## THE EARTH WITHIN A SOLAR SYSTEM

## What is the Solar System?

Our solar system is the Sun and the planets that orbit, or spin, around it. The Sun is really a star that is only about 93,000,000 miles from us. Until 2006 we had nine known planets, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, and Pluto. Astronomers then decided that Pluto was not actually a planet, but a dwarf planet or planetoid, so we don't list it as a planet anymore. Also orbiting the sun is a ring of asteroids between Mars and Jupiter. Many of the planets have natural satellites, called moons, orbiting them.


Thousands of years ago, people thought the earth was flat and the Sun traveled around it. But scientists who study the stars, astronomers, learned that earth was a huge round ball of rock and water spinning around the Sun. In 1522, one of the explorer Magellan's ships successfully sailed all around the world. In 1530, a Polish astronomer named Copernicus proved that the earth spins on its axis and journeys around the sun. In 1687, Sir Isaac Newton explained the laws of gravity. He said that all objects in the universe are attracted to each other with a force called gravity. The gravity of our Sun keeps the planets in orbit.

An axis is the imaginary line through the earth from the North Pole to the South Pole. Imagine a long stick running all the way through the middle of the earth from top to bottom. It takes our earth about 24 hours to spin around its axis one time. That is one rotation and we call it one day.


Each year is also counted as 12 months. It takes our natural satellite, the moon, approximately 30 days to orbit, or revolve, around the earth one time. Each orbit is called a month.



## Try this! (with an adult to help)

Put a bright light in the middle of an empty room such as a gym. Draw a wide circle all the way around that light. Being careful not to trip on the cord as you walk all the way around on the circle. Now try it again as you turn yourself in circles! If you can make 365 circles in one trip around the lamp, you are like the earth rotating and revolving!

