

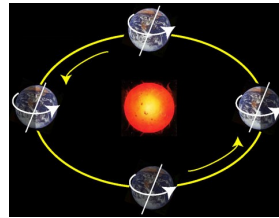


Y5 Thinking like a scientist

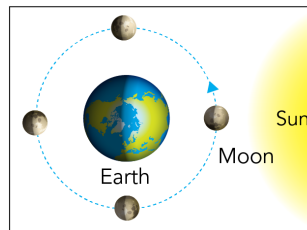
Earth and Space

Key Knowledge:

- There are eight planets in the solar system: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune.
- Pluto is no longer classed as a planet.
- The sun is a star at the centre of the solar system.
- The sun, moon and the Earth are astronomical objects shapes like spheres
- 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
- 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.
- Lunar cycles take 28 days
- Meteors are rocks that fly through space



Key Vocabulary:

Sun	A star at the centre of our solar system.
Moon	A natural satellite of a planet. The Earth's moon orbits just Earth. It is visible (mainly at night) because of reflected light from the sun.
Satellite	Any object in space that orbits something else.
Orbit	The curved path of an object in space around a star, planet or moon.
Planet	A spherical body that orbits a star. A planet must be big enough that its gravity clears away any objects of a similar size near its orbit.
Star	An astronomical body of a glowing ball of gas. A star produces its own energy.
Solar system	A series of planets which orbits a star. In our solar system the star the planets orbit is the sun.
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.
Heliocentric model	The structure of the solar system where the planets orbit around the Sun.
Geocentric model	A belief people had, many years ago, that the planets and the sun all moved around Earth.

Learning Questions

How does the Earth, and other planets, move in relation to the sun?

How does the moon move in relation to Earth?

What are the phases of the moon?

How does the rotation of Earth affect day and night?

How does the rotation of Earth affect the seasons?

What are the features of different planets in the solar system?

How has space travel developed over time?

What else do you know?