



Unit: <b>Earth and Resources</b>	1. Careers 2. Structure of the Earth 3. Types of Rock 4. The Rock Cycle 5. Atmosphere	6. Carbon Cycle 7. Carbon Dioxide and Human Activity 8. Global Warming 9. Reactivity Series 10. Displacement Reactions	11. Obtaining Metals with Carbon 12. Ceramics and Composites 13. Polymers 14. Limited Resources and Recycling
<b>LESSON TOPIC QUESTION(S)</b>			
<b>Knowledge &amp; Skills Development</b>	<div> <ul style="list-style-type: none"> <li>- Describe properties of the different layers of the Earth's structure</li> <li>- Explain two properties of sedimentary rocks</li> <li>- Explain how sedimentary</li> <li>- Compare the ways that igneous and metamorphic rocks form</li> <li>- Explain how igneous and metamorphic rocks form</li> <li>- Use the rock cycle to explain how the material in rocks is recycled</li> <li>- Describe how changes in a substance like wax or chocolate represent a rock represent the real rock cycle</li> <li>- Describe the composition of the atmosphere</li> <li>- Explain why the concentration of carbon dioxide in the atmosphere did not change for many years</li> <li>- Use the carbon cycle to identify reservoirs of carbon</li> <li>- Describe how different human activities (including transport/cars) impact the amount of carbon dioxide in the atmosphere</li> <li>- Explain why global warming happens</li> <li>- Explain some impacts of global warming</li> </ul> </div> <div> <ul style="list-style-type: none"> <li>- Put metals in order of reactivity based on experimental results</li> <li>- Use the reactivity series to explain displacement reactions.</li> <li>- Predict which combinations of metals and metal compounds will lead to displacement reactions.</li> <li>- Describe what an ore is</li> <li>- Explain why different metal require different metals of extraction from their ores</li> <li>- Describe how carbon is used to extract metals from their ores</li> <li>- Explain ceramic properties.</li> <li>- Explain why properties of ceramics make them suitable for their uses.</li> <li>- Describe composite properties.</li> <li>- Explain why composite properties make them suitable for their uses.</li> <li>- Describe polymer properties.</li> <li>- Explain how polymer properties make them suitable for their uses.</li> <li>- Analyse the advantages and disadvantages of recycling</li> </ul> </div>		
<b>Assessment / Feedback Opportunities</b>	<b>Formative Assessment</b> Teacher questioning Quizzes Mid topic assessment		<b>Summative assessment</b> End of topic assessment

<b>Key Vocabulary</b>	Independent Variable, Dependent Variable, Control Variables, Method, Conclusion, Precaution, Evaluation, Reliable, Precision, Valid, Anomaly  Layer, Crust, Mantle, Core, Sedimentary (Sediment), Metamorphic, Igneous, Crystal, Cycle, Melt, Solidify, Weathering, Pressure, Atmosphere, Composition, Percentage, Concentration, Reservoir, Combustion, Respiration, Photosynthesis, Decay, Emissions, Global Warming, Climate, Greenhouse Effect, Reactivity, Extract, Ore, Displacement, Ore, Reactivity, Ceramic, Composite, Properties, Monomer, Polymer, Recycle, Advantage, Disadvantage
<b>Literacy/Reading Opportunities</b>	Dedicated reading lesson Subject specific vocabulary introduced before reading of related texts Word etymology from Latin and Greek roots Reading of simple and complex sentences, paragraphs, articles Scientific writing including structuring methods, comparisons and evaluations
<b>Cross Curricular Themes</b>	Numeracy/Maths – averages (means), reading scales, graph plotting, lines of best fit, using and rearranging equations, using scientific calculators, significant figures  Geography – Climate Change
<b>Personal Development (Including British Values, RSE, Citizenship)</b>	Global Citizenship – Climate Change
<b>Career Opportunities</b>	Dedicated careers lesson at start of topic Climate scientists, Geologists (Historical and Fossil Fuel Industries), Waste Management, Geophysics, Metal Industry, Mining Industry