

## Year 8 Curriculum Overview [2022-2023]

### Subject – Science

Autumn Term	Knowledge & Understanding			Literacy Skills  Opportunities for developing literacy skills	Employability Skills [if any]	Assessment Opportunities
	Composites	Components  [includes understanding of KEY concepts & subject specific vocab]	Formal Retrieval [if any]			
HT1	Acids and Alkalis	<ul style="list-style-type: none"> <li>Hazards</li> <li>Indicators</li> <li>Acidity and Alkalinity</li> <li>Neutralisation</li> <li>Useful neutralisation</li> <li>Chemistry in the home.</li> </ul>	<ul style="list-style-type: none"> <li>Equipment</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Scientific apparatus -key vocabulary.</li> </ul>	<ul style="list-style-type: none"> <li>Medical laboratory scientist</li> </ul>	<b>Assessment Point 1</b> Class Assessment: Acids and alkalis.
HT1	Food and Nutrition	<ul style="list-style-type: none"> <li>Nutrients</li> <li>WS Testing Foods</li> <li>Uses of nutrients</li> <li>WS Science in the news – weighting and Bias</li> <li>Balanced Diets</li> <li>Digestion</li> <li>WS Surface area</li> <li>Absorption and diffusion</li> <li>Packaging and the law</li> </ul>	<ul style="list-style-type: none"> <li>Fitness</li> <li>Muscles</li> <li>Breathing</li> </ul>	<ul style="list-style-type: none"> <li>Weighting and bias – Scientific reports</li> </ul>	<ul style="list-style-type: none"> <li>Dietitian</li> </ul>	
HT2	Fluids	<ul style="list-style-type: none"> <li>The particle Model</li> <li>WS Calculations AND Density</li> <li>Changing State</li> <li>Pressure in Fluids</li> <li>Presenting information</li> <li>Floating and Sinking</li> <li>Drag</li> <li>Exploring extremes</li> </ul>	<ul style="list-style-type: none"> <li>Solids liquids and gases</li> </ul>	<ul style="list-style-type: none"> <li>Presenting information 'The Bends'</li> </ul>	Scientists in extreme Conditions, deep sea Divers, astronauts, artic.	<b>Assessment point 2</b> Food and Nutrition and Acid and alkalis.

<b>HT2</b>	<b>Combustion</b>	<ol style="list-style-type: none"> <li>Burning fuels (combustion)</li> <li>Oxidation</li> </ol>	<ul style="list-style-type: none"> <li>Atoms</li> <li>Elements</li> <li>Molecules</li> </ul>	<ul style="list-style-type: none"> <li>Using adjectives 'Describing materials'</li> </ul>	<ul style="list-style-type: none"> <li>Environmental scientist.</li> </ul>	
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**Year 8 Interim Curriculum Overview [2022-2023]**  
**Subject – Science**

<b>Spring Term</b>	<b>Knowledge &amp; Understanding</b>			<b>Literacy Skills</b>  Opportunities for developing literacy skills	<b>Employability Skills</b> [if any]	<b>Assessment Opportunities</b>
	<b>Composites</b>	<b>Components</b> [includes understanding of KEY concepts & subject specific vocab]	<b>Formal Retrieval</b> [if any]			
<b>HT3</b>	<b>Combustion</b>	<ol style="list-style-type: none"> <li>Fire safety <a href="#">WS Combustion experiment to identify variables.</a></li> <li>The early atmosphere to present day</li> <li>Air pollution</li> <li>Global warming (fossil fuels)</li> <li>Reducing Pollution, <a href="#">The climate change debate – what are the alternatives?</a></li> </ol> <ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Atoms</li> <li>Elements</li> <li>Molecules</li> </ul>	<ul style="list-style-type: none"> <li>Using adjectives</li> <li>'Describing materials'</li> </ul>	<ul style="list-style-type: none"> <li>Environmental scientist.</li> </ul>	

