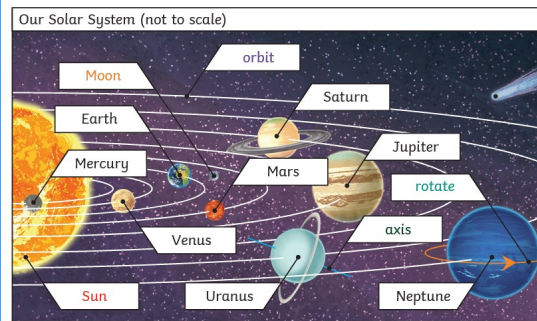


Key Vocabulary

Asteroid	A rock that orbits the sun in a belt between Mars and Jupiter.
Axis	An imaginary line through the middle of something (i.e. a planet).
Comet	A bright object with a long tail that travels around the sun.
Earth	A planet which orbits the sun in 365 days.
Galaxy	An extremely large group of stars and planets. Our galaxy is called the Milky Way.
Moon	A celestial body that orbits around a planet.
Orbit	To move in a regular, repeating curved path around another object.
Planet	A celestial body which moves in orbit around the sun.
Rotate	To spin. E.g. Earth rotates on its own axis.
Shadow	A dark shape on a surface that is made when something blocks the light.
Solar System	The solar system is made up of the sun and everything that orbits around it, including planets, moons asteroids, comets and meteoroids. There are 8 planets in our solar system: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.
Sphere	A round solid shape like a ball.
Star	A large ball of burning gas in space with a fixed point.
Sun	A large star which is the centre of our solar system.
Universe	The whole of space and everything in it.

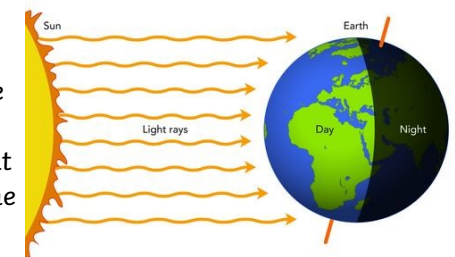
Key Knowledge : What is in our solar system and how is Earth affected?



Mercury, Venus, Earth and Mars are rocky planets. They are mostly made up of metal and rock. Jupiter, Saturn, Uranus and Neptune are mostly made up of gases (helium and hydrogen) although they do have cores made up of rock and metal. At the centre of our solar system is the Sun. The gases that make up the sun are Hydrogen and Helium. Although the sun appears yellow, it is actually more Orangey Red due to its extreme heat. The temperature of the sun is nearly 10,000 degrees, and the temperature at the sun's core is around about 27 million degrees.

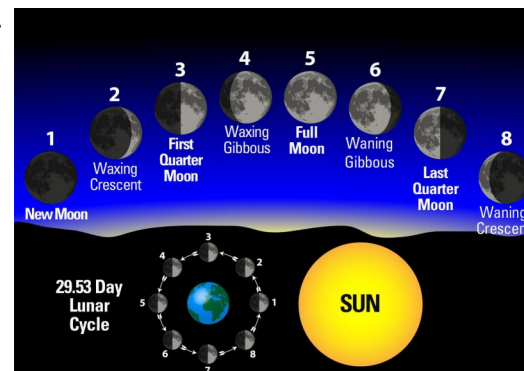
Day and Night

Earth rotates (spins) on its axis and makes a full rotation once in every 24 hours (a day). At the same time that Earth is rotating, it is also orbiting around the Sun. It takes a little more than 365 days to orbit the Sun. Daytime occurs when the side of Earth is facing towards the Sun. Night occurs when the side of Earth is facing away from the Sun. Different parts of the Earth experience daylight at different times and this is also the reason we have different time zones.



Phases of the Moon

The Moon orbits Earth in an oval-shaped path while spinning on its axis. At various times in a month, the Moon appears to be different shapes because, as it rotates around Earth, the Sun lights up different parts.



Geocentric and Heliocentric Models



Geocentric model

Years ago people believed that Earth was the centre of the solar system and the planets moved around the Earth.

Heliocentric model

The years of work by many astronomers, such as Copernicus and Kepler, led to the idea that the Sun is at the centre of the solar system.



Galileo's work on gravity allowed astronomers to understand how planets stayed in orbit.