Subject:

Chemistry

HECKMONDWIKE GRAMMAR SCHOOL

KS4 Year 9 Curriculum Overview

Autumn Term

Topics being taught		What you will be assessed on	How you can support at home
C1 Atomic structure and the periodic table- States of matter, atoms and ions Formulae and balancing equations The periodic table and its history Groups 1,7 and 0 and the transition metals **C8 Chemical Analysis-** Pure substances and formulations. Methods of chemical analysis including chemical tests for positive and negative ions and different gases. Instrumental methods of analysis.	Term 1	Describing structures of atoms and ions in terms of sub-atomic particles Writing simple formulae and balancing equations. Reactivity of the elements in groups 1,7, 0 and transition metals	Be familiar with the specfication and the units covered! Bitesize revision on atomic structure Videos on the whole of unit 1 to review the key ideas Self directed Educake quizzes on C1 Atomic structure
	Term 2	Being able to describe how to test for positive ions using flame tests and sodium hydroxide solution. Being able to describe how to test for halide, carbonate and sulfate ions.	Learn the tests for positive ions – flame tests and metal hydroxide precipitates Learn the tests for negative ions – halide ions, sulphate and carbonate ions

CHRISTMAS HOLIDAYS - CHRISTMAS HOLIDAYS - CHRISTMAS HOLIDAYS - CHRISTMAS HOLIDAYS

Spring Term

Topics being taught		What you will be assessed on	How you can support at home
C4 Chemical changes - Reactions of acids with bases Strength of acids and bases Reactivity of metals and displacement reactions. Oxidation and reduction **C6 Rate and extent of chemical change-** Measuring rates of chemical reactions. Collision theory and explaining the effect of conditions on the reaction rate.	Term 3	Equations for reactions between acids and metal oxides, carbonates and hydroxides.	Neutralisation revision Free science lessons videos on this topic
	Term 4	Being able to explain changes in the speed of reactions using collision theory. Calculating rates from gradients.	Review collision theory and explain how temperature, pressure etc change the rate Review the idea of gradients and how the rate can be calculated from a graph of product formed vs time

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Summer Term

Topics being taught		What you will be assessed on	How you can support at home
C9 Chemistry of the Atmosphere The development of the Earth's atmosphere Pollution and its affects on the environment, including global warming and other pollutants from combustion.	Term 5	Theories about how our atmosphere has developed including changes to the levels of oxygen and carbon dioxide.The greenhouse effect and the impact of human activity on the environment and climate change. Common pollutants and their sources	Review how the Earth's atmosphere changed…. Know the different pollutants in our atmosphere
	Term 6	The greenhouse effect and the impact of human activity on the environment and climate change. Common pollutants and their sources	Be able to describe how greenhouse gasses cause global warming Encourage regular revision using educake of all the units covered this year for Y9 Final examination