

# Our Universe

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## What is Universe?

The vast empty space around the earth that consists of stars, the solar system, galaxies, etc. is called Universe.

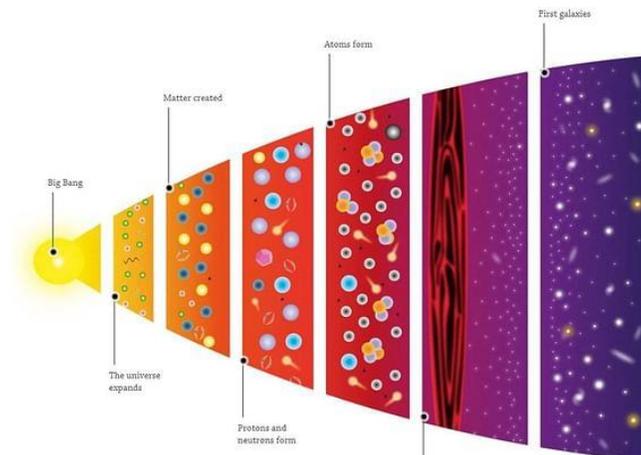


Our Universe

## What are the Theories of Origin of Our Universe?

There are different theories about the origin of the universe but none is thought to be completely correct.

- Many scientists regard the Big Bang theory as the most relevant and believable theory, which explains the origin of the universe.
- According to the Big Bang theory, it is believed that billions of years ago there was a big explosion, out of which a huge ball of fire was created.
- The ball eventually cooled and formed tiny particles. Thus, the universe was created.



**The Big Bang model is that the universe began in an extremely dense and hot condition and has expanded.**

### **The Milky Way Galaxy**

There are billions of galaxies in the universe. The Milky Way galaxy is the home of our planet Earth and the Solar System.



The Milky Way Galaxy and Earth's Position

- The Earth is the only planet on which life exists. The Earth, the Sun, and the rest of the Solar System constitute a tiny part of the Milky Way galaxy.
- It is also known as the Akash Ganga. The Milky Way galaxy contains approximately 200 billion stars, most of which are not visible from the Earth.
- Everything we see in the sky is a part of the Milky Way galaxy.

### **Do you Know?**

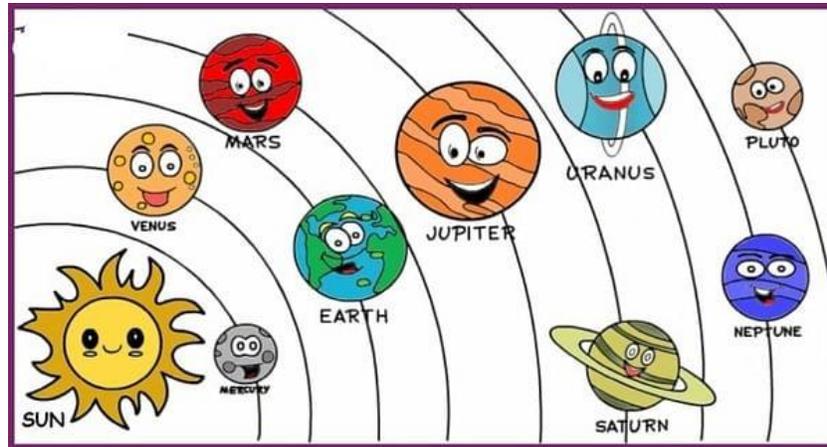
The Andromeda galaxy is the closest major galaxy to the Milky Way. It can be seen without a telescope, though it appears very small and faint.



The Andromeda Galaxy

## The Solar System

The Sun, the eight planets – Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune, satellites and other heavenly bodies together form the Solar System.



Our Solar System

- Sun is the only body in the Solar System that has its own light. Planets have no light of their own; they merely reflect the light of the Sun.
- Sun is at the center of the Solar System. It is the biggest of all the heavenly bodies of the Solar System.

Mercury is the closest planet to it.



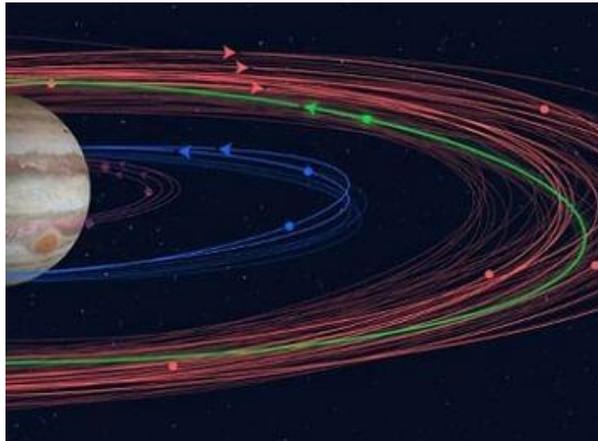
Mercury: It is the smallest planet in our solar system and closest to the Sun.

The Earth is the third planet in the Solar System and the fifth-largest of all the eight planets.



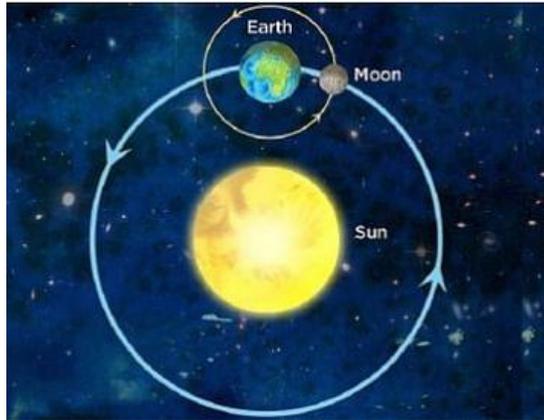
Earth is special because it is the only planet that supports life. It is also known as an ocean planet

- Many planets in the Solar System have small heavenly bodies around them called satellites.
- These satellites revolve around their respective planets and also follow them in their revolution around the Sun.



Jupiter has 79 natural satellites moving around it

The moon is a natural satellite of the Earth. Like planets, satellites also rotate on their respective axes.



Moon is the natural satellite of Earth and the Earth is the natural satellite of the Sun.

### **Keywords**

**Solar system:** the Sun, the eight planets, satellites and other heavenly bodies together

form the Solar System.

**Galaxy:** a group of millions of heavenly bodies and shining stars scattered in space.

The Milky Way galaxy is one among billion galaxies in space.

**Universe:** a vast and infinite space having millions of stars, planets and galaxies.

**Planet:** a heavenly body which revolves around the Sun and receives heat and light from it.

**Satellites:** an astronomical Objects revolving around a planet.

**Moon:** natural satellite of the Earth.

### **Keep in Mind!**

- The Big Bang Theory is the most accepted theory explaining the origin of the universe.
- The Milky Way galaxy includes the Earth, the Sun, and the Solar System.
- The Solar System has a Sun, eight planets, satellites, and other heavenly bodies.
- The Sun is the center of the Solar System.