



Year 10 Combined Science TRILOGY (Chemistry -AQA)

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topics	C4a: Chemical changes Chemical reactions Reactivity of metals. Neutralisation. Soluble salts.	C4b: Chemical changes Electrolysis Extracting metals The process of electrolysis	C5. Energy changes Exo/endothermic reactions. Energy profile diagrams. Calculating bond energies.	C6a. The rate and extent of chemical change Rate of reaction. Factors affecting rate of reaction. Collision theory. Calculating rates of reaction.	C6b: The rate and extent of chemical change Reversible reactions and equilibrium Reversible reactions. Factors affecting equilibrium	C7: Organic chemistry Hydrocarbons. Alkanes and alkenes. Fractional distillation. Cracking.
Assessment	End of unit assessment relating to chemical reactions	End of unit assessment relating to electrolysis	End of unit assessment relating to energy changes	End of unit assessment relating to rates of reaction	End of unit assessment relating to reversible reactions and equilibrium	End of unit assessment relating to organic chemistry Paper 1 PPE

Building on Prior Learning	Pupils will have knowledge of the fundamental ideas of chemistry such as; atomic structure, bonding and quantitative chemistry. Working scientifically skills relating to methodology, variables, and apparatus and collecting data. Learning components at the start of lessons remind students of prior learning and point out links to previous topics
Links with other subjects	Maths – introduction of basic mathematical functions and skills necessary for quantitative chemistry and equations. English - reading, writing and communication. MFL support with the development of learning an additional language for scientific literacy. Physics- consolidate knowledge of atomic structure and ions. Biology - consolidate knowledge of DNA and amino acid structures. Biology and Physics - consolidate working scientific skills and scientific literacy.
Extracurricular opportunities	Option to attend the GCSE Science Live lectures. Developing STEM ambassador visits relating to science careers and applications of science.
A successful learner in this subject will demonstrate	Demonstrate critical thinking relating to the topics taught which can be demonstrated through recall and extended written work. Resilience in handling more complex processes and concepts. They will have the ability to take care of their emerging learning needs. Secure prior knowledge and links to new information. Greater scientific literacy.
Impact on personal development	Science will help students to become logical thinkers and problem solvers with a better understanding of the world around them. Demonstrating resilience and the ability to consider moral and ethical implications of scientific developments.



Ways to support student learning in this subject

- Encourage the completion of homework
- Encourage discussions of science issues that arise in the news
- Discuss science lessons and their progress
- Encourage a positive attitude towards science
- Periodic Table and personalised learning checklists (PLC)
- Encourage students to use Seneca Learning (<https://www.senecalearning.com/>) to consolidate knowledge and build on recall skills.
- CGP science revision guides and workbooks are available to purchase throughout the year on parent pay.
- Practice units, unit conversions, standard form and rearranging equations and encourage the use of maths skills