

SCIENCE

KS3 Curriculum

What does this course involve at Key Stage 3?

Science at Key Stage 3 involves developing students' key skills in science, known as enquiry processes, whilst learning about the **10 'big ideas'** in science. The aim of this course is to ensure students become fluent in the fundamentals of science and to ensure students can analyse data and ask questions about the world around them. This is achieved through the use of experiments that require students to deepen their knowledge of specific topics whilst enhancing their practical skills.

What do you need to be successful in this course?

To be successful students need to be open to and accepting of new and sometimes unfamiliar concepts. Students will enjoy the practical process of planning, developing, carrying out and then analysing and evaluating a range of scientific experiments.

These are the **10 'big ideas'** that students will study in Years 7-9 in addition to mastery of the enquiry processes:

1. Forces
2. Electromagnetism
3. Energy
4. Waves
5. Matter
6. Reactions
7. Earth
8. Organism
9. Ecosystems
10. Genes

KS4 Curriculum

Qualification name:

AQA GCSE Combined Science: Trilogy (8464)

AQA GCSE Biology (8461)

AQA GCSE Chemistry (8462)

AQA GCSE Physics (8463)

Course detail/overview of content:

In Year 10 students start their GCSE course and will follow either the GCSE Combined Science: Trilogy course (double science) or will study the separate sciences Biology, Chemistry and Physics (triple science).

Students continue to develop their practical skills through a series of required practical activities.

Biology content

- Cell Biology
- Organisation
- Infection and Response
- Bioenergetics
- Homeostasis and response
- Inheritance, variation and evolution
- Ecology

Chemistry content

- Atomic structure and the periodic table
- Bonding, structure and the properties of matter
- Quantitative chemistry
- Chemical changes
- Energy changes
- The rate and extent of chemical change
- Organic chemistry
- Chemical analysis
- Chemistry of the atmosphere
- Using resources

Physics content

- Energy
- Electricity
- Particle model of matter
- Atomic structure
- Forces
- Waves
- Magnetism and electromagnetism
- Space physics

Nature of assessment

At the end of the course students will have six exams, two papers in each of the science disciplines.

Papers are at either foundation or higher tier:

- Foundation tier is targeted at grades 1-5
- Higher tier is targeted at grades 5-9

