planets move around the sun in a fixed path called orbit.



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## 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.
- From the outer space, the Earth appears blue because its two-thirds surface is covered by water. It is, therefore, called a blue planet.



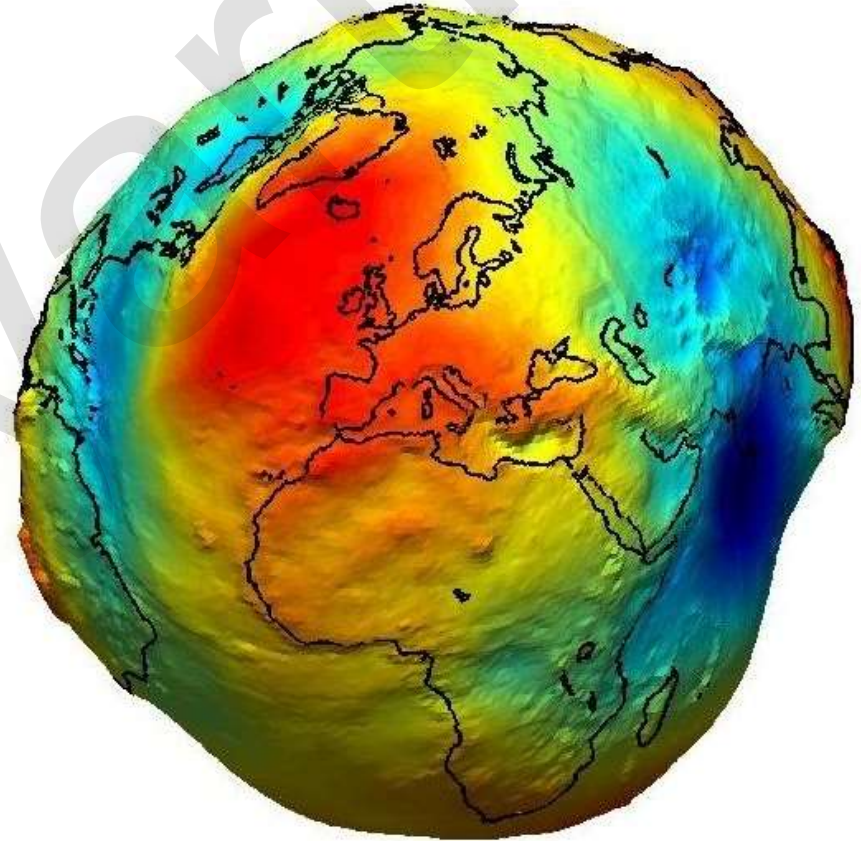
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- It is slightly flattened at the poles.
- It is a unique planet in the Solar System because:
  - Conditions favorable to support life are probably found only on the earth.
  - It is neither too hot nor too cold
  - It has water and air, which are very essential for our survival.
  - The air has life supporting gases like oxygen.

