

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Y9 Content and Topics	Chemistry C1 Atomic Structure Atoms Chemical Equations Separating Mixtures Fractional Distillation and Chromatography History of the Atom Structure of the atom. Ions Atoms and Isotopes Electronic Structures	Chemistry C2 Periodic Table Development of Periodic Table Electronic Structures and Periodic Table Group 1 Alkali Metals Group 7 Halogens Explaining Trends.	Chemistry C3 Structure and Bonding States of Matter Atoms into Ions Ionic Bonding Giant Ionic Structures Covalent Bonding Simple Covalent Molecules Giant Covalent Structures Fullerenes and Graphene Bonding in metals Giant Metallic Structures <i>Nano-Particles</i> <i>Application of Nano- Particles</i>	Chemistry C4 Chemical Calculations Relative masses and moles Equations and Calculations From Masses to Balanced Equations <i>Yield of Chemical Reactions</i> <i>Atom Economy</i> Expressing Concentrations <i>Titrations</i> <i>Titration Calculations</i> <i>Volumes of Gases</i>	Chemistry C5 Chemical Changes Reactivity series Displacement Reactions Extracting Metals Salts from Metals Salts from insoluble bases. Neutralisation and pH Scale Strong and Weak Acids	Chemistry C6 Electrolysis Introduction Changes at Electrodes Extraction of Aluminium Electrolysis of Aqueous Solutions
Y9 Skills				Use titration to find out how much acid is needed to completely react with an alkali.	Required Practical: Prepare a salt from an insoluble metal oxide or carbonate.	Investigate the electrolysis of different aqueous solutions using inert electrodes.
Y9 Assessments/PPEs		Tracking Assessment		Tracking Assessment		Tracking Assessment End of Year Exam

<p>Y10 Content and Topics</p>	<p>Chemistry C7 Energy Changes Exothermic and Endothermic Reactions Using Energy Transfers from chemical reactions Reaction Profiles Bond Energy Calculations <i>Chemical Cells and Batteries</i> <i>Fuel Cells.</i></p>	<p>Chemistry C8 Rates and Equilibrium Rate of Reaction Collision theory and Surface area Effect of Temperature Effect of Concentration and Pressure Effect of Catalysts Reversible Reactions Dynamic Equilibrium Altering Conditions(P/T)</p>	<p>Chemistry C9 Crude Oil and Fuels Hydrocarbons Fractional Distillation of Crude Oil Burning Hydrocarbons Cracking Hydrocarbons</p>	<p><i>Chemistry C10</i> <i>Organic Reactions</i> <i>Reactions of Alkenes</i> <i>Structures of alcohols, carboxylic acid and esters.</i> <i>Reactions and uses of alcohols.</i> <i>Carboxylic acids and esters.</i></p>	<p>Chemistry C11 <i>Polymers</i> <i>Addition polymerisation</i> <i>Condensation Polymerisation</i> <i>Natural Polymers</i> <i>DNA</i></p>	<p>Chemistry C12 Chemical Analysis Pure substances and mixtures Analysing chromatograms Testing for gases <i>Tests for positive ions</i> <i>Tests for negative ions</i> <i>Instrumental Analysis</i></p>
<p>Y10 Skills</p>	<p>Investigating temperature changes. Use appropriate apparatus to investigate the variables that effect energy changes in reactions involving at least one solution.</p>	<p>Investigating the effect of concentration on rates of reaction. Investigate how changes in concentration affect rates of reactions using a method involving a change in colour or turbidity. (Sodium Thiosulphate)</p>				<p>Calculate Rf values in chromatography of food dyes found in different food colourings.</p> <p>Using chemical tests to identify unknown compounds. Use a range of chemical tests to identify negative and positive ions in ionic compounds.</p>
<p>Y10 Assessments/PPEs</p>		<p>Tracking Assessment</p>		<p>Tracking Assessment</p>		<p>Tracking Assessment End of Year Exam</p>

Y11 Content and Topics	Chemistry C13 Earth's Atmosphere History of our atmosphere Evolving atmosphere Greenhouse gases Global climate change Atmospheric pollutants	Chemistry C14 Earth's Resources Finite and renewable resources Water safe to drink Treating waste water Extracting metals from ores Life cycle assessments Reduce reuse and recycle.	<i>Chemistry C15 Using our Resources Rusting Useful alloys Properties of polymers Glass, ceramic and composites Making ammonia Haber process. Economics of Haber process. Making Fertilizers in the lab. Making fertilizers in industry.</i>	Revision	Exam Season	
Y11 Skills		Analyse and purify water from different sources, including pH, dissolved solids and distillation				
Y11 Assessments/PPEs		Tracking Assessment GCSE Mock 1		Tracking Assessment GCSE Mock 2		