

KS4 Curriculum Map – Trilogy and Separate Science

Year 9	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1		Summer 2	
Topic	<i>Atoms Structure and the Periodic Table Structure and bonding</i>	<i>Properties of compounds and molecules Chemical changes</i>	Chemical changes Quantitative Chemistry	Quantitative Chemistry Energy changes	Year 9 Exam Topics 1-4	Energy (6.1) Particle model of matter (6.3)	Electricity (6.2) Atomic structure (6.4)	
Assessment	Assessed homework End of topic test In class quizzes	Assessed homework End of topic tests In class AFL	Assessed homework End of topics tests Half C1 test	Assessed homework End of topic tests		2 Assessed homework 2 End of topic test In class quizzes	2 Assessed homework 2 End of topic test In class quizzes	
Link with GCSE Skills and AOs	Recognise and use of standard form, ratio and decimals. Use of ratios, fractions and expressions in decimals Translate information between graphical and numerical forms. Describe and explain specified examples of the technological applications of graphene and fullerene. AO1-AO2	Make predictions & calculate quantities based on the model. Use of various apparatus to investigate changes mass of gaseous reactants/ products. Use and apply ideas to estimate uncertainty when measuring. Recognise and use expressions in decimal and standard form. Use of mathematical symbols when comparing numerical values. Changing the subject of an equation. Use of algebraic equations AO1-AO3	Use of significant figures and ratios and percentages Make predictions and calculations based on models Make order of magnitude of calculation. Safe use of a range of apparatus to heat and purify soluble salts. Carry out experiments appropriately having due regard for the correct manipulation of apparatus accuracy of measurements and health and safety considerations. AO2-AO3	Use of appropriate significant figures, ratios, fractions and percentages. Recognise and use expressions in decimal and standard form. Use of mathematical symbols when comparing numerical values. Changing the subject of an equation. 8. Use of algebraic equations Translate between numerical and graphical. Making accurate readings AO1-AO2			Recognise and use of standard form, ratio and decimals. Use of ratios, fractions and expressions in decimals Translate information between graphical and numerical forms. Describe and explain specified examples of the technological applications of graphene and fullerene. AO1-AO2	Use of significant figures and ratios and percentages Make predictions and calculations based on models Make order of magnitude of calculation. Safe use of a range of apparatus to heat and purify soluble salts. Carry out experiments appropriately having due regard for the correct manipulation of apparatus accuracy of measurements and health and

							safety considerations. AO2-AO3
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Year 10	Autumn 1	Autumn 2	Spring 1		Spring 2	Summer 1	Summer 2
Topic	Energy Changes Rates of Reaction	Rates of reaction Crude oil Pure substances and Formulation	Year 10 Exam Topics 1-7	Rest of chemical analysis Chemistry of the atmosphere	Using resources	Energy (6.1) Electricity (6.2) Particle model of matter (6.3) Atomic structure (6.4) Forces (6.5)	
Assessment	Assessed homework End of topic tests AFL in lessons Required practical	1/2 assessed pieces of homework per topic End of topic tests AFL in lessons Required practical		½ pieces of assessed homework End of topic tests Required practical	2 pieces of Assessed homework End of topic test	2 Assessed homework 2 End of topic test In class quizzes	2 Assessed homework 2 End of topic test In class quizzes
Link with GCSE Skills and AOs	Drawing graphs, identifying apparatus Calculation using appropriate significant figures Planning Translate between numerical and graphical form lot graphs of variables. Determine the slope and intercept of a linear graph. Use of tangents to calculate the rate. AO2	Plan experiments or devise procedures to make observations, produce or characterise a substance and test hypotheses. 8. Understand that $y = mx + c$ represents a linear relationship Use of models to explain concepts AO1		Translate graphical data to numerical Apply understanding of apparatus and techniques to suggest a procedure for a specified purpose. Use of decimal, fractions, and ratios and appropriate	Interpret data from tables and graphs Make order of magnitude calculation. Apply a knowledge of sampling techniques Evaluate and analyse graphical and numerical data. AO1 – AO3	Recognise and use of standard form, ratio and decimals. Use of ratios, fractions and expressions in decimals Translate information between graphical and numerical forms. Describe and explain specified examples of the technological applications of	Use of significant figures and ratios and percentages Make predictions and calculations based on models Make order of magnitude of calculation. Safe use of a range of apparatus to heat and purify soluble salts. Carry out experiments appropriately having

