

## KS4 GCSE Combined Science Curriculum

### Course Specifications

**Exam board: AQA**

**Course type: Compulsory GCSE**

### Course Description

**Students are studying AQA Combined Science: Trilogy (2 GCSEs)**

During the Options process at the end of Year 9, students make a choice to study Combined Science: Trilogy (2 GCSEs), OR Biology, Chemistry, and Physics GCSE (3 GCSEs).

### What will I study?

#### Combined Science

BIOLOGY Paper 1	CHEMISTRY Paper 1	PHYSICS Paper 1
<p>Cell Biology</p> <p>Organisation</p> <p>Infection and response</p> <p>Bioenergetics</p>	<p>Atomic structure and the periodic table</p> <p>Bonding, structure and the properties of matter</p> <p>Quantitative chemistry</p> <p>Chemical changes</p> <p>Energy changes</p>	<p>Energy</p> <p>Electricity</p> <p>Particle model of matter</p> <p>Atomic structure</p>
BIOLOGY Paper 2	CHEMISTRY Paper 2	PHYSICS Paper 2
<p>Homeostasis and response</p> <p>Inheritance, variation and evolution</p> <p>Ecology</p>	<p>The rate and extent of chemical change</p> <p>Organic chemistry</p> <p>Chemical analysis</p> <p>Chemistry of the atmosphere</p> <p>Using resources</p>	<p>Forces</p> <p>Waves</p> <p>Magnetism and electromagnetism</p>

### Skills & Abilities

GCSE Combined award science will enable students to:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science, through different types of scientific enquiries that help them to answer scientific questions about the world around them
- develop and learn to apply observational, practical, modelling, enquiry and problem-solving skills, both in the laboratory, in the field and in other learning environments
- develop their ability to evaluate claims based on science through critical analysis of the methodology, evidence and conclusions, both qualitatively and quantitatively.

We study Biology, Chemistry and Physics in ways that help students to develop curiosity about the natural world, insight into how science works, and build an appreciation of its relevance to their everyday lives. The scope and nature of our study is broad, coherent, practical and satisfying, thereby encouraging students to be inspired, motivated and challenged by the subject.

### Assessment

#### **Combined Science Exams:**

- There are 6 exams, 2 Biology, 2 Chemistry and 2 Physics which will all be sat at the end of Year 11. Each paper will last 1 hour and 15 minutes and are worth 16.7% of the grade each.
- Students who take combined science will study all three sciences and they will cover roughly two thirds of the content of the single GCSEs in biology, chemistry and physics.
- Students receive an award worth 2 GCSEs. It will consist of two equal or adjacent grades from 9 to 1 which can only be either the same (for example 9-9) or adjacent (for example 9-7) grades from 9 to 1. Therefore, students will not end up with grade combinations such as 5-3 or 7-4. **More information about all the 17 possible combinations for the combined science could be found [here](#).**

### Required Practical

**All external examinations count for 100% of the final mark for GCSE. There is no coursework or controlled assessment.**

On the Combined Science route, students carry out 21 required practical across all specialisms.

Practical skills gained will be assessed in terminal exams and will make up at least 15% of the marks coming from questions relating to practical work.

### Careers & Progression

**A Level options at ACS: Biology, Chemistry, Physics**

**Progression routes: University degrees, Apprenticeships.**

**Careers:** Medicine, Radiography, Nursing, Dentist, Physiotherapy. Astronomer, Technician, Aviation, Chemist, Teacher, Electrician, Food Tester, Food Scientist, Forensic Scientist, Nuclear Technician, Nuclear Power Operator, Occupational Health Specialist, Physicist, Physiotherapist, Pilot, Ship Captain, Sound Engineer, Doctor, Nurse, Pharmacist, Marine Biologist, Veterinarian, Veterinary Nurse, Optician, Chemical Engineer, Marine Biologist, an endless list!

### Guidance & Advice

**Further reading:**

- Kerboodle.com – all students have login details for a free version of the textbook used in lessons. This also includes videos, support and extension activities.
  - BBC Bitesize – KS4 Science. Students can find animations, explanations and questions on this site – organised as Biology, Chemistry and Physics.
  - Collins Science KS4 Revision - Collins provide KS4 revision books based on the AQA KS4 science syllabus.
  - My GCSE science: Students can find online tutorials and exam questions on this site – organised as Biology, Chemistry, Physics and working scientifically.
  - CGP revision guide - CGP provides combined science revision guide based on the AQA KS4 science syllabus
  - Oxford Revise: AQA GCSE Combined Science Revision and Exam Practice:
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