

Science

Earth and Space

Year 5

Spring 1

Key knowledge

Solar System

- There are 8 planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune. Pluto is a dwarf planet.
- They all orbit the Sun, which is a star, and they all have moons.
- The first 4 planets are relatively small and rocky, while the four outer planets are gas giants (Jupiter and Saturn) or ice giants (Uranus and Neptune).
- There are also asteroids, meteoroids and comets in the Solar System.

Day and Night

- Earth rotates on its axis anti-clockwise and makes a complete rotation over 24 hours (a day).
- At the same time that Earth rotates, it also orbits around 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.
- It appears that the Sun moves across the Sky during the day, but the Sun does not move at all. This happens because of the movements of Earth.

Year length and the Seasons

- The Earth takes 365 and a quarter days to orbit the Sun. For this reason, a leap year occurs every four years on Earth.
- It is the Earth's tilt that causes the seasons.

The Moon

The Moon orbits Earth in an oval-shaped path and takes approximately 28 days, 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.

Statutory Requirements

- Describe the movement of the Earth, and other planets, relative to the Sun in the solar system
- Describe the movement of the Moon relative to the Earth
- Describe the Sun, Earth and Moon as approximately spherical bodies
- 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

Solar System	The Sun and the planets that orbit around it.
Orbit	The path taken by one body circling around another body. The Earth makes an orbit around the Sun.
Sphere	A three dimensional version of a circle, like a football or a marble.
Axis	An imaginary line through the middle of something.
Galaxy	An extremely large group of stars and planets. Our galaxy is called the Milky Way. The galaxy is in the universe.
Sun	A huge star that Earth and other planets in our solar system orbit around.
Planets	A large object, round or nearly round, that orbits a star.
Star	A giant ball of gas held together by its own gravity .
Moon	A natural satellite which orbits Earth or other planets.
Satellite	Any object or body in space that orbits something else.

Possible Experiences

- Compare the time of the day at different places on Earth.
- Construct shadow clocks and sundials.
- Keep a Moon diary over the course of a month – what do you notice?

