



Year 10 Chemistry Curriculum Overview

- ✓ Each lesson will start with a series of questions linked to both the previous lesson and topics studied previously.
- ✓ Formative assessment of skills linked to practical work will enable students to demonstrate their acquisition of new skills.
- ✓ Students are encouraged to consolidate learning at least once a week and seek tutor help if unsure on any topics.
- ✓ Within each unit, time will be allocated for consolidation and recall before assessment, this includes for mock exams.
- ✓ The following questions will be explored within the units
- ✓ Content in blue is only taught to the A pathway (students on the triple science route)

Half Term 1	
Date	Topic: Chemical changes
WC 30/08	Introduction to science (expectations, standards, health and safety, introduction of key skills and assessing prior knowledge).
WC 06/09	What are metal oxides? What is oxidation and reduction?
WC 13/09	How do metals react? What is the pH scale and how do we neutralise substances?
WC 20/09	What is the difference between strong and dilute acids? <b>Required practical: Titration</b>
WC 27/09	How do we make a salt using metal carbonate and acid? <b>Required practical: Making a soluble salt.</b>
WC 04/10	What is the reactivity series? What is a displacement reaction?
WC 11/09	What is electrolysis? <b>Required practical: Electrolysis</b>
Half Term 2	
Date	Topic: Energy changes & Quantitative chemistry
WC 01/11	How do we extract reactive metals from their ores?
WC 08/11	What happens when brine is electrolysed?
WC 15/11	How does energy change in reactions?
WC 22/11	What reaction would be best for a hand warmer?
WC 29/11	What do we use exothermic and endothermic reactions for?
WC 06/12	How do reactions occur? Which fuel releases the most energy?
WC 13/12	Where does the energy in a reaction come from?
WC 20/12	How do we make a battery?
Half Term 3	
Date	Topic: Quantitative chemistry
WC 03/01	Can we make cells that are better for the environment?
WC 10/01	How do we balance equations?
WC 17/01	How do I calculate relative formula mass and percentage by mass?
WC 24/01	What happens to mass when a gas is made?
WC 31/01	What are moles?
WC 07/02	How do we calculate percentage yield?
Half Term 4	
Date	Topic: Quantitative chemistry & The rate and extent of chemical change
WC 21/02	How do we use amounts of substances in equations? How can reactions be limited?
WC 28/02	What is atom economy? How do we calculate and use concentration? How do we calculate volumes of gases?
WC 07/03	How can the rate of a reaction be measured and how can it be calculated?
WC 14/03	How do the key factors affect the rate of a reaction? (temperature, concentration, surface area, catalyst)
WC 21/03	<b>Required practical: Investigating rates of reaction</b>
WC 28/03	How do we draw an effective table to represent data from an experiment?
Half Term 5	
Date	Topic: The rate and extent of chemical change & Chemistry of the atmosphere
WC 18/04	What is a reversible reaction?
WC 25/04	How does an energy change affect a reversible reaction? What is equilibrium?
WC 02/05	How does changing a condition affect the position of equilibrium?
WC 09/05	How has the atmosphere evolved? How are pollutants produced?
WC 16/05	How do pollutants cause problems for humans?
WC 23/05	What is the greenhouse effect and how is it caused?
Half Term 6	
Date	Topic: Chemistry of the atmosphere & Chemical analysis
WC 06/06	How are we making the greenhouse effect worse and how will it affect us?
WC 13/06	What is a carbon footprint and why is it important?
WC 20/06	What is a pure substance and what is a formulation?
WC 27/06	How can we separate mixtures using chromatography? <b>Required practical: Chromatography.</b>
WC 04/07	How can we write a method to describe how to carry out an experiment?
WC 11/07	How do we test for gases? How do we conduct a flame test? How do we test for metal hydroxides?
WC 18/07	How do we test for metal carbonates, halides and sulphates? <b>Required practical: Identifying unknown ions.</b> What are instrumental methods?