Science

Earth and Space — **Year 5**

Key Vocabulary

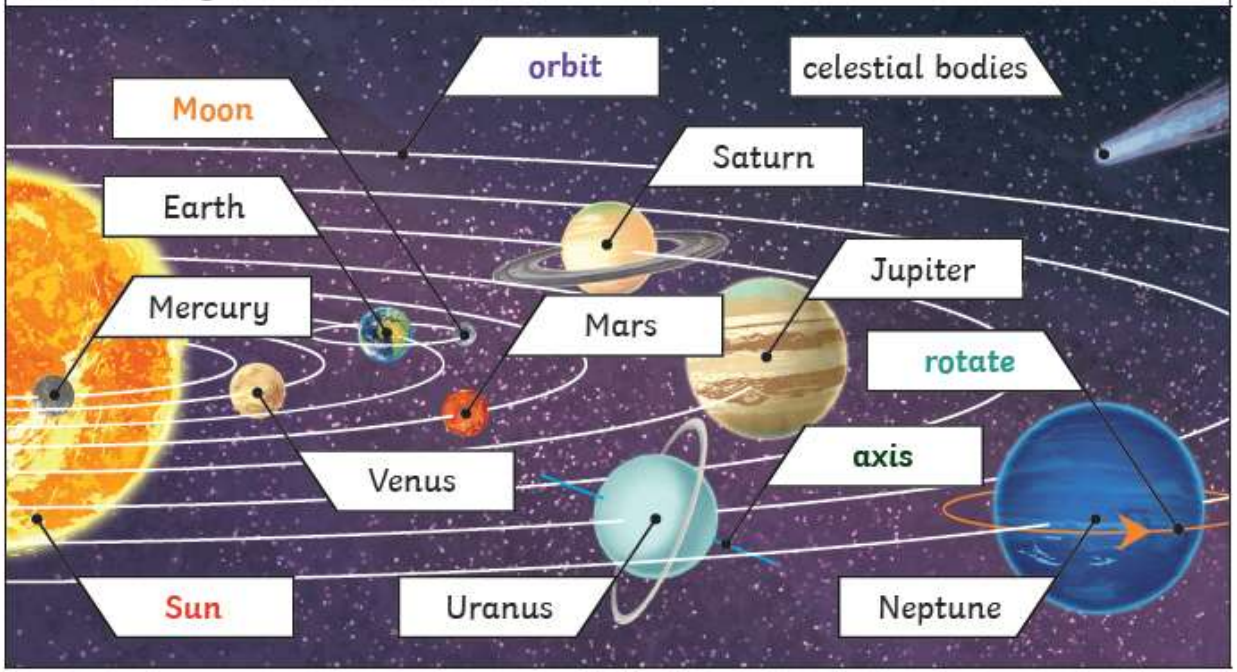
Sun	A huge star that Earth and the other planets in our solar system orbit around.
star	A giant ball of gas held together by its own gravity.
moon	A natural satellite which orbits Earth or other planets.
planet	A large object, round or nearly round, that orbits a star.
sphere	A round 3D shape in the shape of a ball.
spherical bodies	Astronomical objects shapes like spheres.
satellite	Any object or body in space that orbits something else, for example: the Moon is a satellite of Earth.

Pluto used to be considered a planet but was reclassified as a dwarf planet in 2006.

Key Knowledge

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.

Our Solar System (not to scale)



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. This is because as the Moon rotates round Earth, the Sun lights up different parts of it.

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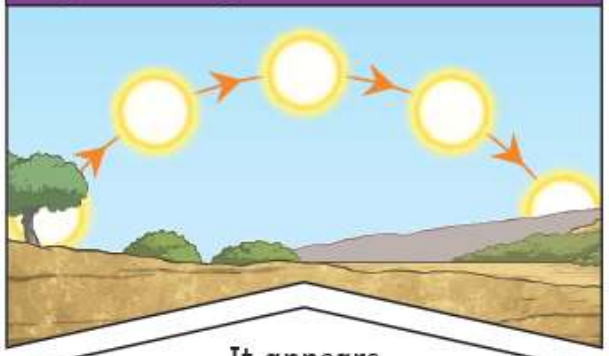
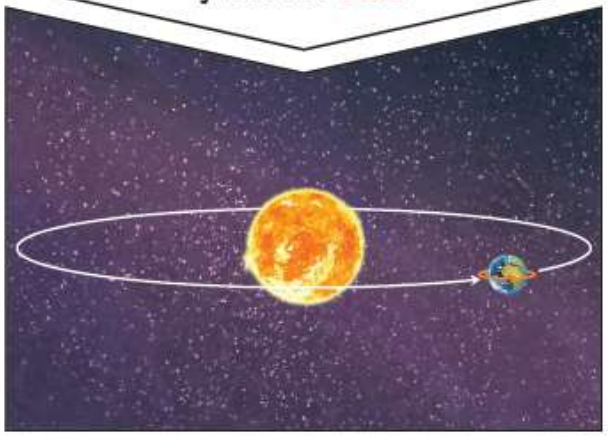
orbit	To move in a regular, repeating curved path around another object.
rotate	To spin. E.g. Earth **rotates** on its own **axis**.
axis	An imaginary line that a body **rotates** around. E.g. Earth's **axis** (imaginary line) runs from the North Pole to the South Pole.
geocentric model	A belief people used to have that other **planets** and the **Sun** **orbited** around Earth.
heliocentric model	The structure of the Solar System where the **planets** **orbit** around the **Sun**.
astronomer	Someone who studies or is an expert in astronomy (space science).

Key Knowledge



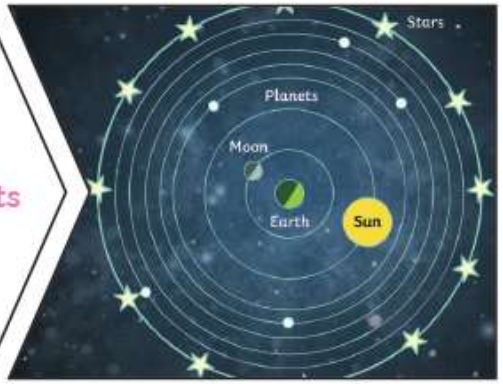
It appears to us that the **Sun** moves across the sky during the day but the **Sun** does not move at all. It seems to us that the **Sun** moves because of the movements of Earth.

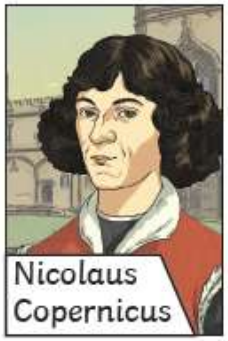
Earth **rotates** (spins) on its **axis**. It does a full **rotation** once in every 24 hours. At the same time that Earth is **rotating**, it is also **orbiting** (revolving) around the **Sun**. It takes a little more than 365 days to **orbit** the **Sun**. Daytime occurs when the side of Earth is facing towards the **Sun**. Night occurs when the side of Earth is facing away from the **Sun**.



Geocentric model

Years ago people believed that **planets** moved around the Earth.





Nicolaus Copernicus

The work and ideas of many **astronomers** (such as Copernicus and Kepler) combined over many years before the idea of the **heliocentric model** was developed. Galileo's work on gravity allowed **astronomers** to understand how **planets** stayed in **orbit**.