

The Solar System

The **solar system** consists of the sun at the center, planets and their moons, comets, asteroids and meteoroids (rocks traveling through space).

Our **sun** is one of billions of stars in the Milky Way galaxy. Like other stars, it is a glowing ball of hot gases. The temperature on the sun's surface is more than 10,000° Fahrenheit. Its energy is produced by **nuclear fusion** as hydrogen atoms **fuse**, or join, to form helium.

The sun is an average distance of 93 million miles away from the earth. Light from the sun takes about eight minutes and twenty seconds to reach the earth, traveling at the speed of 186,282 miles per second.

The sun is 865,000 miles in diameter, about 109 times the diameter of earth. If the earth were one inch in diameter, the sun would be nine feet in diameter. It would take 1.3 million earths to equal the size of the sun.

The sun revolves around the center of the Milky Way at the speed of about 156 miles per second. It rotates completely on its axis about once every 22 days.

Planets revolve around the sun. Some, such as Earth and Mars, are rocky, while others, such as Jupiter and Saturn, are balls of gas. Pluto is a dwarf planet. Planets can be seen only because they reflect light from the sun.

Other objects in our solar system include a belt of **asteroids**, which are very small rocky planets between Mars and Jupiter. The largest is Ceres, which is 600 miles in diameter and can be called a dwarf planet. Only thirty asteroids have diameters greater than 120 miles. Asteroids often collide and break into smaller meteoroids. Some pieces occasionally reach the earth and burn as they fall through the atmosphere, forming "falling stars," or **meteors**.

Some meteoroids are so large that they don't completely burn before reaching the earth. These are called **meteorites**. They form craters on the earth's surface. The moon is covered with craters because it has no atmosphere and is constantly being hit by meteoroids.

