

# The Sun



The sun is an integral part of the solar system. A solar system has a star, planets, moons, asteroids, comets, meteoroids and lots of empty space that all revolve around the sun! The sun doesn't actually move up to rise and down to set. It is the earth that moves by rotating on its axis which makes it look like the sun is moving. Like other stars, the sun produces energy in the form of heat and light. Planets do not produce energy like stars do which is why they are not called stars. The sun is the largest object in the center of our solar system. If you compare the size of the sun to earth, it would take about one million earths to be the same size as the sun! Do you know why the sun is so much brighter than the other stars? It is because the sun is our closest star. The sun is made up of mostly of hydrogen and helium. The sun is so large that it has enough gravity to keep all of our planets in place as they revolve around it. We get our energy from the sun's heat and light. Without the sun, there would be no life on earth. A famous scientist, Albert Einstein discovered the relationship of the sun's mass and its ability to produce energy. He discovered the energy equation called  $E=mc^2$  which means Energy is equal to the mass (m) times the speed of light (c) multiplied by itself or squared. Einstein discovered that the hydrogen particles inside the sun smash together which produces helium, a process called fusion which becomes energy in the form of heat and light. The sun is 93 million miles (150.2 million KM) away from earth which means if a spaceship could get to the moon in two days, it would take over two years for that spaceship to get to the sun.