Lowerhouse Junior School
Science Overview Sheet

Year 5 – Earth and Space

Rationale: Teaching Earth and Space in Year 5 science is crucial for fostering curiosity about the universe. It helps students understand Earth's place in the solar system, the moon's phases, and the sun's role. This knowledge builds a foundation for future scientific learning and encourages exploration and critical thinking.

Substantive Knowledge:

- 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.

Disciplinary Knowledge:

- Researching

Overview:

Lesson 1: What do we want to know about the moon?
Lesson 2: How do the other and other planets move?
Lesson 3: Why do shadows appear to move?
Lesson 4: How do day and night occur?
Lesson 5: Why does the moon appear to change shape?
Lesson 6: What have I learned about Earth and Space?

Key Vocabulary:

Sun: The star at the centre of our solar system, providing light and heat to the planets orbiting it. It is a massive ball of gas undergoing nuclear fusion.
Moon: Earth's natural satellite, which orbits the planet and affects tides. It reflects sunlight and goes through phases based on its position relative to Earth and the Sun.
Earth: The third planet from the Sun, characterized by its diverse ecosystems, water bodies, and atmosphere. It supports life and has a unique climate system.
Spherical: Having the shape of a sphere; round and three-dimensional, like a ball.
Solar System: The collection of the Sun and all the celestial bodies that orbit it, including planets, moons, asteroids, comets, and meteoroids.
Rotate: To spin around an axis. For example, Earth rotates on its axis, causing day and night.
Star: A massive, luminous sphere of plasma held together by gravity, primarily composed of hydrogen and helium, undergoing nuclear fusion.
Orbit: The curved path of a celestial object or spacecraft around a star, planet, or moon, especially a periodic elliptical revolution.

Impact/Assessment

Most Children will be able to: • create a voice over for a video clip or animation • show, using diagrams, the movement of the Earth and Moon • explain the movement of the Earth and Moon • show using diagrams the rotation of the Earth and how this causes day and night • explain what causes day and night • use the model to explain how the Earth moves in relation to the Sun and the Moon moves in relation to the Earth • demonstrate and explain verbally how day and night occur • explain evidence gathered about the position of shadows in term of the movement of the Earth and show this using a model • explain how a sundial works • explain verbally, using a model, why we have time zones • describe the arguments and evidence used by scientists in the past