

## Year 10 Combined Chemistry Curriculum Overview

What is the Year 10 Chemistry curriculum aiming to achieve?		
What do we want our Year 10 Scientists to be like?	How are we building on prior learning?	How can parents/carers support their child's learning?
<ul style="list-style-type: none"> <li>Be excited and enthusiastic about the scientific world around us</li> <li>Be safe and competent practical scientists</li> <li>Be able to make links between observations and scientific theory</li> <li>Be good verbal and written communicators using key terms</li> <li>Have furthered their understanding of key concepts in Chemistry</li> </ul>	<ul style="list-style-type: none"> <li>We will make links to and build on the Chemistry topics from KS3 and from year 9 topics such as atomic structure and the periodic table</li> <li>We will build on our working scientifically skills in the areas of analysis, communication, enquiry and problem solving</li> </ul>	<ul style="list-style-type: none"> <li>Talk to the pupils about what they are learning about in lesson</li> <li>Be curious about the world around you and discuss with your child</li> <li>Support your child with homework tasks</li> <li>Help your child consolidate their school learning e.g. using BBC Bitesize or watching scientific documentaries</li> <li>Purchase CGP revision guide and encourage use of GCSE Pod</li> </ul>

How are we organising the Year 10 Chemistry curriculum?						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topics	Bonding, structure and properties of matter	Electrolysis	Quantitative Chemistry	Energy Changes	Using Resources	Analysis
Threshold Concepts	Explain physical and chemical properties based on bonding	Reactive metals can be extracted using electrolysis	No atoms are created or destroyed during a chemical reaction.	Chemical reactions involved the transfer of energy	Many of Earth's resources are finite how can we increase sustainability	Mixtures can be separated based on properties. Pure substances have fixed BP&MP
Skills	Use a variety of models to solve problems, make predictions and to develop scientific explanations	Use of appropriate apparatus and techniques for conducting and monitoring chemical reactions	Use scientific vocabulary, terminology and definitions Use SI units and interconvert units	Making and recording of appropriate observations during chemical reactions including changes in temperature	Translating data from one form to Another. consider any ethical issues which may arise	Making and recording of appropriate observations during chemical tests and separating techniques
Enrichment within the curriculum	All Personalised Learning Checklists have QR codes for each topics that will take them to the relevant GCSEpod video to support learning in lessons. Practical experiments will take place whenever necessary					
Cross curricular links	<ul style="list-style-type: none"> <li>Atomic structure in Bonding unit has a link to Physics unit 'Atomic Structure'</li> <li>Mathematics and Physics rearranging equations in quantitative</li> <li>Mathematics SI units and standard form</li> <li>KS3 links in chemical changes, reactions of metals and acids</li> <li>Geography – the Earth's resources</li> </ul>					
Extra-curricular opportunities	<p>There are online platforms where you can visit to get some extra help with Chemistry. GCSE Pod is brilliant and the QR codes for the relevant GCSEPODs are on your PLCs. BBC Bitesize and Seneca learning websites below are also very helpful. There are also the CGP revision guides we recommend that can help with homework tasks and revising for exams. These are available on Parent Pay and you can collect your guides if you bring a copy of your receipt to the Science workroom. If you want to check out some careers in Chemistry click on this link <a href="#">Chemistry job profiles   RSC Education</a></p> <p><u>Helpful websites</u></p> <p>1. <a href="#">BBC Bitesize</a> Chemistry : <a href="#">GCSE Chemistry (Single Science) - BBC Bitesize</a></p>					

	<p>Combined Chemistry Trilogy : <a href="#">Chemistry (Combined Science) - GCSE Combined Science Revision - AQA Trilogy - BBC Bitesize</a></p> <p>2. <u>Seneca learning</u></p> <p>Chemistry : <a href="#">Seneca - Learn 2x Faster (senecalearning.com)</a></p> <p>Combined Chemistry Trilogy</p> <p>Foundation : <a href="#">Seneca - Learn 2x Faster (senecalearning.com)</a></p> <p>Higher : <a href="#">Seneca - Learn 2x Faster (senecalearning.com)</a></p>
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<b>What are the intended outcomes of the Year 10 Chemistry curriculum?</b>						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Opportunities to show progress (Assessments)	End of topic test Bonding CTG	End of topic Test Electrolysis CTG	End of topic test Quantitative CTG	End of topic test Energy changes CTG	End of topic test Using resources CTG	End of topic test Analysis CTG End of year exams
Impact on personal development (SMSC)	Spiritual understanding – science is the study of nature and the curriculum aims to bring about the awe and wonder of the natural world. Moral – Earth’s resources knowing they are finite, what can we do as a society to improve sustainability? Social – working together in groups to investigate science practically and understand how science affects society.					
Preparation for the next stage of education	<i>All paper 1 topics for the GCSE are covered before year 11, and a few paper 2 topics, this allows the remaining topics to be taught in year 11 and there will be time to revisit in preparations for their GCSEs.</i>					