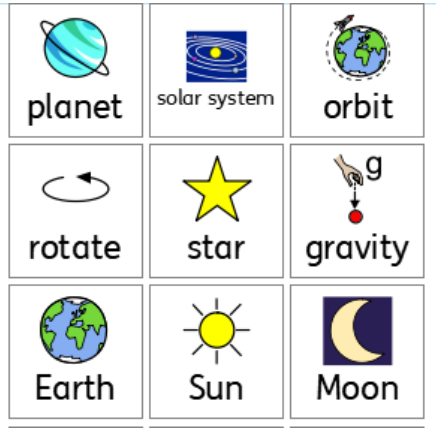
Knowledge Organiser Focus:

Earth and Space

Planet	An object that orbits a star and does not emit its own light.
Star	A giant ball of gas held together by its own gravity and makes heat and light energy.
Gravity	The force that attracts an object towards a larger object.
Orbit	A curved path of a planet taken by one body circling around another body. The earth makes an orbit around the sun.
Solar system	The **solar system** consists of the Sun and everything that orbits, or travels around, the Sun.
Astronomy	**Astronomy** is the study of outer space and all of the objects and bodies outside of the Earth's atmosphere, like stars, planets and comets.
Axis	**Astronomy** is the study of outer space and all of the objects and bodies outside of the Earth's atmosphere, like stars, planets and comets.
Time zone	**Time zones** give specific areas on the Earth a **time** of day that is earlier or later than the neighbouring **time zones**. The time zone is dependent on the Earth's rotation.
Sphere	A round 3D shape in the shape of a ball.
Sun	A huge star that the Earth and other planets in our solar system orbit around.
Moon	A natural satellite which orbits Earth or other planets.
Geocentric model	A belief people used to have that other planets and the Sun orbited around the Earth.
Heliocentric model	The structure of the solar system where the planet orbits around the sun.



Thinking deeper

What happens when a solar eclipse occurs?

The big picture

What I should know…

- I recognise light from the sun can be dangerous and can find ways to protect my eyes.
- I recognise that we need light in order to see things and that dark is the absence of light.

What I will know…

- The movement of the Earth and other planets.
- The movement of the Moon relative to the Earth.
- To describe the Sun, Earth and Moon as approximately spherical bodies.
- To explain day and night and the apparent movement of the sun across the sky.

Links to future topics…

GCSE

- Explain the effects of the motion of the sun, Earth, and moon
- How did the universe begin to exist?
- What can telescopes tell us?

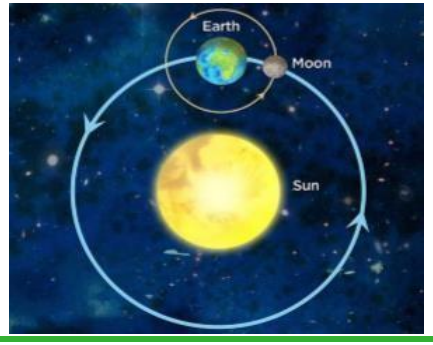
Knowledge Organiser Focus: Earth and Space

The planets are called **Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.**

An easy way to remember the names of planets in order is:

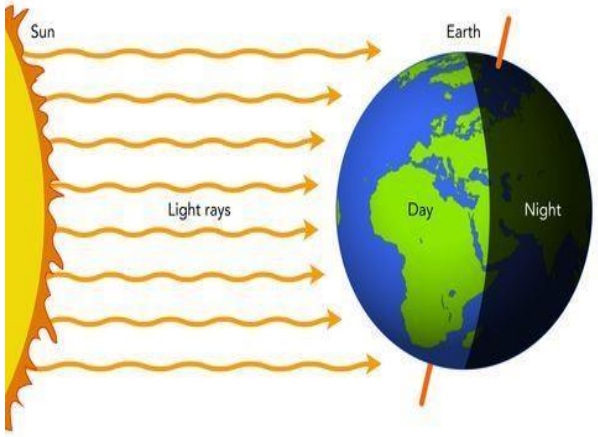
My Very Easy Method Just Speeds Up Naming

The Moon **orbits** the Earth anti-clockwise and takes **approximately 28 days.**
The Moon spins once on its axis every time it orbits Earth. This means that we only see one side of the Moon.
The Moon has different phases depending on where it is in its **orbit.** At different times, the moon appears to be different shapes because the sun light up different parts of the moon as it moves around the Earth. The Moon's **gravity** causes high and low tides.

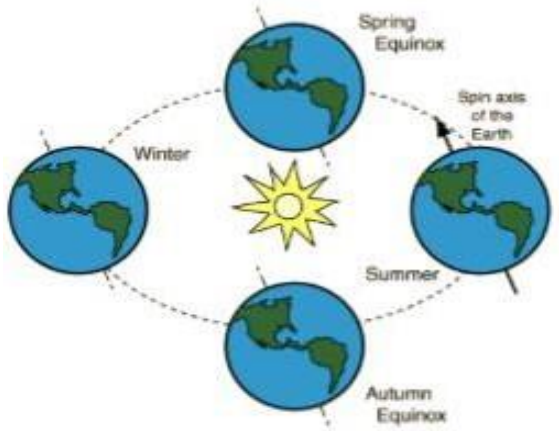


Day and night

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



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.



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.