

- **Jupiter is the Largest planet** of the solar system. Its atmosphere contains hydrogen, helium, methane and ammonia.
- The tilt of rotational axis of **Venus** and **Uranus** is so great that these planets actually **rotate in a direction that is opposite to the other planets**.
- **Pluto is a dwarf planet**.

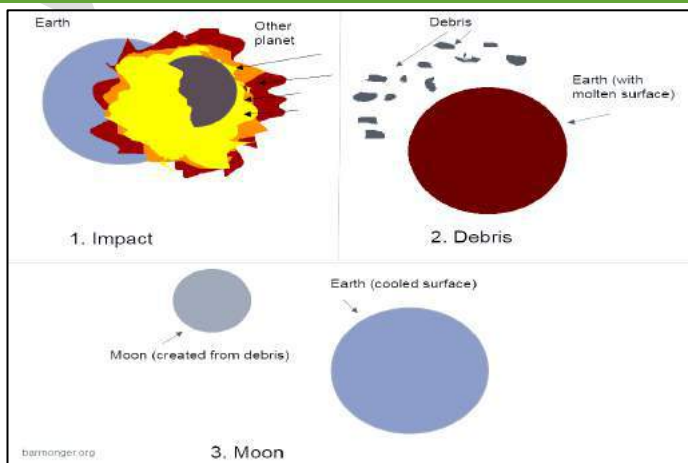
#### These planets are divided into:

1. **Inner or Terrestrial planets** which have higher densities and a solid rocky surface. These are Mercury, Venus, Earth and Mars. The terrestrial planets were formed in the close vicinity of the Sun where it was too warm for gases on the surface to condense to solid particles. The intense solar wind near the sun blew off lots of these gases and dust from the surface of the terrestrial planets. That's why the terrestrial planets have a rocky surface.
2. **Outer or Jovian planets** which have lower densities. These are Jupiter, Saturn, Uranus and Neptune. The solar winds were not all that intense to cause similar removal of gases from the Jovian planets. That's why the Jovian planets have gaseous surface.

PARAMETERS	TERRESTRIAL PLANETS	JOVIAN PLANETS
<b>Location</b>	Formed in close vicinity of parent star → here too warm for gases to condense to solid particles	At distant location
<b>Effect of Solar Winds</b>	It blew off lots of gas and dust from the terrestrial planets. Thus, have rocky surface.	The solar winds were not all that intense to cause similar removal of gases from the Jovian planets.
<b>Size</b>	Smaller → low gravity could not hold escaping gas	Bigger → thick atmosphere
<b>Density</b>	Higher	Lower

#### THE MOON

- The moon is the **only natural satellite of the earth**.
- Its diameter is only one-quarter that of the earth and it is about 3,84,400 km away from us.
- The **moon is tidally locked to the earth**, meaning that the moon revolves around the earth in about 27 days which is the same time it takes to complete one rotation.
- As a result of tidal locking, **only one side of the moon is visible to us on the earth**.
- Generally it is believed that the formation of moon, as a satellite of the earth, is an **outcome of 'giant impact' or what is described as "the big splat"**.
- A body of the size of one to three times that of Mars → collided into the earth sometime shortly after the earth was formed → It blasted a large part of the earth into space → This portion of blasted material then continued to orbit the earth → Eventually formed into the present moon **about 4.44 billion years ago**.



#### Tidal Locking:

- Tidal locking is the name given to the situation when an object's orbital period matches its rotational period.
- The Moon is tidally locked to the Earth, which means that it always shows one face to our planet. Tidal locking is when a body in space orbits another body in a way that the body's year and day are equal in length.
- This means that the body spins around its own axis once for each time it orbits around another, specific body in space.
- By having equal years and days, this orbiting body shows the same side of its face to those looking at it from the other body, or the body that is being rotated around.