

Curriculum Intent

We currently follow AQA at GCSE and OCR at A level. The courses are broad, balanced and include a diverse range of practical lessons. At each Key Stage topics will include both plant and animal biology. The idea of both KS4 and 5 is to have a comprehensive understanding of the scientific method, how science works and how this is applied to the natural world.

Key Stage 4

Year 10 begins with the basics of Biology; Cell structure, Organisation and Methods of Transport. This journey started in Year 7 where these ideas were introduced at their most basic level. We then apply these concepts and ideas to more complex whole organism examples. In addition all scientists must be equipped with skills that allow successful analysis of data and critical thinking to develop conclusions and hypotheses.

All students take part in practical lessons to develop motor skills in handling equipment key to scientific investigation. There is no coursework in Biology at KS4, however students will complete a series of experiments to target core practical skills.

Key Stage 5

Students choose A Level Biology because they have a keen interest in Biology as an academic subject and/or they wish to pursue a career in Biology related disciplines. Building on the skills and content developed in KS4 we delve much deeper into each topic but again cover the fundamentals key to plants and animals first. This again allows the application of these concepts to the whole organism. Mathematical, practical, analytical and evaluative skills become of greater importance and greater emphasis is placed on these in each topic.

Although, there is no coursework at A Level, students complete a series of practicals which fall into one of 12 groups. The aim of these is to further develop experimental skills, such as using a microscope, dissection and data collection in the field.

Curriculum Implementation

Key Stage 3

Year 9

- Adaptation
- Biodiversity

Key Stage 4: GCSE (AQA)

Year 10

- Cell structure and transport
- Cell division
- Tissues and the digestive system
- Organisation and transport in animals and plants
- Non-communicable diseases
- Communicable diseases
- Preventing and treating disease
- Photosynthesis

Year 11

- Respiration
- The nervous system
- Hormonal coordination
- Homeostasis
- Reproduction
- Variation and evolution
- Genetics and evolution

Key Stage 5: A Level (OCR)

Year 12

- Biological molecules
- Nucleic acids
- Cell structure
- Biological membranes
- Cell division, diversity and organisation
- Enzymes
- Exchange surfaces
- Transport in animals
- Transport in plants
- Disease and the immune system
- Biodiversity
- Classification and evolution

Year 13

- Homeostasis and excretion
- Hormones
- Plant responses
- Nerves and coordination
- Genomes
- Cloning and biotechnology
- Photosynthesis
- Respiration
- Cellular control
- Inheritance
- Ecosystems
- Populations and sustainability