



SCIENCE

KEY STAGE 3

At Crofton Academy we give pupils the opportunity to develop their interest in and enthusiasm for Science. All Science courses are based on the statutory requirements of the National Curriculum. At **Key Stage 3** pupils will study the Exploring Science course, based on the QCA scheme of work.

In Year 7 the emphasis is on the development of practical and process skills. As the pupils progress through Year 8 more emphasis is placed on knowledge and comprehension.

Throughout the course pupils are assessed regularly on their skills of planning, implementing (doing) and concluding (judging) practical investigations, developing a critical approach to scientific enquiry and methods.

From Year 9 pupils will follow a three year combined science course, covering aspects of Biology, Chemistry and Physics. There is also an opportunity for some pupils to study separate sciences, leading to three GCSE grades in Biology, Chemistry and Physics.

All courses rely heavily on 'How Science Works', where pupils are expected to examine evidence, observe experiments, design experiments, make measurements, use data appropriately and consider the ethical, social, economic and environmental issues in science.

YEAR 7

Biology

- Cells and organisation
- Health
- Interdependence
- Reproduction

Chemistry

- Acids and Alkalis
- Basic Chemical Reactions
- Building Blocks
- Particles

Physics

- Forces
- Electricity
- Magnetism
- Space

Assessment

At the end of each topic is an exam booklet approximately 50 minutes long and a written task based on scientific skills and understanding.



YEAR 8

Biology

- Digestion
- Gas Exchange and Respiration
- Genetics and Evolution
- Photosynthesis

Chemistry

- Complex Chemical Reactions
- Materials
- Periodic Table
- Rocks, Atmosphere and Earth's Resources

Physics

- Energy
- Forces, Pressure and Moments
- Light
- Waves

Assessment

At the end of each topic is an exam booklet approximately 50 minutes long and a written task based on scientific skills and understanding.

KEY STAGE 4

YEAR 9, 10 & 11

Pupils study AQA Combined Science: Trilogy

Biology

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

Chemistry

- Atomic structure
- Bonding and structure
- Quantitative Chemistry
- Chemical changes
- Energy Changes
- The rate and extent of chemical changes
- Organic Chemistry
- Chemical analysis
- Chemistry of the atmosphere
- Using resources



Physics

- Energy
- Electricity
- Particle model
- Atomic Structure
- Forces
- Waves
- Magnetism and Electromagnetism

Assessment

- All exams are sat at the end of Year 11
- There are 6 papers: 2 Biology, 2 Chemistry and 2 Physics
- Each exam is 1 hour 15 minutes
- Foundation and Higher tier
- 70 marks
- Each exam is worth 16.7% of the GCSE

TRIPLE SCIENCE

Year 10

Pupils study AQA Biology, Physics & Chemistry

Biology

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

Chemistry

- Atomic structure
- Bonding and structure
- Quantitative Chemistry
- Chemical changes
- Energy changes
- The rate and extent of chemical changes
- Organic Chemistry
- Chemical analysis
- Chemistry of the atmosphere
- Using resources

Physics

- Energy
- Electricity
- Particle model
- Atomic Structure
- Forces
- Waves



- Magnetism and electromagnetism

Assessment - All exams are sat at the end of Year 11

- There are 6 papers: 2 biology, 2 chemistry and 2 physics
- Each exam is 1 hour 45 minutes
- Foundation and Higher tier
- 100 marks
- Each exam is worth 50% of the GCSE