				significant number AO1& AO3		graphene and fullerene. AO1-AO2	due regard for the correct manipulation of apparatus accuracy of measurements and health and safety considerations. AO2-AO3
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Year 11	Autumn 1		Autumn 2	Spring 1		Spring 2	Summer 1	Summer 2
Topic	Revision of the Trilogy content Revision of trilogy content plus separate content of... Forces (6.5) Waves (6.6)	Year 11 Exam Paper 2 content – P5 and P6	Revision of the Trilogy content Revision of trilogy content plus separate content of... Electromagnetism (6.7) Space Physics (Separate science ONLY)(6.8)	Revision of the Trilogy content Revision of trilogy content plus separate content of... Energy (6.1) Electricity (6.2)	Year 11 Exam Paper 1 and 2 ALL	Revision of the Trilogy content Revision of trilogy content plus separate content of... Particle model of matter (6.3) Atomic structure (6.4)	Revision	
Assessment	2 Assessed homework 2 End of topic tests AFL in lessons		2 Assessed homework 2 End of topic tests AFL in lessons 2 Required practical Tests	2 Assessed homework 2 End of topic tests AFL in lessons		2 Assessed homework 2 End of topic tests AFL in lessons	More exam questions and modelling of answers Concepts specific revision	

	2 Required practical Tests			2 Required practical Tests		2 Required practical Tests		
Link with GCSE Skills and AOs	<p>Plan & select appropriate apparatus to use safely.</p> <p>Explain how scientific methods and theories are developed overtime through modelling (2D & 3D) and peer reviews for accuracy and validity.</p> <p>Correct use SI units and standard form</p> <p>Make order of magnitude calculations.</p> <p>Calculate areas of triangles and rectangles, surface areas and volumes of cubes.</p> <p>Use decimals, ratios and standard forms.</p> <p>Make estimation.</p> <p>Scientific vocabulary, quantities, order of magnitude.</p> <p>Evaluate the risks of nanotechnology</p>		<p>Plan experiments or devise procedures to make observations, produce or characterise a substance and test hypotheses. 8.</p> <p>Understand that $y = mx + c$ represents a linear relationship</p> <p>Use of models to explain concepts</p> <p>Make models of alkane molecules using the molecular modelling kits.</p> <p>Use of correct terminologies</p> <p>AO1 & AO3</p>	<p>Use of scientific vocabularies and definitions.</p> <p>Describe and explain specific applications of science</p> <p>Explain why a given practical procedure is well designed for its specified purpose.</p> <p>Interpret diagrams.</p> <p>Translate data from one form to another.</p> <p>Use of ratios, fractions, and decimals.</p> <p>Give answers to appropriate significant figures</p> <p>Make estimates of results from calculations</p> <p>AO1 – AO2</p>		<p>Use of scientific vocabularies and definitions.</p> <p>Describe and explain specific applications of science</p> <p>Explain why a given practical procedure is well designed for its specified purpose.</p> <p>Interpret diagrams.</p> <p>Translate data from one form to another.</p> <p>Use of ratios, fractions, and decimals.</p> <p>Give answers to appropriate significant figures</p> <p>Make estimates of results from calculations</p> <p>AO1 – AO2</p> <p>Plan experiments or devise procedures to make</p>		

	<p>Use of various apparatus to investigate changes mass of gaseous reactants/ products. Using algebraic equations AO1 – AO2</p>				<p>observations, produce or characterise a substance and test hypotheses. 8. Understand that $y = mx + c$ represents a linear relationship Use of models to explain concepts Make models of alkane molecules using the molecular modelling kits. Use of correct terminologies AO1 & AO3</p>		
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