

KS4 Chemistry Curriculum Map

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 10	Atomic Structure and the Periodic Table	Bonding, Structure, and the Properties of Matter	Quantitative Chemistry	Chemical Changes	Chemical Changes	Energy Changes
	<p>A simple model of the atom, symbols, relative atomic mass, electronic charge and isotopes</p> <p>The Periodic Table</p> <p>Properties of Transition metals (Separate Only)</p>	<p>Chemical bonds, ionic, covalent and metallic</p> <p>How bonding and structure are related to the properties of substances</p> <p>Structure and bonding of carbon</p> <p>Bulk and surface properties of matter including nanoparticles (Separate Only)</p>	<p>Chemical measurements, conservations of mass and the quantitative interpretation of chemical equations</p> <p>Use of amount of substance in relation to masses of pure substances</p> <p>Yield and atom economy of chemical reactions (Separate Only)</p>	<p>Reactivity of metals</p> <p>Reactions of acids</p> <p><i>Required Practical Activity</i> - Preparation of a pure, dry sample of a soluble salt</p> <p><i>Required Practical Activity</i> - determination of the reacting volumes of solutions of a strong acid and a strong alkali by titration (Separate Only)</p>	<p>Electrolysis</p> <p><i>Required Practical Activity</i> - Investigate what happens when aqueous solutions are electrolysed using inert electrodes</p>	<p>Exothermic and endothermic reactions</p> <p>Chemical cells and fuel cells (Separate Only)</p> <p><i>Required Practical Activity</i> - Investigate the variables that affect temperature changes in reacting solutions</p>



Academic
Excellence

We provide a supportive and challenging environment to ensure our students achieve academic excellence.



Ambition

We have the highest expectations for academic excellence and personal development and work hard to achieve them.

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 11	The Rate and Extent of Chemical Change	Organic Chemistry	Chemical Analysis	Chemistry of the Atmosphere	Using Resources	
	<p>Rate of reaction</p> <p>Reversible reactions and dynamic equilibrium</p> <p>The Haber process and the use of NPK fertilisers (Separate Only)</p> <p><i>Required Practical Activity</i> - Investigate how changes in concentration affect the rates of reactions</p>	<p>Carbon compounds as fuels and feedstock</p> <p>Reactions of alkenes and alcohols (Separate Only)</p> <p>Synthetic and naturally occurring polymers (Separate Only)</p>	<p>Purity, formulations and chromatography</p> <p>Identification of common gases</p> <p>Identification of ions by chemical and spectroscopic means</p> <p><i>Required Practical Activity</i> - Investigate how paper chromatography can be used to separate and tell the difference between coloured substances</p> <p><i>Required Practical Activity</i> - Use of chemical tests to identify the ions in unknown single ionic compounds (Separate Only)</p>	<p>The composition and evolution of the Earth's atmosphere</p> <p>Carbon dioxide and methane as greenhouse gases</p> <p>Common atmospheric pollutants and their sources</p>	<p>Using the Earth's resources and obtaining potable water</p> <p>Life cycle assessment and recycling</p> <p>Using materials (Separate Only)</p> <p><i>Required Practical Activity</i> - Analysis and purification of water samples from different sources</p> <p>Revision and Examinations</p>	

