



By following the AQA GCSE science qualifications, we are building on the hard work our students have completed during their key stage 3 studies. Students follow either AQA Combined Science: Trilogy or AQA Separate Sciences. This allows us to ensure the students follow the best path for them.

	Foci	Assessment	Knowledge Organiser
Unit 1 (Year 9)	<p>Atomic structure and the periodic table The development of the periodic table and the understanding the structure of an atom</p> <ul style="list-style-type: none">• Atoms, elements and compounds• Mixtures• The development of the model of the atom• Subatomic particles – location, electrical charge, size and mass• Relative atomic mass• Structure and development of the periodic table• Groups of the periodic table – Groups 1, 7, 0	<ul style="list-style-type: none">• Continuous assessment via knowledge recall• End of unit test via past paper examination questions	Knowledge organisers are included in student's booklet (at the back) with blank copies to practice recall.
Unit 9 (Year 9)	<p>Chemistry of the atmosphere Understanding the development and changes within the atmosphere including causes of pollution and global warming.</p> <ul style="list-style-type: none">• Composition and evolution of the atmosphere• Greenhouse gases• Climate change and global warming• Carbon footprints• Pollutants	<ul style="list-style-type: none">• Continuous assessment via knowledge recall• End of unit test via past paper examination questions	Knowledge organisers are included in student's booklet (at the back) with blank copies to practice recall.



Unit 2 (Year 10)	<p>Bonding, structure and the properties of matter The bonding within materials and how this relates to their physical and chemical properties</p> <ul style="list-style-type: none">• States of matter• Formation of ions• Ionic bonding• Covalent bonding• Polymers• Metallic bonding• Alloys• Allotropes of carbon – diamond, graphite, graphene, fullerene	<ul style="list-style-type: none">• Continuous assessment via knowledge recall• End of unit test via past paper examination questions	Knowledge organisers are included in student's booklet (at the back) with blank copies to practice recall.
Unit 3 (Year 10)	<p>Quantitative chemistry Using quantitative methods and calculations to determine reaction outcomes, establish patterns and make predictions of chemical behaviour</p> <ul style="list-style-type: none">• Conservation of mass and balancing equations• Relative formula mass• Chemical measurements• Moles• Limiting reactants	<ul style="list-style-type: none">• Continuous assessment via knowledge recall• End of unit test via past paper examination questions	Knowledge organisers are included in student's booklet (at the back) with blank copies to practice recall.
Unit 4 (Year 10)	<p>Chemical changes Developing an understanding of common reactions and using these to predict the outcomes of other reactions</p> <ul style="list-style-type: none">• Reactions and reactivity of metals• Extraction metals• Oxidation and reduction (redox)• Reactions of acids and neutralisation• Electrolysis• Half equations	<ul style="list-style-type: none">• Continuous assessment via knowledge recall• Required practical – Preparing a pure and dry sample of soluble salts from an insoluble oxide or carbonate• Required practical – investigating what happens when aqueous solutions are electrolysed using inert electrodes• End of unit test via past paper examination questions	Knowledge organisers are included in student's booklet (at the back) with blank copies to practice recall.



Unit 5 (Year 10)	Energy changes The transfer of energy within reactions and how this affects the surroundings. How electricity can be produced and used within chemical reactions <ul style="list-style-type: none">• Exothermic and endothermic reactions• Reaction profiles• Bond energies	<ul style="list-style-type: none">• Continuous assessment via knowledge recall• Required Practical – Investigating the variables that affect temperature change• End of unit test via past paper examination questions	Knowledge organisers are included in student's booklet (at the back) with blank copies to practice recall.
Unit 6 (Year 10)	The rate and extent of chemical change Determining the rate at which a reaction is moving, including dynamic equilibrium <ul style="list-style-type: none">• Calculating rate of reaction and the factors that can affect it, including catalysts• Collision theory and activation energy• Reversible reactions and dynamic equilibrium• Changing conditions and the effect on equilibrium	<ul style="list-style-type: none">• Continuous assessment via knowledge recall• Required practical – Investigating how changing concentration affects rate of reaction using two different methods• End of unit test via past paper examination questions	Knowledge organisers are included in student's booklet (at the back) with blank copies to practice recall.
Unit 7 (Year 11)	Organic chemistry The chemistry of carbon compounds, their sources and the modifications of them to produce new and useful materials. <ul style="list-style-type: none">• Crude oil• Fractional distillation and uses of the fractions• Hydrocarbons and their properties	<ul style="list-style-type: none">• Continuous assessment via knowledge recall• End of unit test via past paper examination questions	Knowledge organisers are included in student's booklet (at the back) with blank copies to practice recall.



Unit 8 (Year 11)	<p>Chemical analysis Using chemical test to detect the chemical composition of a substance</p> <ul style="list-style-type: none">• Purity and formulations• Chromatography• Gas tests – oxygen, carbon dioxide, hydrogen, chlorine	<ul style="list-style-type: none">• Continuous assessment via knowledge recall• Required practical – determining the composition of a coloured substance using chromatography• End of unit test via past paper examination questions	<p>Knowledge organisers are included in student's booklet (at the back) with blank copies to practice recall.</p>
Unit 10 (Year 11)	<p>Using resources Developing sustainable methods of using limited resources to reduce our impact on the environment.</p> <ul style="list-style-type: none">• Sustainable development• Creating potable water• Alternative metal extraction• Lifecycle assessment• Reducing resource use	<ul style="list-style-type: none">• Continuous assessment via knowledge recall• Required practical – analysing and purifying water samples from different sources• End of unit test via past paper examination questions	<p>Knowledge organisers are included in student's booklet (at the back) with blank copies to practice recall.</p>