

- **PRIOR KNOWLEDGE:** In Year 3 children learned to recognise that they need light in order to see things and that dark is the absence of light and notice that light is reflected from surfaces. Also, to recognise that shadows are formed when the light from a light source is blocked by a solid object.
- They could find patterns in the way that the sizes of shadows change.

## SCIENCE: Earth and Space (Y5) Autumn 1

**NATIONAL CURRICULUM:** Pupils should be taught to: 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

### CONTEXT:

Children study light in Year 3 which is 2 years below year 5. In year 4 they study sound so not really related to Earth and Space. Children need to be taught knowledge of the planets of our Solar System, that they revolve around the Sun which is a Star and to study Earth's moon and how the Earth's rotation makes it appear to change shape.

### STICKY KNOWLEDGE:

- To be able to describe the movement of the Earth, and other planets, relative to the Sun in the solar system.
- To name the planets (of which Earth is one) in our Solar System and the conditions on their surfaces, orbits and moons.
- To understand that the Earth and its moon are approximately spherical.
- To understand why Earth's moon appears to change shape linked to the orbit of the Earth.
- To understand how day and night occur linked to the Earth spinning on its axis.

### KEY VOCABULARY:

**Day and night** - Earth, axis, rotate  
**Solar system** – Star = Sun, Planets = Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune (Pluto was classified as Dwarf planet in 2006)  
**Phases of the Moon** - [full moon](#), [gibbous moon](#), [half moon](#), [crescent moon](#), [new moon](#), [waxing](#), [waning](#)  
**Moon's orbit:** [29.5 days](#), [lunar month](#)  
 Orbit, planets, revolve, sphere

### Enquiry Questions:

1. **What is in our solar system? How large are they? How far apart are they?**
2. **What is it like on the other planets in the solar system?**
3. **How can we prove the shape of the Earth, Sun and Moon?**
4. **How does the shape of the Moon appear to change over time?**
5. **How do we have day and night on planet Earth?**
6. **How can we use the Sun to tell the time?**

### SKILLS:

To be able to plan a scientific enquiry to answer a question.