## Year 10 CHEMISTRY (COMBINED SCIENCE) Curriculum Map

Term	Topic/Unit title	Essential content
		https://www.aqa.org.uk/subjects/science/gcse/combined-science-trilogy-
		8464/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 of materials	
		-lonic, covalent and metallic bonding
		-Properties of crystal types
		-Alloys
		-Carbon allotropes
		-Polymers
		-States of matter

Autumn 2	Structure, bonding and properties of 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 -Electrolysis of melts and solutions
Spring 2	Chemical change completed  Energy	-Exo and endothermic reactions -Combustion and calorimetry -Energy profile diagrams

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

## Year 11 CHEMISTRY (COMBINED SCIENCE) Curriculum Map

Topic/Unit title	Essential content
	https://www.aqa.org.uk/subjects/science/gcse/combined-science-trilogy- 8464/specification-at-a-glance
	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  Organic chemistry	-Collision theory -Factors affecting rate: surface area, concentration, temperature, catalysts -Reversible reactions and equilibria -Alkanes and fractional distillation -Cracking
	Rates of reaction started in Summer term of Year 10 is consolidated and completed

Autumn 2	Atmosphere	-Current and ancient atmosphere
		-Pollutants
		-Carbon dioxide, the greenhouse effect and carbon footprints
Spring 1	Atmosphere completed	
	Analysis	-Pure and mixture
		-Chromatography
		-Gas tests
Spring 2	Using resources	-Potable water and distillation
		-Resources, sustainability and metals
		-Recycling and LCA's
Summer 1	Revision phase	