

Year 10	Term 1	Term 2	Term 3
Unit (Tablet in 39 week plan)	 C5.3 – Quantitative Chemistry C5.4 – Chemical Changes 	 C5.5 – Energy Changes C5.6 – Rates of Reaction 	C5.8 – Chemical Analysis
Key Retainable Knowledge (Required for Y11/13) • What How Why	 Mathematical skills and calculations Remembering and application of formulae/units Relative formula mass Titrations Percentage Yield Word and symbol equations Reactions and products Writing and reading formulae Everyday reactions Particle theory Titrations 	 Exothermic Endothermic Everyday reactions Use of symbols Cells and Batteries Graph analysis Particle theory 	 Word and symbol equation Chemical formulae
Key Technical Vocabulary (To be modelled and deliberately practiced in context.)	 Moles, Relative formula mass, yield, atom economy, concentration, gas volume Reaction, Reactants, Products, Reversible, Equilibrium, Titrations 	 Neutralisation, displacement, exothermic, endothermic, Cells, fuel cells Temperature, Surface area, catalyst, concentration, equilibrium, rate 	 chromatography, spectroscopy



Opportunities for Reading	• Researching different types of engineering jobs and how these links to different parts of this topic	 The news in terms of recent updates about energy resources 	•
Developing Cultural Capital (exposure to very best- essential knowledge and skills of educated citizens – appreciation of human creativity and achievement.)	 Job Links = chemical analyst, chemical engineering, mechanical engineering Appreciation of human creativity and achievement = Avogadro's discoveries 	Job Links = chemical engineering, food production	 Job Links = chemical analyst
Cross Curricular Links (Authentic Connections)	 Maths – formula: application of formula and units, rearranging formula Maths – line graphs: drawing and interpreting 	Maths – formula: application of formula and units, rearranging formula	 Maths – formula: application of formula and units, rearranging formula Maths – line graphs: drawing and interpreting
Key Assessment	End of Unit Tests	End of Unit Tests	End of Unit TestsY10 Mocks



How Science Work Skills in Science	 These skills will continuously throughout the year, some or all of which will be covered within each topic Variables Equipment Risk assessments Writing a method Presenting data (bar charts and line graphs) Interpreting data Types of error (measuring, systematic, random) Equations, calculations and units Evaluating Models 		
Year 11	Term 1	Term 2	Term 3
Unit (Tablet in 39 week plan)	 C5.8 – Chemical Analysis 	C5.10 - Resources	Revision
Key Retainable Knowledge (Required for Y11/13) • What How Why	 Word and symbol equation Chemical formulae 	• Required practical skills	• EVERYTHING!
Key Technical Vocabulary (To be modelled and deliberately practiced in context.)	chromatography, spectroscopy	 Potable water, renewable, non-renewable, finite 	



Opportunities for Reading	•	Carbon Capture	
Developing Cultural Capital (exposure to very best- essential knowledge and skills of educated citizens – appreciation of human creativity and achievement.)	 Job Links = chemical analyst 	 Job Links = environmental engineering, meteorologist, oil engineer, geologist, 	
Cross Curricular Links (Authentic Connections)	 Maths – formula: application of formula and units, rearranging formula Maths – line graphs: drawing and interpreting 	 Maths – formula: application of formula and units, rearranging formula 	
Key Assessment	End of Unit TestsPaper 1 Mocks	End of Unit TestsPaper 2 Mocks	• Real Exams!!!
How Science Work Skills in Science	 These skills will continuously throughout the year, some or all of which will be covered within each topic Variables Equipment Risk assessments Writing a method Presenting data (bar charts and line graphs) Interpreting data Types of error (measuring, systematic, random) Equations, calculations and units 		



	 Evaluating Models
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