



What I should already know:

About the natural world around me including the four seasons, the weather associated with these and how day length varies.

That light from the sun can be dangerous and ways to protect my eyes.

That we need light to see things and that dark is the absence of light.

At the end of this topic, I will know:

Describe the movement of the Earth and other planets relative to the sun in the solar system.

Describe the movement of the moon relative to the Earth.

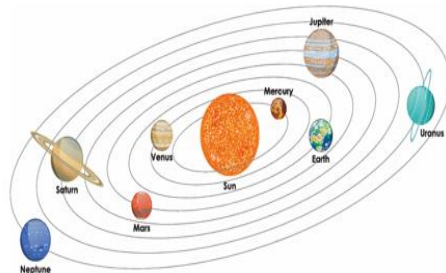
Describe the sun, Earth and moon as approximately spherical bodies.

Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.

Key Facts:

The planets

There are **eight** planets that orbit the Sun.



Mercury, Venus, Earth and Mars all have solid surfaces. Jupiter, Saturn, Uranus and Neptune have gas surfaces. Pluto is considered a dwarf planet.

The sun



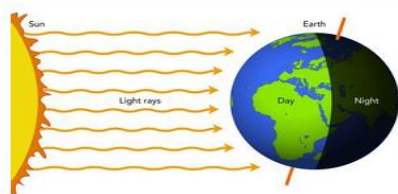
The sun is a star at the centre of our solar system. It is the largest object in the solar system and has the greatest gravitational pull. This keeps all the planets in orbit around the Sun.

The moon



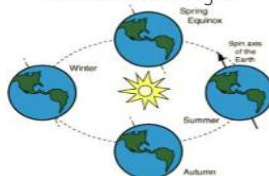
A moon is a rocky object in space that orbits a planet. The Earth has one Moon, and it takes approximately 27 days for the Moon to orbit the Earth. Without the Earth's gravitational pull, the Moon would float into space. The Moon is not a light source; it reflects light from the Sun. Light from the Sun is reflected from the Moon onto Earth.

Day and night



Earth **rotates** on an **axis**. During the winter, the North Pole is tilted away from the Sun's rays. As Earth travels around the Sun, the tilt of Earth changes. By June, the North Pole is tilted towards the Sun and the days become very long. Earth takes a year to **orbit** the Sun and it is the tilt which creates the seasons.

The Earth **rotates** one complete turn **every 24 hours** to give us day and night. Daytime occurs when the side of the Earth is facing the sun and night occurs when the side of the Earth is facing away from the sun. When Britain faces the Sun it is daytime in Britain but the other side of the world is in darkness. So, in Australia it is the middle of the night.

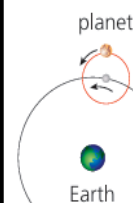


It appears to us that the Sun moves across the sky during the day but the Sun does not move at all. It seems to us that the Sun moves because of the movement of the Earth.

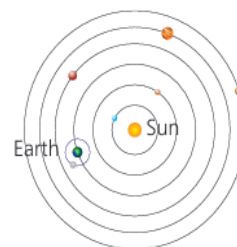


The Universe

The Universe is everything that exists. A galaxy is a group of billions of stars. Our galaxy is called the Milky Way.



Geocentric model: people used to think that the Earth was at the centre of the Solar System.



Heliocentric model: scientists now know that the sun is in the centre of the Solar System.

Vocabulary

solar system	A collection of planets, moons and the sun.
planets	A roughly spherical object which orbits a star.
star	A luminous ball of gas in space with radiating points.
spherical	A shape that is spherical is round like a ball.
orbit	The path an object takes around another object because of gravity.
sun	The star at the centre of our solar system which releases heat and light.
celestial body	An object in space.
Earth	The planet that we live on.
satellite	An object that orbits a planet or a star.
moon	A natural satellite that orbits Earth.
night	When it is dark on the half of Earth that is facing away from the Sun
day	When it is light on the half of Earth that is facing the sun.
gravity	An invisible force that pulls things to the centre of Earth. (or other planets).
rotates	To turn around a central axis.
Geocentric	A model that proposed that the Earth was at the centre of the Solar System.
Heliocentric	A model that proposed that the sun was at the centre of the Solar System.