## ✓ 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.



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## ➤ Satellite



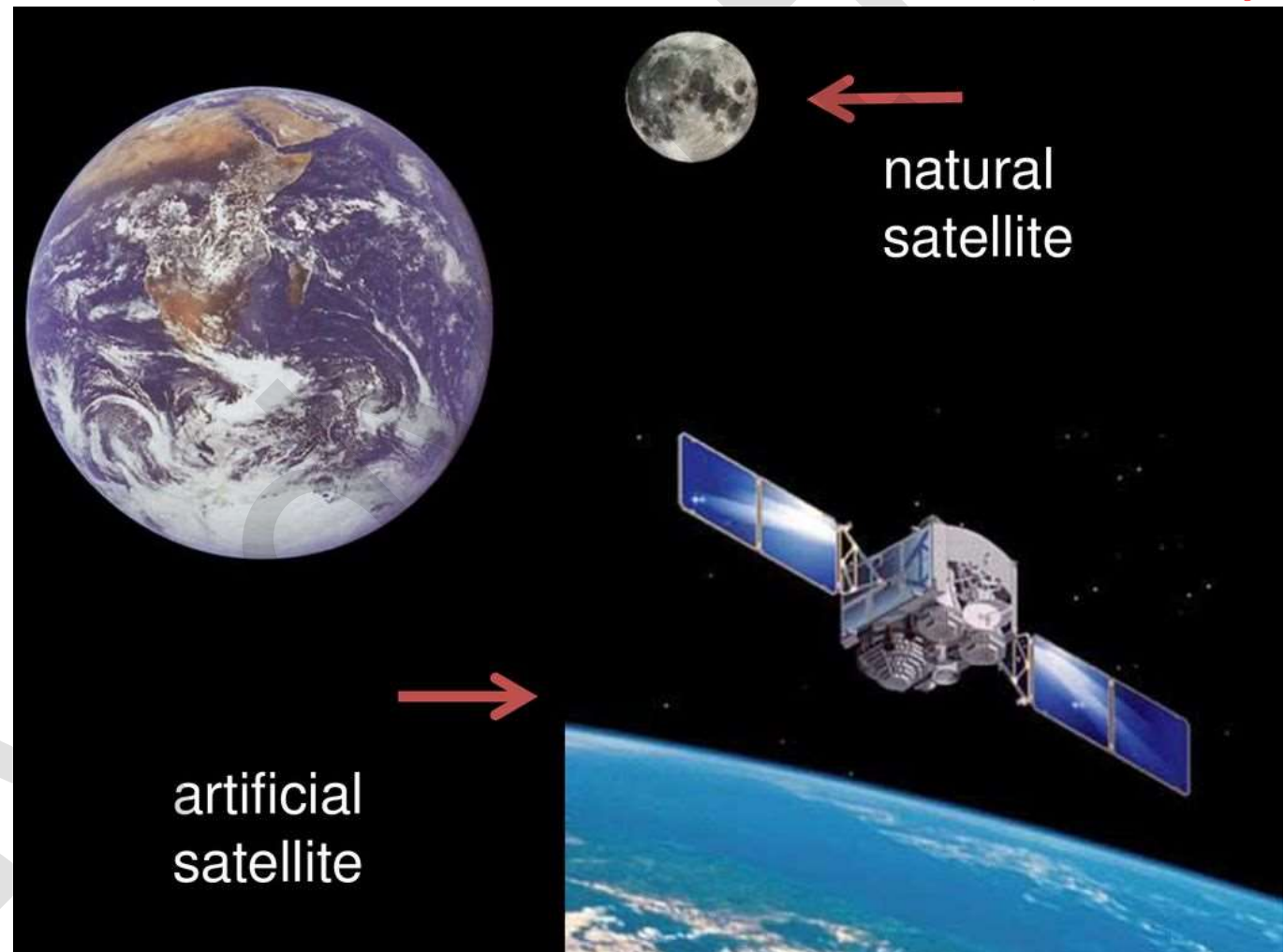
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## ➤ Satellite

- A Satellite is a celestial body that moves around the planets in the same way as the planets move around the sun.
- Usually, the word "satellite" refers to a machine that is launched into space and moves around Earth or another body in space.

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## ✓ The Moon



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## ✓ The Moon

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- It is the only natural 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 and takes exactly the same time to complete one spin. Hence, only one side of the moon is visible to us on the earth

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- No life exists on moon as it has neither water nor air.
- It appears so big because it is nearer to Earth than other celestial bodies.
- It has mountains, plains and depressions on its surface.
- The moon appears at different times, in different shapes and at different positions.

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## ✓ Phases of moon



## ❖ Full moon (Purnima)

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



## ❖ New moon (Amavasya)

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.





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**Phases of moon**

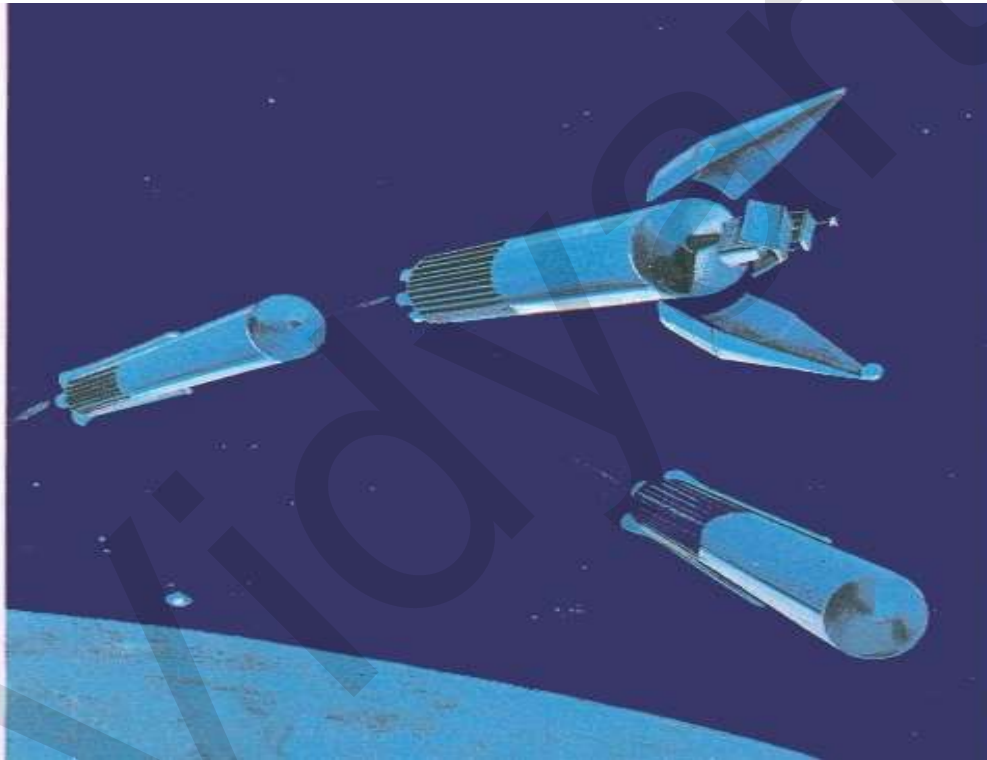
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## ✓ Artificial Satellite



