

Science Overview - Chemistry

Year 8

	Term 1	Term 2	Term 3
Topic	<ul style="list-style-type: none"> · Atoms and elements · Physical and chemical change 	<ul style="list-style-type: none"> · Reactions of acids · Combustion 	<ul style="list-style-type: none"> · Metals and alloys · Reactions of metals
Key Concept	Materials and their properties	Chemical changes	Our Earth and it's Atmosphere
Learning Objectives	<ul style="list-style-type: none"> · Describe Dalton's atomic model. · State the meaning of a molecule. · Describe that the atoms are grouped into about 100 types, and that each type is given a symbol. · State that an element is a substance where all the atoms are of the same type. · Describe the periodic table. · Describe the general physical properties of metals and non-metallic elements. · State the difference between physical and chemical changes. · Use word equations to represent chemical reactions. 	<ul style="list-style-type: none"> · State that the reaction between an acid and an alkali is called neutralisation. · Describe how to tell if neutralisation has taken place using an indicator. · Write word equations for acid + alkali reactions. · State that combustion is a reaction with oxygen from the air. · State that reactions where oxygen is added are oxidation reactions. · State the hazard symbol for flammable. · Describe the fire triangle. · State that metal oxides are basic and non-metal oxides are acidic. 	<ul style="list-style-type: none"> · State that metals occur as elements or compounds in rocks called ores, and that these are finite. · Describe how to extract metals from their ores. · Explain how a metal's uses link to its properties. · Describe an alloy and its usefulness. · State that iron rusts when exposed to air and water. · Describe that some metals form metal oxides when heated in air. · State that some metals react with acids to release hydrogen gas. · Describe the test for hydrogen.
Scaffolding SEND	glossaries, targeted questions, knowledge organisers, recall quizzes	glossaries, targeted questions, knowledge organisers, recall quizzes	glossaries, targeted questions, knowledge organisers, recall quizzes
Key Vocabulary	atom, compound, element, brittle, malleable, metal, mixture, periodic table, molecule, non-metal, lattice, molecular formula, physical change, product, reactant, chemical reaction, endothermic, exothermic, word equation	acid, alkali, measuring cylinder, neutral, salt, corrosive, indicator, chemical change, litmus, neutralisation, pH paper, Universal Indicator, word equation, chemical reaction, product, combustion, flammable, reactant, oxidation, fire triangle, word equation	recycling, uncombined, ore, alloy, reactive, unreactive, reactivity, oxidation

Formative Assessment	Rewind grid	Rewind grid	Rewind grid
Summative Assessment	End of unit test	End of unit test	End of unit test
Careers	forensic scientist, lab technician	botanist, conservationist, dietician, equine dentist, forensic scientist, geoscientist, hydrotherapist, immunologist, lab technician, marine biologist, neuroscientist, paramedic, optician, urologist, volcanologist	aeronautical engineer, equine dentist, robotist, sports scientist,
Links	To build on atoms. To prepare for the subatomic particle structure of atoms.	To build on acids and alkalis. In addition, physical and chemical properties. To prepare for salt preparation methods. In addition, combustion and fuels.	To build on the general properties of metals and their everyday use. To prepare for reactivity of metals and metal extraction techniques.