

Year:11 Subject: Chemistry (Separate)

IMPLEMENTATION

<p>INTENT (including key concepts and skills)</p>	<p>Year:11 Subject: Chemistry (Separate)</p> <p>IMPLEMENTATION</p>					
	<p>Half Term 1 Context: C5 Part 1 Crude Oil and Fuels and Organic Reactions</p> <p>Key Vocabulary: Crude oil, finite, mixture, hydrocarbon, fractional distillation, homologous series, alkane, alkene, saturated, unsaturated, general formula, boiling point, flammability, volatility, viscosity, complete combustion, incomplete combustion, cracking, thermal decomposition, combustion, bromine water, addition reaction, alcohol, oxidation, carboxylic acid, ester, displayed formula</p> <p>Prior Learning: Y7 R1 Combustion Y8 P4 Compounds and Mixtures C2 Covalent Bonding C3 Weak acids</p> <p>Cultural Capital: Importance of crude oil and society's reliance on a finite resource. Use of cracking to match supply and demand for hydrocarbons. Everyday uses of alcohols, carboxylic acids and esters.</p>	<p>Half Term 2 Context: C5 Part 2 Polymers</p> <p>Key Vocabulary: Polymer, monomer, addition polymerisation, condensation polymer, polyester, amino acid, polypeptide, protein, DNA (deoxyribonucleic acid), nucleotide.</p> <p>Prior Learning: C5 Part 1 (structures and functional groups of the alkenes, alcohols, carboxylic acids and esters)</p> <p>Cultural Capital: What are plastics made of? There are many naturally occurring polymers such as starch, cellulose and proteins. How your DNA is formed in a condensation polymerisation reaction.</p>	<p>Half Term 3 Context: C5 Part 3 Chemical Analysis</p> <p>Key Vocabulary: Pure, impure, formulation, analysis, database, melting point, boiling point, chromatography, chromatogram, Rf value (retention factor), hydrogen, oxygen, carbon dioxide, limewater, chlorine, litmus paper, cation, precipitate, halide, instrumental methods, flame emission spectroscopy, line spectrum</p> <p>Prior Learning: Y7 R1 An introduction to reactions (gas tests) Y7 P2 Solutions (chromatography) Y9 R4 Reactions of metals (gas tests)</p> <p>Cultural Capital: Formulations in everyday use. The importance of chemical analysis i.e. safety of food additives and urine testing for banned substances in sport.</p>	<p>Half Term 4 Context: C6 Earth's Resources and Atmosphere and Using Our Resources</p> <p>Key Vocabulary: Atmosphere, greenhouse gases, climate change, pollutants, finite, renewable, potable water, extracting metals, life cycle assessments, reduce, reuse, recycle, rusting, galvanise, sacrificial protection, alloys, thermosetting polymers, thermosoftening polymers, cross-linking, glass, ceramics, composites, ammonia, the Haber process, NPK fertilisers</p> <p>Prior Learning: Y8 R3 Reactions in our environment Y8 R4 Reactivity Y9 P5 Rocks and Earth's resources C3 Extraction of metals</p> <p>Cultural Capital: How the Earth's atmosphere evolved and how humans are affecting it now. What can be done to limit the effects? How metals are found, extracted and conserved. How Scientists can change properties of alloys and polymers to suit a use. Use of the Haber process to produce ammonia and make fertilisers that are vital to feed the Earth's growing population.</p>	<p>Half Term 5 Context: Revision of all content during all Science lessons until the final Physics exam takes place.</p> <p>Key Vocabulary: This will include lots of exam techniques being taught alongside exam style questions.</p>	<p>Half Term 6 Context: Revision of all content during all Science lessons until the final Physics exam takes place.</p> <p>Key Vocabulary: This will include lots of exam techniques being taught alongside exam style questions.</p>

Applying knowledge and understanding to explain observations	X	X	X	X	X	X
Use different types of scientific enquiry to answer scientific questions	X	X	X	X	X	X
Use technical terminology with confidence accuracy and precisely	X	X	X	X	X	X
Apply mathematical knowledge to scientific understanding	X	X	X	X	X	X
Aware of some of the social and economic implications of science	X	X	X	X	X	X
IMPACT	Assessment: At end of C5	Assessment: GCSE Pre Public Exam on Paper 1 content	Assessment: C5 End of Topic Assessment	Assessment: C6 End of Topic Assessment GCSE Pre Public Exam on Paper 2 content	Assessment: Live GCSE exams start	Assessment: Live GCSE exams

Cultural Capital is the body of knowledge a student needs so that they can flourish in the future and not be left behind.