Rocket launch



Rocket falls back to the Earth



Satellite enters orbit

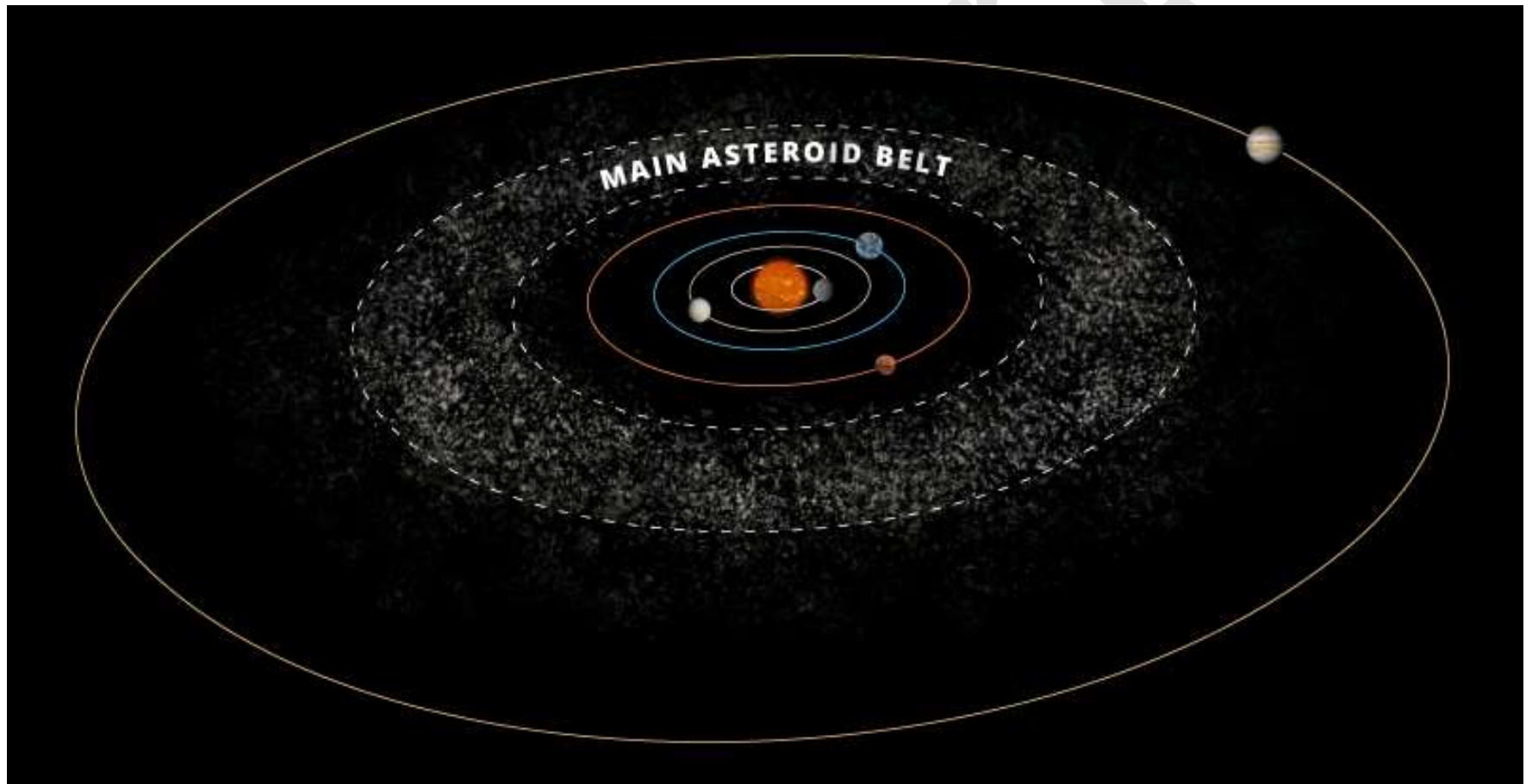
## ✓ Artificial Satellite

- designed by scientists to gather information about the universe or for communication.
- It is carried by a rocket and placed in the orbit around the earth.
- Some of the Indian satellites in space are INSAT, IRS, EDUSAT, etc.

