

Year Group: KS3 (Year B)

Term: Summer 2

Science: Earth & Atmosphere

Key Concepts	SMSC & British Values	Lesson Objectives	Key Vocabulary
<p>The Earth has different layers and features. The atmosphere is a layer of gases around the Earth and it is important for life. Weather and climate are different. Scientific data about Earth and atmosphere can be measured, recorded, compared and presented in tables, charts and line graphs. Measurements must use correct units and sensible rounding. Scientific information can be interpreted from graphs, tables and simple formulae. Earth and atmosphere contexts link strongly to density, pressure, temperature, rainfall, wind speed and time.</p> <p>Prior Knowledge</p> <p>Recognise and use basic units of length, mass and time. Read simple scales and interpret simple tables. Compare quantities using more than, less than, equal to. Understand basic vocabulary such as hot, cold, heavy, light. Use simple counting, sorting and tallying skills. Interpret basic bar charts and line graphs at a simple level.</p> <p>Cross-Curricular Links</p> <p>Geography: weather patterns, climate regions, maps, scales, environmental change. Maths: measurement, units, graphs, averages, rounding, scale, interpreting data. English: reading scientific key words, explaining findings orally and in writing, using full sentences. PSHE: environmental responsibility, safety, teamwork, resilience and self-regulation.</p>	<p>Spiritual: understanding the wonder of Earth as a life-supporting planet and reflecting on natural systems. Moral: considering human impact on the atmosphere and the importance of responsible choices. Social: working collaboratively to collect, interpret and discuss weather and environmental data. Cultural: comparing weather and climate in different places and recognising how environment shapes life. Democracy: discussing shared class decisions about actions that support sustainability.</p> <p>Assessment</p> <p>Start and End-of-unit low-stakes assessment using real-world Earth and atmosphere data. Teacher questioning to check understanding of weather, climate, atmosphere and measurement. Review of pupil work for accuracy of graphs, units, rounding and conclusions.</p> <p>Adaptations</p> <p>Use visual prompts, symbols and word banks for all key vocabulary. Provide scaffolded writing frames, sentence starters and model answers. Break tasks into short, clear steps with frequent check-ins. Allow extra processing time, repetition and supported retrieval. Use practical resources, real objects and guided examples wherever possible.</p>	<p>Links to Future Learning</p> <p>More complex graph work, averages and data comparison in KS3 science and maths. Foundation for GCSE-style scientific communication and data handling. Future work on climate change, pollution and human impact on the environment.</p> <ol style="list-style-type: none"> 1. Identify the Earth as a planet with layers and describe the atmosphere as the layer of gases surrounding the Earth, using key scientific vocabulary accurately. 2. Describe the main purpose of the atmosphere and explain why it is important for life, including oxygen, protection and weather. 3. Distinguish between weather and climate using simple data and examples. 4. Read, record and compare weather measurements using correct standard units and sensible rounding. 5. Construct and interpret simple tables and charts for Earth and atmosphere data. 6. Plot and interpret line graphs to show changes in weather over time and identify basic trends. 7. Calculate the mean of a small set of weather measurements and explain how averaging helps compare data. 8. Use compound units and simple formulae in Earth and atmosphere contexts. 9. Compare different representations of the same Earth and atmosphere data and interpret conclusions from the evidence. 10. Apply knowledge of Earth and atmosphere to answer simple scientific questions using measurements, graphs, units, rounding and data interpretation. 	<p>Earth atmosphere weather climate gas oxygen carbon dioxide temperature rainfall wind speed pressure density measurement unit data table chart graph line graph mean trend scale rounding compare predict</p>

Possible Enrichment:

Use ICT to create graphs from real weather data. Visit or invite a local weather expert, if available. Carry out a school grounds environmental observation linked to weather and atmosphere.