<b>HT3</b>	Plants and their reproduction	<ul style="list-style-type: none"> <li>• Classification and Biodiversity</li> <li>• WS Accuracy and Estimates</li> <li>• Types of reproduction</li> <li>• Pollination</li> <li>• Literacy lesson? Paragraphs / clarity / emphasis</li> <li>• Germination and growth</li> <li>• Reactions in plants – photosynthesis <b>WS INVESTIGATING PHOTOSYNTHESIS</b></li> <li>• Plant adaptations</li> </ul>	<ul style="list-style-type: none"> <li>• Human reproductive organs</li> </ul>	<ul style="list-style-type: none"> <li>• Structuring paragraphs</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental Planners</li> <li>• Environmental Geneticist</li> <li>• Zoologist</li> <li>• Veterinary Nurse</li> <li>• Wildlife Biologist.</li> </ul>	
<b>HT4</b>	Metals and their uses	<ul style="list-style-type: none"> <li>• Metal properties</li> <li>• Corrosion</li> <li>• Metals and water</li> <li>• Metals and acids</li> <li>• Pure metals and alloys</li> </ul>	<ul style="list-style-type: none"> <li>• Atoms</li> <li>• Elements</li> <li>• Molecules</li> </ul>	<ul style="list-style-type: none"> <li>• Using adjectives 'Describing materials</li> </ul>	<ul style="list-style-type: none"> <li>• Architect – designing bridges.</li> </ul>	
<b>HT4-5</b>	Light	<ul style="list-style-type: none"> <li>• Light on the move</li> <li>• <b>WS Drawing Ray Diagrams</b></li> <li>• Reflection</li> <li>• Refraction</li> <li>• Cameras and eyes</li> <li>• Colour</li> <li>• <b>Seeing things and Invisibility</b></li> </ul>	<ul style="list-style-type: none"> <li>• Reflection</li> <li>• colours</li> </ul>	Preparing and presenting.	<ul style="list-style-type: none"> <li>• Light technician.</li> </ul>	

# Year 8 Interim Curriculum Overview [2022-2023]

## Subject – Science

Summer Term	Knowledge & Understanding			Literacy Skills  Opportunities for developing literacy skills	Employability Skills [if any]	Assessment Opportunities
	Composites	Components [includes understanding of KEY concepts & subject specific vocab]	Formal Retrieval [if any]			

HT5	Breathing and Respiration	<ol style="list-style-type: none"> <li>Aerobic Respiration</li> <li>Gas Exchange system</li> <li>WS Means and ranges</li> <li>Getting Oxygen</li> <li>Comparing Gaseous Exchange</li> <li>Anaerobic respiration</li> </ol> <p><b>WS YEAST RESPIRATION</b></p> <ol style="list-style-type: none"> <li>Fitness training / Watersports</li> </ol>	<ul style="list-style-type: none"> <li>Digestion</li> <li>Diffusion</li> </ul>	<p>How to show</p> <ul style="list-style-type: none"> <li>cause and effect in sentences.</li> </ul>	Sport Science	
HT5	The Periodic Table	<ol style="list-style-type: none"> <li>Elements and symbols (intro)</li> <li>Chemical properties and formula</li> </ol> <p><b>INVESTIGATING CHEMICAL REACTIONS</b></p> <ol style="list-style-type: none"> <li>Mendeleev's table</li> <li>WS Anomalous results</li> <li>Trends in Physical Properties</li> <li>Trends in Chemical properties</li> </ol> <p>Fireworks</p>	<ul style="list-style-type: none"> <li>Atoms and elements</li> </ul>	<ul style="list-style-type: none"> <li>Using sentences to explain ideas.</li> </ul>	Make up scientist	
HT5-6	Energy transfers	<ol style="list-style-type: none"> <li>Temperature Changes</li> <li>Transferring Energy</li> </ol> <p><b>WS INVESTIGATING INSULATION</b></p> <ol style="list-style-type: none"> <li>Controlling Transfers</li> <li>WS Accuracy and Precision</li> <li>Power and Efficiency</li> <li>Paying for Energy</li> <li>Keeping warm and extreme weather</li> </ol>	<ul style="list-style-type: none"> <li>Energy stores</li> <li>Breathing &amp; Respiration</li> </ul>	<ul style="list-style-type: none"> <li>WS Accuracy and Precision</li> </ul>	Energy Production Insulation installation	

<b>HT6</b>	Unicellular organisms	<ol style="list-style-type: none"> <li>1. Unicellular or multicellular</li> <li>2. Microscopic fungi</li> <li>3. Bacteria</li> <li>4. <a href="#">WS Pie Charts</a></li> <li>5. <a href="#">Protoctists</a></li> <li>6. Decomposers and carbon cycle</li> <li>7. <a href="#">The Black Death hypotheses</a></li> </ol>	<ul style="list-style-type: none"> <li>• Cells</li> <li>• The Periodic Table</li> </ul>	Using modal verbs to show degrees of certainty.	Microbiologist.	<b>Assessment Point 3: CSA</b>
<b>HT6</b>	Earth and space	<ol style="list-style-type: none"> <li>1. Gathering the Evidence</li> <li>2. Literacy Scientific Arguments</li> <li>3. Seasons</li> <li>4. Magnetic earth</li> <li>5. Gravity in Space</li> <li>6. <a href="#">WS Making Comparisons</a></li> <li>7. Beyond the Solar system <a href="#">Studying space and changing ideas</a></li> </ol>	<ul style="list-style-type: none"> <li>• Location and interaction of Sun, Earth &amp; Moon, Introduce gravity -KS2</li> </ul>	Scientific arguments	Astronaut.	