

Year 10 - AQA GCSE Chemistry 8462

Timing	Unit Title	Key Question	Knowledge	Assessing understanding
Autumn Term 1	Chemical Calculation Chapter 4	How do we calculate quantity in a chemical reaction? How do we consider efficiency in a reaction?	<ul style="list-style-type: none"> • Masses and moles • Using moles to balance equations • Reacting masses • Gas volumes • Limiting reagents • % yield • Atom economy 	<p>How understanding is assessed</p> <p>Students will be assessed on their ability to:</p> <ul style="list-style-type: none"> • Recall the knowledge covered • Explain chemical phenomena • Analyse and interpret graphical and experimental data • Plan and describe valid experiments • Evaluate experimental procedures and results <p>Skills</p> <ul style="list-style-type: none"> • Description • Explanation • Evaluation • Comparison • Planning and carrying out investigations <p>Assessment information</p> <p>Assessment point data based on:</p> <ul style="list-style-type: none"> • Short written test on calculations • Short written test on structure and bonding <p>These two assessments will be used for the assessment point reported home.</p> <p>Student understanding will also be checked using:</p> <ul style="list-style-type: none"> • Short written test covering calculations and structure and bonding <p>This will not be used to inform an assessment point reported home.</p>
Autumn Term 2	Structure and Bonding Chapter 3	How do atoms bond with each other? How do the elements combine in chemical reactions?	<ul style="list-style-type: none"> • Structure and properties of ionic compounds • Structure and properties of covalent compounds • Structure and properties of metals • Giant covalent structures – fullerenes • Nanoparticles 	

Spring Term 1	<p>Chapter 5</p> <p>Chemical Changes</p> <p>Chapter 4</p> <p>Titration Calculations</p>	<p>What are the main types of chemical reaction, and how do we write equations to illustrate them?</p> <p>How are concentration and strength linked to pH?</p> <p>How do we use empirical data to calculate concentration?</p>	<ul style="list-style-type: none"> • Reactivity series of metals • Displacement reactions • Redox • Making salts from metals • Making salts from bases • Acids and the pH scales • Strong and weak acids • Neutralisation reactions of acids and alkalis • Solution calculations • Titration • Titration calculations 	<p>How understanding is assessed</p> <p>Students will be assessed on their ability to:</p> <ul style="list-style-type: none"> • Recall the knowledge covered • Explain chemical phenomena • Interpret graphical and experimental data • Plan and describe valid experiments • Evaluate experimental procedures and results <p>Skills</p> <ul style="list-style-type: none"> • Description • Explanation • Evaluation • Comparison • Planning and carrying out investigations • Chemical calculations <p>Assessment information:</p>
Spring Term 2	<p>Electrolysis</p> <p>Chapter 6</p>	<p>How can compounds be split up using electricity?</p>	<ul style="list-style-type: none"> • Electrolysis • Half equations • Extraction of aluminium • Electrolysis of brine 	<p>Student understanding will be checked by:</p> <ul style="list-style-type: none"> • Short written test on chemical changes • Required Practical 1 – Making a salt from an insoluble base. • Required Practical 2 – Titration • Required Practical 3 - Electrolysis <p>These assessments and practicals will not inform an assessment point reported home.</p>

Summer Term	Energy Changes Chapter 7	Why do chemical reactions cause temperature changes?	<ul style="list-style-type: none"> Exothermic and endothermic reactions Energy profiles Using energy changes Bond energy calculations Cells, batteries and fuel cells 	How understanding is assessed Students will be assessed on their ability to: <ul style="list-style-type: none"> Recall the knowledge covered Explain chemical phenomena Interpret graphical and experimental data Plan and describe valid experiments Evaluate experimental procedures and results
	Review of the year	Checking understanding of key topics	Students complete review activities and standalone tasks. The topics covered are decided by the teacher, with class input, based on what it is felt needs review. Activities are a mixture of theoretical, exam questions, and practical tasks.	Skills <ul style="list-style-type: none"> Description Explanation Evaluation Comparison Planning and carrying out investigations Chemical calculations Assessment information Assessment point data based on: <ul style="list-style-type: none"> End of year exam This will be used to determine the grade used in the assessment point sent home. Student understanding will also be checked using: <ul style="list-style-type: none"> Required Practical 4 - Measuring energy changes This will not be used to determine the grade used in the assessment point sent home.