

The Solar System : Notes-90

The following is basic information about the planets.

Mercury

Mercury is a small planet, so it has no atmosphere. Because of this, it has a lot of craters like the Earth's moon. Normally, meteors, which cause craters, burn up in a planet's atmosphere. Mercury is the closest planet to the Sun, so the days are very hot. But the nights are very cold due to the lack of an atmosphere. The temperature range is from -180 C to 420 C.

Venus

Venus has a temperature of about 460 C, making it the hottest of all of the planets. The dense carbon dioxide atmosphere traps the Sun's energy. This process is called the green-house effect. Venus is similar in size and density to the Earth. It is usually the brightest planet in the sky.

Mars

Mars is called the red planet, because its surface is covered with red rocks. The rocks contain the red compound, iron oxide. At each of the poles, there is an ice cap. The caps are a combination of frozen water and frozen carbon dioxide. It appears that there was once liquid water on Mars which carved many canyons. There is a thin carbon dioxide atmosphere on Mars. It has two small moons, Phobos and Deimos.

Jupiter

Jupiter is the largest planet. It is similar in composition to the Sun. It is composed mostly of the gases hydrogen and helium. There may be a small rocky or metallic core. Some scientists believe that Jupiter would have become a star if it had been larger. It radiates more energy than it gets from the Sun. It rotates quickly and since it has no solid surface, the gaseous surface is a series of colored bands. Near the equator is the giant red spot. This is thought to be a giant storm. Jupiter has four large moons, which were discovered by Galileo. It also has many small moons.

Saturn

Saturn is the second largest planet. It is similar to Jupiter in composition. Its distinctive feature is the ring system. This may be the remains of a shattered moon. Saturn has many moons.

Uranus

Uranus is also a gas giant. It is composed mostly of hydrogen and helium. The axis of rotation is parallel to the plane of its orbit. Most planets have their axis perpendicular to the orbit plane. Uranus has rings like Saturn but they are not as distinct. The planet's blue color occurs because methane in the atmosphere absorbs red light.

Neptune

Neptune is very similar to Uranus.

Pluto

This planet is in a class all by itself. It seems to be composed largely of ice. It may have been a moon of Neptune, or it could have been a comet that was "captured" by our solar system.

Additional Information about the Planets

<u>Planet</u>	<u>Magnetic Field</u>	<u>Number of Moons</u>
Mercury	0	0
Venus	0	0
Earth	small	1
Mars	0	2
Jupiter	large	at least 40
Saturn	small	at least 30
Uranus	small	at least 21
Neptune	small	at least 15
Pluto	unknown	1