

Year 11 Curriculum Overview [2022-2023]

Subject – Chemistry Separate 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	Year 10 Review	<ul style="list-style-type: none"> Topics C1-C16 	<ul style="list-style-type: none"> Topics C1-C16 			
	C17 Groups in The Periodic Table	<ul style="list-style-type: none"> Group 1 Group 7 Halogen Reactivity Group 0 	<ul style="list-style-type: none"> KS3 Review – Metals & their Uses Dynamic Equilibrium 	<ul style="list-style-type: none"> Scientific Research and presentations – Group 7 Group 1 extended writing 	<ul style="list-style-type: none"> Making chemical products - Bleaches, Soaps, salts, signs, toothpaste 	
	C18 Rates of Reaction	<ul style="list-style-type: none"> Rates of Reaction, Factors affecting reaction rates Core Practical – Investigating Reaction Rates part 1 Investigating rates Part 2 	<ul style="list-style-type: none"> KS3 Review – Reactivity Groups 	<ul style="list-style-type: none"> Oral / written explanations - how different factors affect reaction rate. 	<ul style="list-style-type: none"> Cool Jobs – explosive pursuits Medicinal Chemist 	<p>Assessment Point 1 C17-18</p> <p>Feedback lesson</p>

		<ul style="list-style-type: none"> Catalysts and Activation Energy 				
HT2	C19 Heat energy Changes in chemical reactions	<ul style="list-style-type: none"> Exothermic and endothermic reactions Energy changes in reactions 	<ul style="list-style-type: none"> C8 CP Investigating neutralisation C11 Reactivity & Displacement 	<ul style="list-style-type: none"> Key terminology- endothermic vs exothermic 	<ul style="list-style-type: none"> Ammunition technician 	Review & Feedback on Year 10 Mock Assessment.
	C20 Fuels	<ul style="list-style-type: none"> Hydrocarbons in Crude oil and Natural Gas Fractional Distillation of Crude Oil The Alkane Homologous Series Complete and Incomplete Combustion Combustible Fuels and Pollution Breaking down Hydrocarbons 	<ul style="list-style-type: none"> KS3 review – Combustion & the Atmosphere Energy Changes 	<ul style="list-style-type: none"> Compare and contrast -Fractional Distillation with Cracking 	<ul style="list-style-type: none"> Meteorologists Optoelectronic Field Engineer Oilrigs 	<hr/> Assessment Point 2 Mock Paper 1 Chemistry <hr/>

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Subject – Separate Science Chemistry

Spring 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]			
HT3	C21 Earth & Atmospheric Science	<ul style="list-style-type: none"> The early atmosphere The changing atmosphere The atmosphere today Climate Change. 	<ul style="list-style-type: none"> Fuels KS3 review – Combustion & the Atmosphere 	<ul style="list-style-type: none"> Extended writing: 	<ul style="list-style-type: none"> Meteorologists Geologist 	
	C22 Hydrocarbons	<ul style="list-style-type: none"> Alkanes and alkenes Reactions of alkanes and alkenes 	<ul style="list-style-type: none"> C20 Hydrocarbons in crude oil 	<ul style="list-style-type: none"> Key words – homologous series 	<ul style="list-style-type: none"> Oil Rigs 	
	C23 Alcohols and carboxylic acids	<ul style="list-style-type: none"> Ethanol production Alcohols Core practical- the combustion of alcohols Carboxylic acids 	<ul style="list-style-type: none"> C20 Homologous series C20 Hydrocarbons 	<ul style="list-style-type: none"> Descriptions of reactions of alcohols 	<ul style="list-style-type: none"> Raw material chemist Analytical chemist Brewing 	
	C24 Polymers	<ul style="list-style-type: none"> Addition polymerisation Polymer properties and uses 	<ul style="list-style-type: none"> C22 Hydrocarbons Year 9 special materials 	<ul style="list-style-type: none"> Verbal discussions of addition and condensation polymerisation 	<ul style="list-style-type: none"> polymer chemist manufacturing pharmaceuticals 	
HT4	C24 Polymers	<ul style="list-style-type: none"> Condensation polymerisation Problems with polymers 	<ul style="list-style-type: none"> C22 Hydrocarbons Year 9 special materials 	<ul style="list-style-type: none"> Verbal discussions of addition and condensation polymerisation 	<ul style="list-style-type: none"> polymer chemist manufacturing pharmaceuticals 	

	<p>C25 Qualitative Analysis: Test for Ions</p>	<ul style="list-style-type: none"> • Flame tests and photometry • Tests for positive ions • Tests for negative ions • Core-practical- identifying ions 	<ul style="list-style-type: none"> • Metals • Ions • C8 Solubility 	<ul style="list-style-type: none"> • Following methods, analysing results 	<ul style="list-style-type: none"> • Analytical chemist 	
	<p>C26 Bulk and surface properties of Matter including nanoparticles</p>	<ul style="list-style-type: none"> • Choosing materials • Composite materials • Nanoparticles 	<ul style="list-style-type: none"> • Allotropes of carbon • Year 9 special materials 	<ul style="list-style-type: none"> • Describing the composition of different materials and their properties 	<ul style="list-style-type: none"> • Pharmaceutical industry 	<p>Assessment Point 4</p> <p>Mock Examination Paper 2 Chemistry</p>

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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	GCSE Preparation	<ul style="list-style-type: none"> • Chemistry 			<ul style="list-style-type: none"> • N/A 	GCSE Examinations