

Science Progression in Earth and Space

Essential characteristics of scientists

- The ability to think independently and raise questions about working scientifically and the knowledge and skills that it brings
- Confidence and competence in the full range of practical skills, taking the initiative in, for example, planning and carrying out scientific investigations
- Excellent scientific knowledge and understanding which is demonstrated in written and verbal explanations, solving challenging problems and reporting scientific findings
- High levels of originality, imagination or innovation in the application of skills
- The ability to undertake practical work in a variety of contexts, including fieldwork
- A passion for science and its application in past, present and future technologies

Year Group	Key Skills	Key Vocabulary
EYFS	• Explore the natural world around them, making observations and drawing pictures of animals and plants • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class • Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter	
Year 1/2	• Observe the apparent movement of the Sun during the day • Observe changes across the four seasons • Observe and describe weather associated with the seasons and how day length varies	• weather • temperature • seasons • leaves • thunderstorms
Year 5/6	• Describe the movement of the Earth 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	• solar • orbit • axis • rotating • gravitational
KS 3	• Gravity force, weight = mass x gravitational field strength (g), on Earth $g=10 \text{ N/kg}$, different on other planets and stars; gravity forces between Earth and Moon, and between Earth and Sun (qualitative only) • Our Sun as a star, other stars in our galaxy, other galaxies • The seasons and the Earth's tilt, day length at different times of year, in different hemispheres • The light year as a unit of astronomical distance	