



# Chemistry Combined Year 9

## KS3

Curriculum Details

Modules	Content	Homework	Parent / Carer Support
<b>C1</b> <b>Atomic Structure</b>	Structure of the atom History of the atom Chemical equations Separation techniques Isotopes and ions	The students are given a homework book, either higher tier or foundation tier based on their Kimberley School Target.	Help them revise using revision cards.
<b>C2</b> <b>The Periodic Table</b>	Development of the Periodic Table Reactions and trends in group 1 & group 7 elements Electronic structure of atoms and ions	The students will be allocated pages to complete in this book for homework, which correspond to the lessons taught in class. In addition, questions may be set covering the following areas: <ul style="list-style-type: none"><li>• Long answer questions.</li><li>• Practical write-ups.</li><li>• Revision &amp; flashcards.</li><li>• Key words.</li></ul>	Help them revise from the classwork books.  Ensure they complete homework on time. Encourage them to ask their teachers for help if they are stuck.
<b>C13</b> <b>Our Atmosphere</b>	History and composition of the atmosphere Development of the atmosphere Greenhouse effect Global warming Global climate change and greenhouse gases Atmospheric pollution		
<b>C14</b> <b>The Earth's Resources</b>	Finite & renewable resources How chemistry improves agriculture and industry Interpreting data Potable water Water treatment Extracting metals from ores Life cycle assessments Issues affecting recycling, reducing and reusing products		

Exam Board: AQA



# Chemistry

## Combined

### Year 10

## KS4

Curriculum Details

Modules	Content	Homework	Parent / Carer Support
<b>C3</b> <b>Structure and Bonding</b>	States of matter Ionic, covalent & metallic bonding Giant and simple structures Fullerenes and graphene Properties of giant and simple structures	The students are given a homework book, either higher tier or foundation tier based on their Kimberley School Target. The students will be allocated pages to complete in this book for homework, which correspond to the lessons taught in class. In addition, questions may be set covering the following areas: <ul style="list-style-type: none"><li>• Long answer questions.</li><li>• Practical write-ups.</li><li>• Revision &amp; flashcards.</li><li>• Key words.</li></ul>	Help them revise using revision cards.  Help them revise from the classwork books.
<b>C4</b>	Mole calculations using relative formula mass Isotopes Convert between moles, mass and formula mass Balancing equations Calculating concentrations of solutions		Ensure they complete homework on time. Encourage them to ask their teachers for help if they are stuck
<b>C5</b> <b>Chemical Changes</b>	Reactivity series of metals Reduction and oxidation Displacement reactions Extracting metals Acids reactions – making salts Strong and weak acids pH curves		
<b>C6</b> <b>Electrolysis</b>	Electrolysis uses Half equations Electrolysis of molten ionic compounds and aqueous solutions Extraction of aluminium Oxidation and reduction		
<b>C7</b> <b>Energy changes</b>	Exothermic and endothermic Calorimetry Activation energy, bond breaking and bond breaking		
<b>C8</b> <b>Rates and equilibrium</b>	Calculating the rate of reaction Collision theory Temperature, surface area, concentration, catalysts		



# Chemistry Combined Year 11

KS4  
Curriculum Details

Modules	Content	Homework	Parent / Carer Support
<b>C8 cont. Rates and equilibrium</b>	Reversible reactions and equilibria Dynamic equilibria and Le Chatelier's Principle	The students are given a homework book, either higher tier or foundation tier based on their Kimberley School Target. The students will be allocated pages to complete in this book for homework, which correspond to the lessons taught in class.	Help them revise using revision cards.
<b>C9 Crude oil and fuels</b>	Fractional distillation of crude oil Hydrocarbons and alkanes and their properties. Complete and incomplete combustion Cracking and alkenes	In addition, questions may be set covering the following areas: <ul style="list-style-type: none"><li>• Long answer questions</li><li>• Practical write-ups.</li><li>• Revision &amp; flashcards.</li><li>• Key words.</li></ul>	Help them revise from the classwork books.  Ensure they complete homework on time. Encourage them to ask their teachers for help if they are stuck
<b>C12 Chemical Analysis</b>	Formulations, mixtures, percentage compositions of components  Chromatography and Rf values Testing for gases		

#### Study Guides Available:

CGP Study and Question books (will last until the end of Y9) - Purchase via sQuid and collect from the science department.

Revision Cards - Purchase online through sQuid, and can be collected from Mr Murray in S9. 3 x £3 for combined science.

CGP workbook, exam practice question and answers books. These books cover the whole course (Y10 and Y11) - Purchase online (£14) through sQuid, and can be collected from Mr Murray in S9.

AQA Chemistry for GCSE Combined Science: Trilogy. Higher/Foundation Workbook provided by free the Science Department for use in class or at home.

BBC Bitesize Key Stage 3 - [www.bbc.co.uk/bitesize](http://www.bbc.co.uk/bitesize)

<http://www.expertguidance.co.uk>

#### Extra parental support

- Ensuring students complete homework on time.
- Encouraging them to seek help if they are struggling.
- Supporting students to revise for end of chapter tests.
- Helping students to review tests to see where to improve and set targets to ensure progress.