

Earth and Space

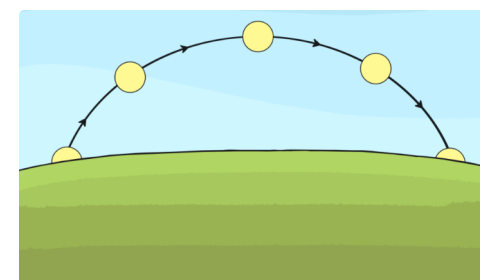
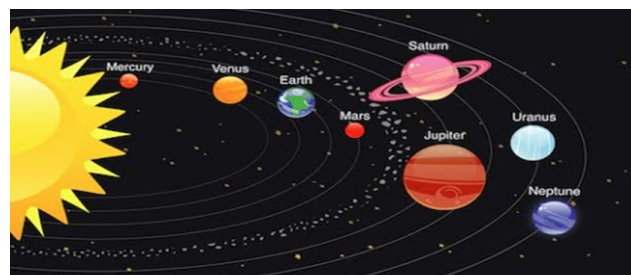
What our children should already know

- How day length varies with the seasons (Year 1)
- That the Sun and stars are light sources and the Moon is not (Year 3)
- How shadows are formed and can be changed (Year 3)

Key Vocabulary

Asteroid	A small rocky body orbiting the sun
Axis	An imaginary line about which a body rotates
Day	A twenty-four hour period, from one midnight to the next, corresponding to a rotation of the earth on its axis
Dwarf planet	A celestial body resembling a small planet but lacking certain technical criteria to be classed as a planet e.g. Pluto
galaxy	The extremely large group of stars and planets to which the Earth and solar system belong.
Moon	A natural satellite that orbits a planet.
Night	The period from sunset to sunrise in each twenty-four hours
Orbit	The regularly repeated oval course of a celestial object around a star or planet
Planet	A celestial body moving in orbit round a star
Rotation	The action of rotating about an axis or centre
Solar system	The collection of eight planets and their moons in orbit round the sun
Star	A fixed luminous point in the night sky which is a large, remote body like the sun
Year	The length of time it takes a planet to complete one full orbit around its sun.

Diagrams



Lesson Sequence

- L1 WALT: Describe the Earth, Sun and Moon as spherical bodies.
- L2 WALT: Describe the Earth's movements, and that of the other planets, in relation to the Sun.
- L3 WALT: Describe the movement of the sun in the sky.
- L4 WALT: Conduct an investigation to show what causes day and night.
- L5 WALT: Describe the movement of the moon.
- L6 WALT: Consolidate our understanding of planets by looking at patterns in data.

Key Knowledge

- The Earth spins once around its own axis in 24 hours, giving night and day.
- The Earth orbits the Sun in one year.
- We can see the Moon because the Sun's light reflects off it.
- The Moon orbits the Earth in approximately 28 days and changes to the appearance are evidence of this.
- The Sun appear to move across the sky from East to West and this causes shadows to change during the day.
- Changes to shadow length over a day or changes to sunrise and sunset times over a year are evidence sup-

Final Outcome

Children to create a nursery rhyme/song/rap for children that explains Earth and Space and includes relevant information learnt throughout the unit.

SMSC Links

Spiritual - When learning about earth and space children will become fascinated about the movement of Earth, other planets, the sun in the solar system and spherical bodies.

Moral - Discussing the moral issue surrounding the first man on the moon: Buzz Aldrin or Neil Armstrong?

Social - Debating respectfully surrounding theories of the 'flatness' of Earth and working together within lessons.

Key Milestones

Light and Astronomy

- Describe the movement of the Earth, and the 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.

Working Scientifically

- Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments.

Choices

- What would our lives be like if gravity didn't exist?
- Forces in action- children demonstrating various forces and taking pictures
- Links to further study of the moon-Neil Armstrong.

Earth and Space Retrieval Grid

Which planet takes the longest to orbit the Sun? Why?	What shape is a planet's orbit?	How long does it take for the Moon to orbit Earth?	Which planet has the shortest orbit time? Why?
Why does the Moon change shape?	How long does it take for Earth to orbit the Sun?	How do the Earth, Sun and Moon fit within our solar system?	The sun appears to rise in the and set in the?
Name 3 of the Moon phases.	How is day and night created?	Name the 8 planets in the solar system	Order the planets in the solar system.
Give one piece of evidence to support the fact that Earth is spherical.	Name 2 significant people that we associate with space exploration.	Define the term 'orbit'	What causes sunset and sunrise?

One Point

Two Points

Three Points

Four Points