

Subject:

Chemistry



HECKMONDWIKE
GRAMMAR SCHOOL

KS5 - Year 12 Curriculum Overview

| | Topics being taught | What you will be assessed on | How you can support at home |
|-------------|--|--|---|
| Autumn Term | 3.1 Physical Chemistry- 3.1.1 Atomic Structure 3.1.2 Amount of substance 3.1.3 Bonding | Term 1 How a mass spectrometer works and interpreting spectra. Electronic configuration of atoms and ions. Basic calculations including empirical and molecular formulae | Be familiar with the specification – on the AQA website |
| | 3.2 Inorganic Chemistry 3.2.1 Periodicity | Term 2 Properties of materials, shapes of molecules and intermolecular forces. More detailed calculations including titration calculations and use of the ideal gas equation. | Time of flight is a tricky topic – useful review notes here . |
| | 3.3 Organic Chemistry 3.3.1 Introduction to organic chemistry | | Some great revision notes on structures and bonding . |
| | | | Free science lessons has some great videos on quantitative chemistry |

CHRISTMAS HOLIDAYS - CHRISTMAS HOLIDAYS - CHRISTMAS HOLIDAYS - CHRISTMAS HOLIDAYS

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|-------------|--|---|---|
| Spring Term | 3.1 Physical Chemistry- 3.1.4 Energetics 3.1.5 Kinetics 3.1.6 Chemical equilibria and Kc | Term 3 Calorimetry calculations and use of Hess's law including enthalpies of formation and combustion. Maxwell boltzmann distribution and collision theory to explain reaction rates. Reactions of alkanes and haloalkanes. | Calorimetry and enthalpy changes videos to help you with Hess's Law calculations. |
| | 3.3 Organic Chemistry 3.3.2 Alkanes 3.3.3 Halogenoalkanes 3.3.4 Alkenes | Term 4 Equilibria and Kc calculations. Addition reactions of alkenes an addition polymerisation. | A-Level revision notes has some overviews on kinetics |
| | | | Use Seneca to help you remember more! |
| | | | Free science lessons playlist on organic chemistry |

EASTER HOLIDAYS - EASTER HOLIDAYS - EASTER HOLIDAYS - EASTER HOLIDAYS - EASTER HOLIDAYS

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| Summer Term | 3.1 Physical Chemistry- 3.1.7 Redox Chemistry | Term 5 Reactions of alcohols and organic analysis including infra-red spectroscopy. Redox reactions and use of oxidation states | Snap revise has some revision videos – this one on oxidation numbers . |
| | 3.2 Inorganic Chemistry 3.2.2 Group 2 3.2.3 Group 7 | Term 6 Y12 Final on all AS sections of content from specification | Group 7 and Group 2 revision notes |
| | 3.3 Organic Chemistry 3.3.5 Alcohols 3.3.6 Organic Analysis 3.3.7 Optical Isomerism 3.3.8 Aldehydes and Ketones | | Learn your organic functional groups . |
| | | | Review how mass spectroscopy and infrared can be used to analyse organic molecules. |