

The Planets

A planet is a celestial body orbiting a star that:

- is massive enough to be spherical as a result of its own gravity,
- is not massive enough to cause fusion, and
- has cleared its neighboring region of other objects.

Planets are generally divided into two main types: **gas giants** and **terrestrials**. Under the current definitions, there are eight planets in the Solar System. The four inner planets are terrestrials, while the four outer planets are gas giants.

Inner Planets

The inner four planets in our Solar System, in order of increasing distance from the Sun, are: Mercury, Venus, Earth, and Mars.

The four inner or terrestrial planets have dense, rocky compositions. They have few or no moons, and no ring systems. Three of the four inner planets (Venus, Earth, and Mars) have atmospheres that are capable of generating weather. All have impact craters and tectonic surface features (e.g. volcanoes).

Outer Planets

The outer four planets in our Solar System, in order of increasing distance from the Sun, are: Jupiter, Saturn, Uranus, and Neptune.

The four outer planets, or gas giants, are significantly larger than the inner planets. They are composed primarily of the gases hydrogen and helium. All four gas giants have rings, though only Saturn's are easily visible from Earth.

Dwarf Planets

Our Solar System also contains at least five **dwarf planets**. A dwarf planet is a celestial body orbiting a star that:

- is massive enough to be spherical as a result of its own gravity, but
- has not cleared its neighboring region of other objects, and
- is not a satellite (i.e. is not a moon).

Ceres is the largest asteroid located in the asteroid belt between the orbits of Mars and Jupiter, and is also a dwarf planet. The remaining four dwarf planets are located in the Kuiper belt, a region of debris similar to the asteroid belt, but composed mainly of ice.

Pluto is the most famous dwarf planet, having been considered a ninth planet for nearly 80 years (1930-2006) before the formal definition of a planet was adopted.