## Year 10 CHEMISTRY (SEPARATE SCIENCE) Curriculum Map

Term	Topic/Unit title	Essential content
		https://www.aqa.org.uk/subjects/science/gcse/chemistry-8462/specification-at-a-glance
Autumn 1	Revision of Atomic structure and Periodic Table from Year 9	Throughout the GCSE, disciplinary knowledge is interwoven throughout each topic with a particular focus on:  -working scientifically: plan and conduct investigations objectively, then analyse, evaluate and conclude.  -apparatus and technique: select the most appropriate pieces of equipment and use them in the correct way to ensure accurate results are obtained.  -mathematical skills: particular focus on recording, processing, graphing and analysis.
	Structure, bonding and properties or materials	-Ionic, covalent and metallic bonding -Properties or crystal types -Alloys -Carbon allotropes -Polymers -Nanoparticles -States of matter

Autumn 2	Structure, bonding and properties or materials completed	
Spring 1	Chemical change	-Metals with acid/water/oxygen and the Reactivity series -Displacement and reduction -Making soluble salts and crystallisation -Metal carbonates with acid -pH scale -Titration technique
		-Strong and weak acids -Electrolysis of melts and solutions
Spring 2	Chemical change completed	
	Energy	-Exo and endothermic reactions  -Combustion and calorimetry  -Energy profile diagrams and bond energies  -Cells, batteries and fuel cells

Summer 1	Energy completed	
	Prepare for end of Year 10 exams	
	Quantitative chemistry	-Equations and conservation of mass
		-Relative mass, moles, reacting masses and limiting reagents
		-Concentration and solution calculations
		-Atom economy
		-Percentage yield
		-Gas volumes
		-Uncertainty
Summer 2	Quantitative chemistry completed	
	Rates of reaction started	-Collision theory
		-Factors affecting rate: surface area, concentration, temperature, catalysts
		-Reversible reactions and equilibria
		-Haber process

## Year 11 CHEMISTRY (SEPARATE SCIENCE) Curriculum Map

Term	Topic/Unit title	Essential content
		https://www.aqa.org.uk/subjects/science/gcse/chemistry-8462/specification-at-a-glance
Autumn 1		Throughout the GCSE, disciplinary knowledge is interwoven throughout each topic with a particular focus on:
		-working scientifically: plan and conduct investigations objectively, then analyse, evaluate and conclude.
		-apparatus and technique: select the most appropriate pieces of equipment and use them in the correct way to ensure accurate results are obtained.
		-mathematical skills: particular focus on recording, processing, graphing and analysis.
	Rates of reaction started in Summer term of Year 10 is consolidated and completed	-Collision theory
		-Factors affecting rate: surface area, concentration, temperature, catalysts
		-Reversible reactions and equilibria
		-Haber process
	Organic chemistry	-Alkanes and fractional distillation
		-Cracking

		-Gas tests -Positive and negative ion tests
Spring 2	Using resources	This topic has been incorporated into previous topics where appropriate so material is consolidated and remaining new content delivered.
		-Potable water and distillation
		-Resources, sustainability and metals
		-Recycling and LCA's
		-Corrosion
		-Ceramic and composite
		-NPK fertiliser
Summer 1	Revision phase	