

# Subject Overview Triple Science – Year 10

Year 10 marks the start of the GCSE journey, where students deepen their understanding of science concepts and begin exploring STEM careers. They apply experimental techniques, critical thinking, and questioning across key topics in biology, chemistry, and physics.

	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Knowledge & Skills	<p><b>Quantitative Chemistry (18 Lessons):</b> Explore methods to calculate reactant/product amounts using equations, ratios, and yields.</p> <p><b>Domestic Electricity (20 Lessons):</b> Investigate household electricity use, appliance power calculations, and safety measures.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p style="text-align: center;"><b>Assessment 1</b></p> <ul style="list-style-type: none"> <li>• Bioenergetics</li> <li>• Bonding, Structure and the Properties of Matter</li> <li>• Particle Model of Matter</li> </ul> </div>	<p><b>Infection &amp; Response (20 Lessons)</b> Explore how pathogens cause disease and how the body and medicine defend against them.</p> <p><b>Energy Changes (15 Lessons)</b> Investigate and calculate energy changes in chemical reactions using experiments and real-life examples.</p>	<p><b>Nuclear Physics (15 Lessons)</b> Study ionising radiation, its risks, and how it's used in medicine and industry.</p> <p><b>Chemical Changes (15 Lessons)</b> Explore chemical reactions and how metals are extracted through practical and industrial methods.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p style="text-align: center;"><b>Assessment 2</b></p> <ul style="list-style-type: none"> <li>• Infection &amp; Response</li> <li>• Energy Changes</li> <li>• Domestic Electricity</li> </ul> </div>	<p><b>Forces in Depth (15 Lessons)</b> Explore star formation, motion, and theories about the origin and fate of the universe.</p> <p><b>Chemical Changes (15 Lessons)</b> Continuation into Half-Term 4</p>	<p><b>Chemistry of the Atmosphere (10 Lessons)</b> Investigate how human activity alters the atmosphere and explore climate misconceptions and bias.</p> <p><b>Adaptation and Interdependence (10 Lessons)</b> Explore how organisms adapt physically and behaviourally to survive and interact in ecosystems.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p style="text-align: center;"><b>Assessment 3</b></p> <ul style="list-style-type: none"> <li>• Biology Paper 1</li> <li>• Chemistry Paper 1</li> <li>• Physics Paper 1</li> </ul> </div>	<p><b>Waves in Depth (10 Lessons)</b> Continuation into Half-Term 6</p> <p><b>Nutrient Cycles and Human Impact on the Environment (10 Lessons)</b> Study Earth's nutrient cycles and evaluate how human activity disrupts natural processes.</p> <p><b>Forces in Motion (15 Lessons)</b> Use equations and graphs to analyse how unbalanced forces affect object motion.</p>
Beyond The Curriculum	<p><b>Suggested places to visit:</b> Magna Science Adventure Centre (Rotherham) University of Huddersfield – Chemistry Lab Taster Days</p> <p><b>Suggested reading:</b> “Stuff Matters” by Mark Miodownik Website: <a href="https://www.compoundchem.com">https://www.compoundchem.com</a></p>	<p><b>Suggested places to visit:</b> Thackray Museum of Medicine (Leeds) Eureka! Halifax – “All About Me” Gallery</p> <p><b>Suggested reading:</b> “The Physics of Everyday Things” by James Kakalios Website: <a href="https://www.bbc.co.uk/bitesize/topics/zgg87hv">https://www.bbc.co.uk/bitesize/topics/zgg87hv</a></p>	<p><b>Suggested places to visit:</b> Science + Industry Museum Heysham 2 Nuclear Power Station Visitor Centre</p> <p><b>Suggested reading:</b> “Radioactive! How Irène Curie &amp; Lise Meitner Revolutionized Science and Changed the World” by Winifred Conkling <a href="https://www.bbc.co.uk/bitesize/topics/zwyycdm">https://www.bbc.co.uk/bitesize/topics/zwyycdm</a></p>	<p><b>Suggested places to visit:</b> Calderdale Industrial Museum (Halifax)</p> <p><b>Suggested reading:</b> “Forces and Motion” by Peter Lafferty (Science Essentials series) Royal Society of Chemistry – Learn Chemistry (Student Zone) <a href="https://edu.rsc.org/student">https://edu.rsc.org/student</a></p>	<p><b>Suggested places to visit:</b> National Science and Media Museum (Bradford)</p> <p><b>Suggested reading:</b> “Waves” by Chris Oxlade (Science Essentials series) “Pollution and Climate Change” by Peter Riley Natural History Museum – Explore Nature <a href="https://www.nhm.ac.uk/discover.html">https://www.nhm.ac.uk/discover.html</a></p>	<p><b>Suggested places to visit:</b> Yorkshire Wildlife Park (Doncaster)</p> <p><b>Suggested reading:</b> “Environmental Science: A Graphic Guide” by Tony Juniper &amp; Alice Roberts Website: <a href="https://www.bbc.co.uk/bitesize/topics/z4brd2p">https://www.bbc.co.uk/bitesize/topics/z4brd2p</a></p>