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## ☐ Asteroids



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## ❑ Asteroids

- They are numerous tiny bodies which move around the sun between the orbits of Mars and Jupiter.
- They are found between the orbits of Mars and Jupiter.
- The largest asteroid is the Ceres.
- Scientists are of the view that asteroids are parts of a planet which exploded many years back.





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## ☐ Meteoroids



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## ☐ Meteoroids

- The small pieces of rocks which move around the sun are called meteoroids.
- Sometimes these meteoroids come near the earth and tend to drop upon it.
- During this process due to friction with the air they get heated up and burn. It causes a flash of light.
- a meteor without being completely burnt, falls on the earth and creates a hollow.



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## ➤ Galaxy



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## ➤ 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 also known as Akash Ganga.
- Gravitationally bound system of stars, stellar remnants, interstellar gas, dust, and dark matter is known as galaxy.
- There are millions of galaxies that make the Universe like Andromeda Galaxy and milkyway galaxy.



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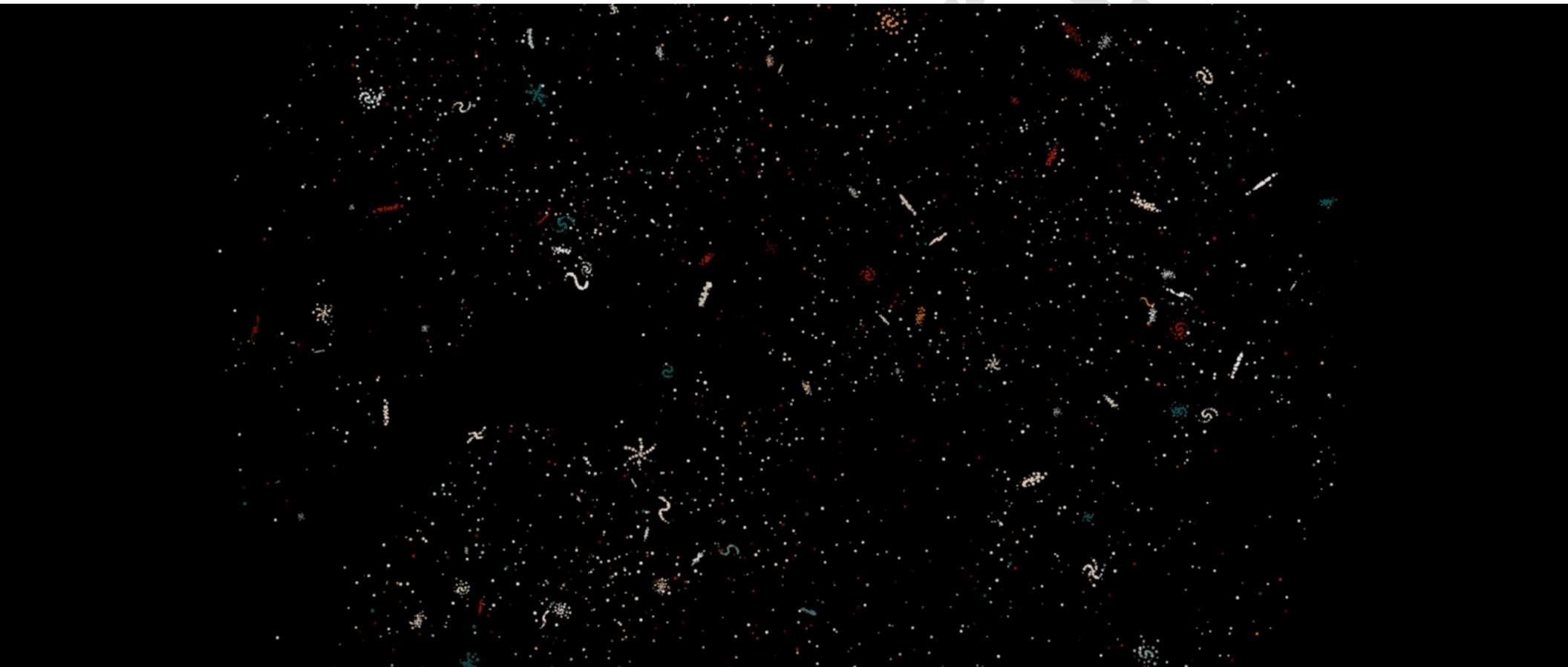
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➤ **Universe**

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## ➤ Universe

- There are millions of such galaxies that make the Universe.
- The universe is everything.
- It includes all of space, and all the matter and energy that space contains.
- It even includes time itself and, of course, it includes you.