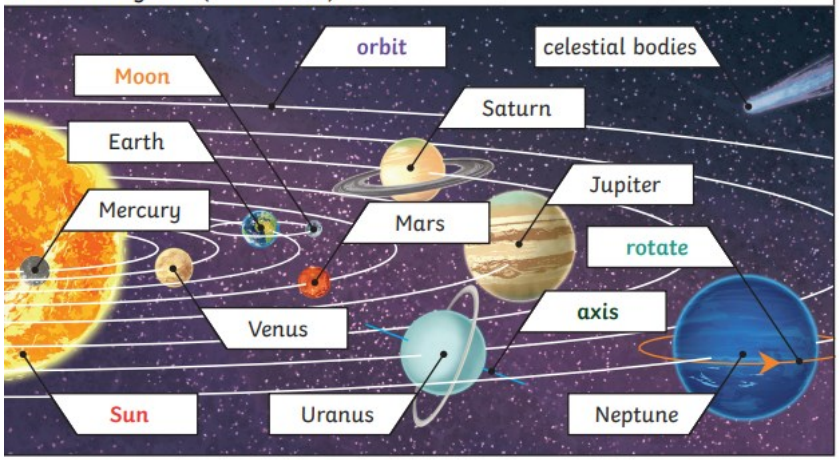
# Year 5 Physics — Earth In Space

## Key knowledge

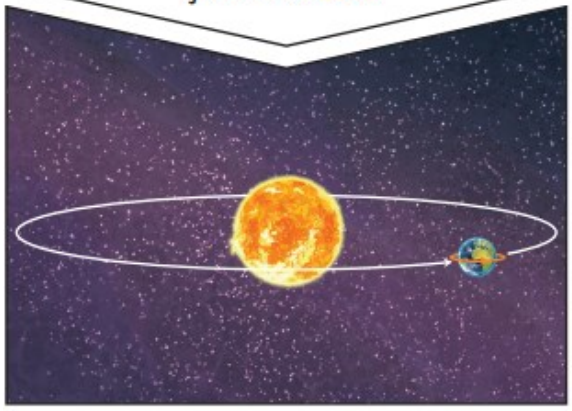
Mercury, Venus, Earth and Mars are rocky planets. They are mostly made up of metal and rock. Jupiter, Saturn, Uranus and Neptune are mostly made up of gases (helium and hydrogen) although they do have cores made up of rock and metal.

**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.

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.



## Famous Scientists

**Maggie Aderin-Pocock**

Astronomer and science communicator

## Investigation

To report and present information to answer their questions about Space.

- Can I identify a good research question?
- How will I present my information in a way that others can understand?

## What we will learn:

- To describe the movement of the Earth and other planets relative to the sun in the solar system
- To describe the movement of the moon in relation to the Earth
- To describe the Sun, Moon and Earth as spherical bodies
- To use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky

## Key Vocabulary

| | |
|---|---|
| Sun | A huge star that the Earth and other planets in our solar system orbit round |
| star | A giant ball of gas held together by it's own gravity |
| moon | A natural satellite which orbit- 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 shaped like spheres |
| satellite | Any object or body in space that orbits something else, e.g. the moon is a satellite of the Earth |
| orbit | To move in a rectangular, repeating curved path around another object |
| rotate | To spin. E.g. the Earth rotates on it's own axis |
| axis | An imaginary line that a body rotates around. E.g. Earth's axis runs from North to South Pole |
| Geocentric model | A belief people used to have that the other planets and the Sun orbited around Earth |
| Heliocentric model | The structure of the Solar system where the planets orbit-ed around the Sun |