

KS4 Curriculum Map – GCSE Chemistry

Year 10	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	
Topic	Quantitative Chemistry Beginning of Rates of Reaction	Rates of reaction & Equilibrium	Organic chemistry	Chemical analysis	End of year 10 exams	Chemistry of the atmosphere	Using resources
Assessment	Assessed homework AFL in lessons End of topic 3 test	1 -3 assessed pieces of homework per topic AFL in lessons Required practical Topic tests 3, 6 & 10.4	1 or 2 pieces of assessed homework per topic AFL in lessons Topics 3, 6, 7 & 10.4 test	2 pieces of Assessed homework per topic AFL in lessons Topics 3, 6, 7, 8 & 10.4 test		2 Assessed homework AFL in lessons Required practical Topics 3, 6, 7, 8, 9 & 10.4 tests	2 Assessed homework AFL in lessons Test C2 paper
Link with GCSE Skills and AOs	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. Use of appropriate significant figures, ratios, fractions and percentages. Recognise and use expressions in decimal and standard form. Use of mathematical symbols when	Calculation using appropriate significant figures Planning Translate between numerical and graphical form lot graphs of variables. Plan experiments or devise procedures to make observations, produce or characterise a substance and test hypotheses. Drawing and identifying apparatus Understand that $y =$	Make models of alkane molecules using the molecular modelling kits. Use of correct terminologies 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 significant number AO1& AO3	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		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	Translating data from one form to another. Interpret data from tables and graphs. Translate information between graphical and numeric form. Make order of magnitude calculations. Safe use of appropriate apparatus for measuring pH, distillation and evaporation. recognise when to apply a knowledge of sampling

	<p>comparing numerical values.</p> <p>Changing the subject of an equation.</p> <p>Use of algebraic equations</p> <p>Planning</p> <p>Translate between numerical and graphical form</p> <p>lot graphs of variables.</p> <p>Determine the slope and intercept of a linear graph.</p> <p>Use of tangents to calculate the rate.</p> <p>AO1 – AO3</p>	<p>$mx + c$ represents a linear relationship</p> <p>Use of models to explain concepts</p> <p>AO1 - AO3</p>					<p>techniques to ensure any samples collected are representative.</p> <p>Evaluate methods and suggest possible improvements and further investigations.</p> <p>Consider the ethical issues</p> <p>Interconverting units</p>
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KS4 Curriculum Map – GCSE Combined Chemistry

Year 10	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	
Topic	<p>Quantitative Chemistry</p> <p>Beginning of Rates of Reaction</p>	<p>Rates of reaction & Equilibrium</p> <p>Crude oil</p> <p>Pure substances and Formulation</p>	<p>Rest of chemical analysis</p> <p>Chemistry of the atmosphere</p>	<p>Using resources</p>	<p>End of year 10 exam - C2 paper</p>	<p>Energy (6.1)</p> <p>Electricity (6.2)</p> <p>Particle model of matter (6.3)</p> <p>Atomic structure (6.4)</p>	<p>Forces (6.5)</p>
Assessment	<p>Assessed homework</p> <p>End of topic 3 test</p> <p>AFL in lessons</p> <p>Required practical</p>	<p>1 or 2 assessed pieces of homework per topic</p> <p>Topic tests 3, 6</p> <p>AFL in lessons</p> <p>Required practical</p>	<p>1 or 2 pieces of assessed homework per topic</p> <p>End of topic tests</p> <p>Required practical</p>	<p>2 pieces of Assessed homework</p> <p>End of topic test</p>		<p>2 Assessed homework</p> <p>2 End of topic test</p> <p>In class quizzes</p>	<p>2 Assessed homework</p> <p>2 End of topic test</p> <p>In class quizzes</p>

<p>Link with GCSE Skills and AOs</p>	<p>Make predictions 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 & AO3</p>	<p>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</p>	<p>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 significant number AO1& AO3</p>	<p>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</p>	<p>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</p>	<p>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</p>
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KS4 Curriculum Map – GCSE Chemistry

Year 11	Autumn 1		Autumn 2	Spring 1		Spring 2	Summer 1	Summer 2
Topic	Atoms and the periodic table Structure and Bonding Chemical quantitative	Year 11 Exam C1 plus triple contents from topics 1-3	Chemical energetics and chemical cells and fuel cells Organic chemistry	Chemical analysis The Haber process and NPK	Year 11 Exam C1 & C2	Revision	Revision	
Assessment	Assessed homework End of topic tests AFL in lessons Required practical Tests		1/2 assessed pieces of homework per topic End of topic tests AFL in lessons Required practical	Required practical End of topic tests AFL in lessons		More exam questions and modelling of answers		
Link with GCSE Skills and AOs	Plan & select appropriate apparatus to use safely. Explain how scientific methods and theories are developed overtime through modelling (2D & 3D) and peer reviews for accuracy and validity. Correct use SI units and standard form Make order of magnitude calculations. Calculate areas of triangles		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 Make models of alkane molecules using the molecular modelling kits. Use of correct terminologies AO1 & AO3	Use of scientific vocabularies and definitions. Describe and explain specific applications of science Explain why a given practical procedure is well designed for its specified purpose. Interpret diagrams. Translate data from one form to another. Use of ratios, fractions, and		AO1, AO2 & AO3		

	<p>and rectangles, surface areas and volumes of cubes. Use decimals, ratios and standard forms. Make estimation. Scientific vocabulary, quantities, order of magnitude. Evaluate the risks of nanotechnology Use of various apparatus to investigate changes mass of gaseous reactants/ products. Using algebraic equations</p> <p>AO1 – AO2</p>			<p>decimals. Give answers to appropriate significant figures Make estimates of results from calculations</p> <p>AO1 – AO2</p>				
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