



# Sandbach School Science Curriculum:

## Year 11 Science Curriculum Sequence

**Intent:** To consolidate knowledge from Y10 : Students will continue to visit these 10 key topics of forces, electromagnetism, energy, waves, matter, reactions, earth, organisms in practical's. whilst applying their understanding in a GCSE context. In addition students will further develop their knowledge of the scientific method within the contexts of GCSE required

**W.S ideas to be embedded:**  
 1 Development of scientific thinking  
 2 Experimental skills and strategies  
 3 Analysis and evaluation  
 4 Scientific vocabulary, quantities, units, symbols and nomenclature

HT1	HT2	Term 2	Term 3
<p><b>Combined</b></p> <p>B14 Variation &amp; evolution. B16-18 Ecology, B13 Reproduction</p> <p><b>Biology</b></p> <p>Complete Ecology topic</p>	<p><b>Combined</b></p> <p>Complete B14 Variation &amp; evolution. Then preparation for paper 1 mock exam.</p> <p><b>Biology</b></p> <p>B14 Variation &amp; evolution.</p>	<p><b>Combined</b></p> <p>Revision for Rev 3 (Paper 2) content</p> <p><b>Biology</b></p> <p>B14 Variation &amp; evolution (continued)</p>	<p><b>Combined</b></p> <p>Revision &amp; GCSE Exams 1:15 mins</p> <p><b>Biology</b></p> <p>Final revision then Exam 2 x 1.45 minutes</p>
<p><b>Combined</b></p> <p>C4 Chemical Calculations.</p> <p><b>Chemistry</b></p> <p>C4 Chemical Calculations</p>	<p><b>Combined</b></p> <p>C6 Electrolysis then preparation for paper 1 mock exam.</p> <p><b>Chemistry</b></p> <p>C6 Electrolysis then preparation for paper 1 mock exam</p>	<p><b>Combined</b></p> <p>Complete C6 electrolysis. Revision for Rev 3 (Paper 2) content</p> <p><b>Chemistry</b></p> <p>C11 Polymers, C10 Organic reactions</p>	<p><b>Combined</b></p> <p>Revision &amp; GCSE Exams 2 x 1:15 mins</p> <p><b>Chemistry</b></p> <p>Final revision then Exam 2 x 1.45 minutes</p>
<p><b>Combined</b></p> <p>P13 EM Waves</p> <p><b>Physics</b></p> <p>Triple content to be completed: eg P11 Forces &amp; Pressure / P7 Nuclear issues</p>	<p><b>Combined</b></p> <p>P15 Electromagnetism then preparation for paper 1 mock exam</p> <p><b>Physics</b></p> <p>Triple content to be completed P12 Seismic Waves, P14 Lenses</p>	<p><b>Combined</b></p> <p>Revision for Rev 3 (Paper 2) content</p> <p><b>Physics</b></p> <p>Triple content to be completed: eg P15 Generators / transformers, P16 Space topic</p>	<p><b>Combined</b></p> <p>Revision &amp; GCSE Exams 2 x 1:15 mins</p> <p><b>Physics</b></p> <p>Final revision then Exam 2 x 1.45 minutes</p>
<p><b>Why start here?</b> These are the final units of the course. * More challenging topics are delivered here, these have been left until Y11 due to the high level of mathematical skills required.</p>	<p><b>Why move onto these units?</b> The last part of the HT will be preparation for paper 1 from mock exams.</p>	<p><b>Why move onto these units?</b> These are the final units of the specification.</p>	<p><b>Why move onto these units?</b> N/a No new content to be covered during term 3 of Y11. Revision will be based on ERA from previous years &amp; analysis of weaker areas of mock exams.</p>
<p><b>Spec links:</b> 4.7.1 Adaptations, interdependence and competition, 4.7.2 Organisation of an ecosystem, 4.7.3 Biodiversity and the effect of human interaction on ecosystems., 4.6.1 Reproduction</p> <p>5.3.1 Chemical measurements, conservation of mass and the quantitative interpretation of chemical equations (foundation level only)</p> <p>6.6.2 Electromagnetic waves, 6.6.2.1 Types of electromagnetic waves <b>4.4.4.1 Nuclear fusion , 4.4.4.2 Nuclear fission, 4.5.5.1 Pressure in fluids, 4.6.2.6 Visible light</b></p>	<p><b>Spec links:</b> 4.6.1 Reproduction, 4.6.2 Variation and evolution. 5.4.3 Electrolysis 6.7 Magnetism and electromagnetism, 6.7.1 Permanent and induced magnetism, magnetic forces and fields <b>4.6.2.5 Lenses , 4.7.3 Induced potential, transformers and national grid, 4.8 Space Physics ,</b></p>	<p><b>Spec links:</b> 4.6.3 The development of understanding of genetics and evolution 5.7.1 Carbon compounds as fuels and feedstock 5.10.1 Using the Earth's resources and obtaining potable water, 5.10.2 Life cycle assessment and recycling <b>4.6.1.4 Sound waves , 4.6.1.5 Waves for detection and exploration , 4.5.7.3 Changes in momentum</b></p>	<p><b>Spec links::</b></p>
<p><b>Teaching these topics here supports:</b> A level topics</p>	<p><b>Teaching these topics here supports:</b> A level topics</p>	<p><b>Teaching these topics here supports:</b> A level topics</p>	<p><b>Teaching these topics here supports:</b></p>
<p><b>These topics feed from:</b> 7D Ecosystems Y10 Work on Ecology unit</p>	<p><b>These topics feed from:</b> 7B Reproduction 8B plant reproduction C3 Structure &amp; bonding. P12 Wave properties.</p>	<p><b>These topics feed from:</b> 9A Genetics &amp; evolution 8E Combustion, C3 Structure &amp; bonding.</p>	<p><b>These topics feed from:</b></p>