

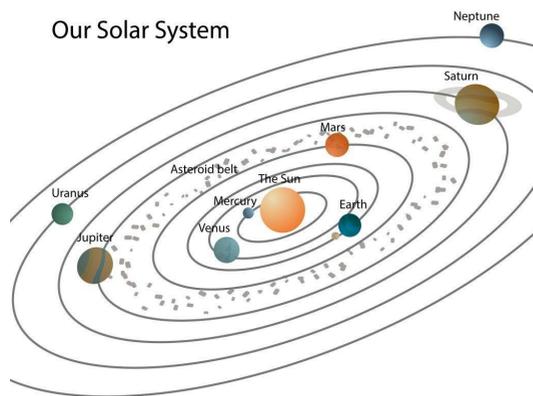
What did we learn before: Year 1 - Art - Starry Night, Year 4 - Science - How do I see? How do I hear?, Year 5 - Science - Forces

Key knowledge by subject

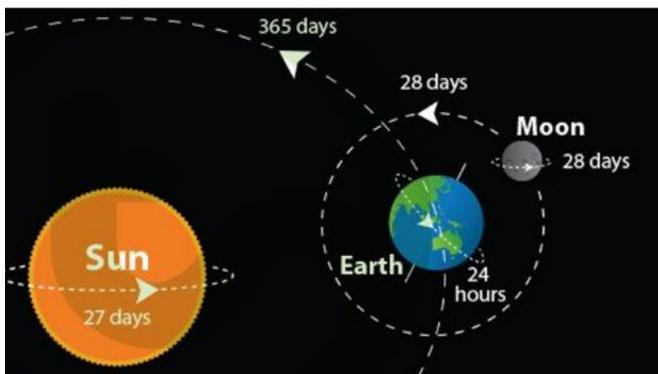
SCIENCE

There are eight **planets** in our solar system.

The **sun** is a star at the centre of our **solar system**.



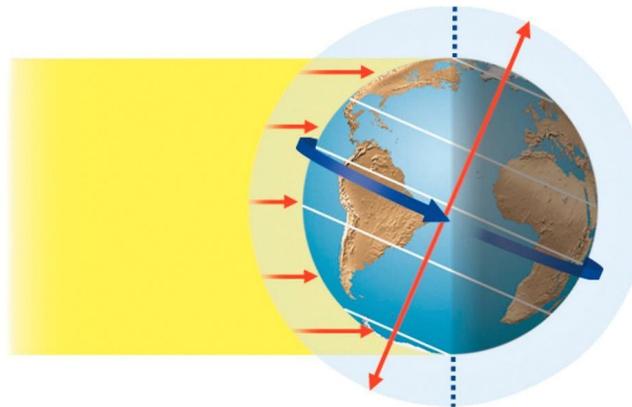
The **moon** is a **celestial** body and it orbits the Earth once every 28 days.



The Earth **rotates** on a **tilted axis**. It makes one complete turn every 24 hours.

One side of Earth faces the sun and the sun's rays give light and heat. This is day time.

The other side is facing away and in the Earth's shadow causing darkness and less warmth - this is night time.



The Earth **orbits** the sun once every 365 days (1 year).

In Autumn and Winter, Earth tilts away from the sun. The days are shorter and the temperature is normally cooler.

In Spring and Summer, the Earth tilts towards the sun. The days are longer and the temperature is normally warmer.

Key vocabulary

Solar System	The sun and everything that orbits, or travels around, the sun.
Planet	Large objects which orbit the sun - there are 8 planets.
Axis	An imaginary line an object turns around.
Rotation	When something turns/ spins around a point located at its centre.
Orbit	The path or movement of an object around a particular point in space.
Tilt	The angle of rotational axis.
Hemisphere	A word to describe half of the earth - there are Northern and Southern hemispheres.
Celestial	A body outside of the earth's atmosphere.
Waxing	When the moon gets larger each night, until it is a full moon.
Waning	When the moon is getting smaller, until it disappears and becomes a 'new moon.'

Key knowledge (continued)

SCIENCE

Light (sun and moon)

The Sun and other stars are a light source.

We see the moon because it reflects light from the Sun. It is not a light source.

Light travel

A **shadow** is made when an **opaque** or **translucent** object blocks light. Because light travels in straight lines, the shadow is the shape of the object.



Shadows cast by the Sun are longest at the beginning and end of the day because the sun is lower in the sky and so closer.

Shadows cast by the Sun are shortest at mid-day because the sun is higher in the sky and so further away.

Forces

The **mass** of an object is how much matter it contains. It is not a force.

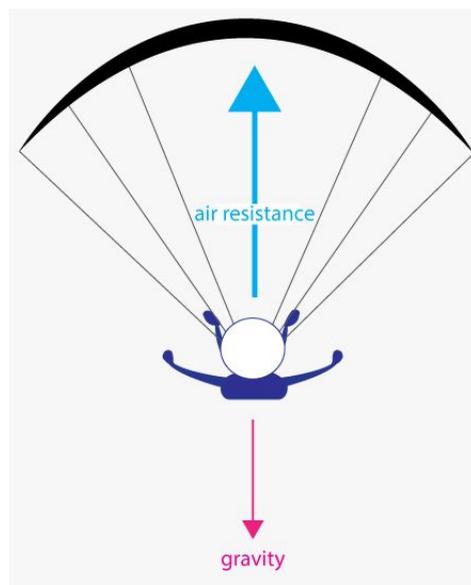
Gravity is a force which pulls objects towards the centre of a body of mass (e.g. a planet or moon).

The weight of an object is the force caused by gravity pulling down on the mass of an object.

Gravity keeps all of the planets in orbit around the sun and the moon in orbit around Earth.

Air resistance is a **force** which slows an object moving through the air by pushing against the surface area.

Objects with a larger surface area have a larger amount of air resistance.



Key vocabulary

Transparent	Transparent objects let light pass through; you can see through them.
Translucent	Translucent materials let some light pass through them but you cannot see clearly through them.
Opaque	An opaque material lets no light pass.
Shadow	Formed when light is blocked by an opaque object.
Force	A push or a pull on an object, happens when two objects interact.
Mass	The amount of matter or substance that makes up an object, measured in kilograms.
Gravity	A pulling force that works across space. Objects do not have to touch each other for the force of gravity to affect them.
Newtons	A unit of force.
Air resistance	A force which slows an object which is moving through the air by pushing against the surface area.