

Year 11 Science (Trilogy)

GCSE Science (Trilogy) follows the AQA specification which leads to two GCSE grades. It builds on biology, chemistry and physics work studied at KS3 whilst also encountering new content that prepares students for A' level sciences such as transport of chemicals, electrolysis, radioactivity.

There are 24 units (Biology B1-B7, chemistry C1-10 and physics P1-7) which are taught by two teachers. These are examined in six papers at the end of Y11 which can be sat at higher or foundation tier;

1. Biology 1 B1-B4
2. Chemistry 1 C1-C5
3. Physics 1 P1-P4
4. Biology 2 B5-B7
5. Chemistry 2 C6-C10
6. Physics 2 P5-P7

There is no coursework but there are “Required Practicals” which students will be asked about in exams - these are integrated into lessons throughout the course along with other practical work and the development of broader scientific skills

At the end of each topic students complete a topic test made up of past exam questions. This is then marked and graded and used to identify strengths and areas in need of attention. Note that many topics overlap and so end-of-topic assessments may contain elements from different units which also acts as retrieval practice.

Each lesson begins with a Brain in Gear retrieval task and a Key Learning Question. There will be teacher input of some kind followed by tasks which use prior learning to develop greater knowledge understanding. Once understanding is established then students develop their ability to apply this to unfamiliar situations.

Note: B7, C9 and P1 are taught at the end of year 9

Year 11 Curriculum	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2	
Topic(s)	<p>B5 - Homeostasis and Response Reflex responses, Hormonal control including control of blood glucose and reproduction, Puberty, The menstrual cycle, Controlling fertility</p> <p>C6 - Rate and Extent of Chemical change Rates of reaction Measuring rate Finding rate from graphs Reversible reactions Le Chatelier's Principle</p>	<p>Y11 mock exams Biology (B1-B4), Chemistry (C1-C5) Physics (P1-P4) - Revision - Feedback - Support</p> <p>C7 - Organic Chemistry Hydrocarbons Fractional distillation Cracking Alkanes and alkenes</p> <p>P5a: Forces Forces and their interactions Work done Forces and elasticity</p>	<p>Y11 mock exams Chemistry (C6-C10) - Revision - Feedback - Support</p> <p>P5b: Forces in Motion Describing motion along a line Motion graphs Newton's laws Braking Momentum</p> <p>P6: Waves Waves in air, fluids and solids Electromagnetic waves</p> <p>P7: Magnetism and electromagnetism Magnetic forces and fields Electromagnetism The motor effect</p>	<p>Y11 mock exams Physics (P5-P7) Biology (B5-B7) - Revision - Feedback - Support</p> <p>B6 -Inheritance, Variation and Evolution Reproduction, Meiosis, Genetic inheritance, Variation, Evolution, Selective breeding, Genetic engineering, Extinction, Antibiotic resistance, Classification</p> <p>C8 - Chemical Analysis Purity and formulations Chromatography</p> <p>C10 - Using Resources Using Earth's resources Potable water Life cycle assessments</p>	Revision and beginning of formal GCSE examinations		

Assessment

Tests half way through each topic usually set as homework

Formal end of unit test

Mock exams in November (paper 1 exams in biology, chemistry and physics) and January-March (paper 2 exams spread across a number of weeks)

Independent Work

Regular homework covering a variety of skills:

- GOALs (“Go Off And Learn”) for factual recall
- Application
- Practice exam questions to gain experience of recall, application, unfamiliar contexts and extended response
- Research
- Write ups of experimental work, especially work related to the Required Practicals
- Increasing use of Tassomai as the year progresses