

## Core GCSE: Combined Science: Trilogy

Contact: Mrs E. Boxall – Head of Science

### Course Structure & Overview

Exam Board: AQA

Syllabus: 8464

Everyday life has many questions that science can help us answer. This course is designed to develop curiosity about the natural world and give an insight into how science works. The combined science course covers the main 3 science disciplines, Chemistry, Biology and Physics and will provide you with the deep understanding of the science required to allow you to make informed decisions on scientific issues.

Practical work is at the heart of science, you will master the practical skills required through regularly carrying out experimental work and learning important investigative techniques, these skills will then be assessed in the final written exams.

### Course Content

There are six papers: two biology, two chemistry and two physics. Each of the papers will assess knowledge and understanding from distinct topic areas. Each exam is 1 hour and 15 minutes

**Paper 1 Biology:** Topics 1 -4: Cell Biology: Infection and Response; Bioenergetics

**Paper 2 Biology:** Topics 5 -7: Homeostasis and Response: Inheritance, variation and evolution and Ecology

**Paper 1 – Chemistry:** Topics 8 – 12: Atomic structure and the periodic table; Bonding, structure, and the properties of matter; Quantitative chemistry; Chemical changes and Energy changes

**Paper 2 – Chemistry:** Topics 13 -17: Chemistry topics 13–17: The rate and extent of chemical change; Organic chemistry; Chemical analysis; Chemistry of the atmosphere and using resources

**Paper 1 – Physics:** Topics 18-21: Energy, Electricity, Particle model of matter, Atomic structure

**Paper 2 – Physics:** Topics 22 – 24: Forces, Waves, Magnetism and electromagnetism

Papers involve a selection of multiple choice, structured, closed short answer and open response questions. Each paper is worth 16.7% of the GCSE and can be sat at either Foundation (Grade 1-3) or Higher Level (Grade 4 -9).

### Skills Developed

Science GCSE will:

- Give you a deep understanding of science to allow you to make decisions on scientific issues
- Allow you to design and carry out experiments
- Enable you to analyse information and draw conclusions
- Encourage you to evaluate information

### Progression Routes

Students who enjoyed studying GCSE Science have gone on to study A Level Chemistry, Physics or Biology. You can also study a Science related course post-16 such as engineering. If post-16 is not for you, employers will value the GCSE qualification as it encourages both academic and practical skills.

### Future Careers

GCSE science gives you the opportunity to seek future careers in the NHS, engineering, marine biology, chemist and pharmacology.