



## Science Department Curriculum Map KS4 Science Trilogy September 2023

Curriculum Intent			
<i>Our students will experience the nature of scientific processes through scientific enquiry and develop an understanding of the world we live in.</i>			
	Autumn Term	Spring Term	Summer Term
<b>Year 9 Content</b>	Consolidation, revision and working scientifically through several investigative projects: Practical skills Celebrating All Scientists Forensics Microbes Energy	B1a Cell structure B3a Enzymes (B3.4 - B3.7) C1 Atomic Structure C2 The Periodic Table P1 Conservation and dissipation of energy	B3b Digestive system (B3.1-3.3) B9 Respiration P2 Energy transfer by heating Revision and assessment fortnight  Consolidation and working scientifically
<b>Year 9 Skills</b>	Investigative, presentation and practical skills Effective revision skills and exam technique Skills in working scientifically and application of knowledge to real-world situations	Required Practicals covered: <ul style="list-style-type: none"> <li>RP B1 Microscopy (using a microscope, rearranging equations)</li> <li>RP B3 Enzymes</li> </ul>	Required Practicals covered: <ul style="list-style-type: none"> <li>RP B3 Food tests</li> <li>P2 Specific Heat capacity (calculating gradients on a graph)</li> </ul> Investigative and working scientifically skills
<b>Year 9 Key Points</b>	Celebrating Scientists project links to CC and SMSC KS4 Baseline assessment late October 2023 covering all topics covered in Y7 and 8	Interim block tests on topics covered	Interim block tests on topics covered  Assessment fortnight in June 2024 End of Y9 test covering topics all KS4 topics covered to date
<b>Year 10 Content</b>	B1b Movement of substances B8 Photosynthesis B4 Organising animals and plants C3 Structure and bonding C5 Chemical changes C4 Chemical calculations P4 Electric circuits P6 Molecules and matter P8 Forces in balance	B10 The human nervous system B7 Non-communicable diseases C7 Energy changes C9 Crude oil and fuels P9 Motion P13 Electromagnetism	B2 Cell division C11 The Earth's Atmosphere P3 Energy resources P11 Wave properties
<b>Year 10 Skills</b>	Required Practicals covered: <ul style="list-style-type: none"> <li>RP B1 Osmosis (calculating change in mass, drawing tables and graphs)</li> <li>RP B8 Photosynthesis (timing, drawing tables and graphs)</li> <li>RP C5 making salts (using a bunsen burner)</li> <li>RP P4 Resistance (reading ammeters and voltmeters, calculating resistance)</li> </ul>	Required Practicals covered: <ul style="list-style-type: none"> <li>RP B10 Reaction Time (timing, drawing tables and graphs)</li> <li>RP C7 Temperature changes (reading a thermometer, drawing tables and graphs)</li> </ul> Revision and Exam Technique	Required Practicals covered: <ul style="list-style-type: none"> <li>RP P11 Waves (measuring distances, calculating speed)</li> </ul> Revision and Exam Technique



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	<ul style="list-style-type: none"> <li>RP P4 I-V Characteristics (reading ammeters and voltmeters, calculating resistance)</li> <li>RP P6 Density (measuring distances and masses, calculating density)</li> </ul>		
<b>Year 10 Key Points</b>	Interim tests on topics covered	Interim tests on topics covered January Assessment on Autumn Term and Year 9 content	Interim tests on topics covered June assessment on all Y9/10 content so far
<b>Year 11 Content</b>	B5 Communicable diseases B6 Preventing and treating disease B12 Reproduction B14 Genetics and evolution (taught backwards) C6 Electrolysis C8 Rates and equilibrium P5 Electricity in the home P7 Radioactivity	B11 Hormonal co-ordination B13 Variation and Evolution B15 Adaptations, interdependence and competition B16 Organising an ecosystem B17 Biodiversity and ecosystems C10 Chemical analysis C12 The Earth's resources P10 Forces and motion P12 Electromagnetic waves	Programme of revision for biology, chemistry & physics in the run up to exams. Final Revision and GCSE Exams
<b>Year 11 Skills</b>	Required Practicals covered: <ul style="list-style-type: none"> <li>RP C6 Electrolysis</li> <li>RP C8 Rates of reaction (timing, drawing tables and graphs)</li> </ul> Revision: 2 week plan	Required Practicals covered: <ul style="list-style-type: none"> <li>RP B15 Field investigation</li> <li>RP C10 Chromatography (measuring distances, calculating Rf values)</li> <li>RP C12 Water purification</li> <li>RP P10 Force and acceleration</li> <li>RP P10 Force and Extension (measuring distances, drawing tables and graphs)</li> <li>RP P12 Radiation and Absorption (timing, reading a thermometer, drawing tables and graphs)</li> </ul>	Revision 15 week plan
<b>Year 11 Key Points</b>	Y11 mocks on Paper 1 content	Internal mock exam covering Paper 2 content	External exams start May