Chemistry Curriculum Overview

Year	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6
7	**Topic**: Matter **Resources**: PP, Practical Activities, Handouts, KS3 Book 1 **Focus**: An introduction to the states of matter, changes of state and the particle theory in relation to chemistry. **Outcome**: Practical Assessment **Duration**: 9 lessons	**Topic**: Separation **Resources**: PP, Practical Activities, Handouts, KS3 Book 1 **Focus**: Learning about scientific equipment and procedures used to separate substances. **Outcome**: End of Term Assessment **Duration**: 7 lessons	**Topic**: Acids/ Alkalis **Resources**: PP, Practical Activities, Handouts, KS3 Book 1 **Focus**: Using experimental techniques to learn about the reactions and use of acids and alkalis. **Outcome**: Practical Assessment **Duration**: 7 lessons	**Topic**: Metals/ Non metals **Resources**: PP, Practical Activities, Handouts, KS3 Book 1 **Focus**: Discovering the properties of metals and non-metals and learning how to recognise reactivity through observation. **Outcome**: Practical Assessment **Duration**: 7 lessons	**Topic**: Climate and Resources **Resources**: PP, Practical Activities, Handouts, KS3 Book 2 Focus: The effect of humans on planet Earth's atmosphere and the impact it could have on future generations. **Outcome**: Structure strip Assessment **Duration**: 7 lessons	**Topic**: Earth **Resources**: PP, Practical Activities, Handouts, KS3 Book 1 **Focus**: Finding out about the structure of planet Earth and the varying types of rocks that exist beneath our feet. **Outcome**: End of Term Assessment **Duration**: 6 lessons
8	**Topic**: Periodic Table **Resources**: PP, Practical Activities, Handouts, KS3 Book 2 **Focus**: Discovering the hidden secrets of the periodic table, whilst learning about the alkali metals and halogens. **Outcome**: Practical Assessment **Duration**: 4 lessons	**Topic**: Types of reactions **Resources**: PP, Practical Activities, Handouts, KS3 Book 2 **Focus**: How the heating and combustion of substances creates an irreversible, chemical change and how to represent these reactions in equations. **Outcome**: Practical Assessment **Duration**: 4 lessons	See Physics/Biology Overview	**Topic**: Rates Investigation **Resources**: PP, Practical Activities, Handouts, KS3 Book 2 **Focus**: Planning, carrying out, analysing and evaluating a series of practicals around rates of reactions. **Outcome**: Practical Assessment **Duration**: 5 lessons	**Topic**: Chemical Energy **Resources**: PP, Practical Activities, Handouts, KS3 Book 2 **Focus**: Finding out how energy is transferred during a chemical reaction. Relating these transfers to real-life scenarios. **Outcome**: End of Term Assessment **Duration**: 3 lessons	See Physics/Biology Overview

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9	See Physic Overview	See Physics Overview	**Topic**: Process and Profit **Resources**: PowerPoints, Practical activities, Handouts **Focus**: Exploring how humans can control and manipulate chemical reactions to produce a desired, and hopefully profitable outcome. **Outcome**: Practical Assessment and End of Term Assessment **Duration**: 12 lessons	**Topic**: Material Science **Resources**: PowerPoints, Practical activities, Handouts **Focus**: Investigating the chemistry behind how different material have different properties and how us humans can use these properties to our advantage. **Outcome**: Practical Assessment and End of Term Assessment **Duration**: 12 lessons	See Biology Overview	See Biology Overview
9 ELC	See Biology Overview	**Topic**: Elements, compounds & mixtures **Resources**: PowerPoints, Practical activities, Handouts, Chemistry Book **Focus**: Deepening understanding of elements, compounds and mixtures from particle theory to different materials and uses. And linking to the bonds formed in chemical compounds and relating to the properties of compounds formed. **Outcome**: Practical assessment on melting points of substances and Topic test. **Duration**: 13 lessons	See Physics Overview	See Biology Overview	**Topic**: Chemistry in our world **Resources**: PowerPoints, Practical activities, Handouts, Chemistry Book **Focus**: Looking at reactions in the real world and the effects of temperature, concentration and surface area on rates of reactions. Studying the Earth's atmosphere, and human influences on the atmosphere. **Outcome**: Practical on safe drinking water and Topic test. **Duration**: 14 lessons	See Physics Overview

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10	**Topic**: Atomic Structure Review **Resources**: PowerPoints, Practical activities, Handouts, Chemistry Book. **Focus**: To develop knowledge of atoms, elements and mixtures linking to KS3 topics and deepen understanding of the periodic table and atomic structure. **Outcome**: End of Term Assessment. **Duration**: 9 lessons	**Topic**: Properties and Bonding Review **Resources**: PowerPoints, Practical activities, Handouts, Chemistry Book. **Focus**: Strengthen knowledge of compounds and deepening understanding of types of bonds formed between atoms, extending into how types of bonds affect the materials properties. **Outcome**: End of Term Assessment. **Duration**: 9-10 lessons (F/H/Sep)	**Topic**: Chemical Changes Resources: PowerPoints, Practical activities, Handouts, Chemistry Book. **Focus**: To understand and deepen knowledge into the chemical changes in reactions. Understand the processes of oxidation and reduction by practising electrolysis. Utilising the pH scale to explain neutralisation reactions. **Outcome**: RA 11 Making Salts, RA 12 Titrations (Separate science only), RA 13 Electrolysis and End of Term Assessment. **Duration**: 17 - 19 lessons (F/H/Sep)	**Topic**: Quantitative Chemistry **Resources**: PowerPoints, Practical activities, Handouts, Chemistry Book. **Focus**: Using mathematical techniques to calculate chemical quantities for use in experimental work. **Outcome**: End of Term Assessment. **Duration**: 8 - 10 lessons (F/H/Sep)	See Biology/Physics Overviews	See Physics Overview
11	See Biology Overview	**Topic**: Chemistry of the Atmosphere **Resources**: PowerPoints, Practical activities, Handouts, Chemistry Book **Focus**: Investigating the history of our atmosphere and how it has evolved over the life span of the earth and what has caused this. **Outcome**: End of Term Assessment **Duration**: 6 lessons (F/H/Sep)	**Topic**: Using Resources Resources: PowerPoints, Practical activities, Handouts, Chemistry Book **Focus**: Discovering the value of materials, both naturally formed and produced by man. To appreciate why the handling of materials needs to be more carefully considered in the future, for waste management purposes. **Outcome**: End of Term Assessment, RA 18 Water purification and RA 17 Identifying Ions (Separate science only) **Duration**: 10 lessons (F/H/Sep)	**Topic**: Organic Chemistry **Resources**: PowerPoints, Practical activities, Handouts, Chemistry Book **Focus**: An introduction to organic chemistry. To find out how hydrocarbon chemicals are manipulated to form useful materials used in everyday life. **Outcome**: End of Term Assessment **Duration**: 9 lessons (F/H/Sep)	**Topic**: Rates of Reactions **Resources**: PowerPoints, Practical activities, Handouts, Chemistry Book **Focus**: An introduction to how rates of reactions are controlled and how humans can manipulate reactions to receive the wanted outcome. **Outcome**: End of Term Assessment **Duration**: 8 lessons (F/H/Sep)	**Topic**: Chemical Analysis **Resources**: PowerPoints, Practical activities, Handouts, Chemistry Book **Focus**: To learn about the chemical tests and procedures used by chemists, in laboratories, can identify elements and quantities. **Outcome**: Topic Test and RA 16 Chromatography. **Duration**: 8 lessons (F/H/Sep