



A Level Biology Course Outline

Overview

Biology at A Level builds on the knowledge that students will have already gained at GCSE. Students will gain an awareness of the technological, ethical and economic aspects of biology. It is a subject that can provide great enjoyment and respect for all things living. There will be a structured and progressive approach to the essential principles, in contexts that are interesting and stimulating. There will be number of practical activities which will help develop practical skills alongside the understanding of concepts and principles. To reinforce what is learnt in class it is expected that students would put in a considerable amount of independent study time to develop their appreciation and enjoyment of this subject and regular assignments will be set. A course textbook will be provided along with the opportunities to practise past papers in tutorial sessions.

Course Structure & Content

Year 12

Module 1: Development of Practical Skills in Biology: This covers the skills of planning, implementing, analysing and evaluating practical investigations

Module 2: Foundations in Biology: This covers cell structure, biological molecules, enzymes, nucleotides and nucleic acids, biological membranes, cell division, cell diversity and cellular organisation

Module 3: Exchange and Transport: This covers exchange surfaces, transport in animals and transport in plants

Module 4: Biodiversity, Evolution and Disease: This covers communicable diseases, disease prevention, immune system, biodiversity, classification and evolution

Year 13

Module 5: Communications, Homeostasis and Energy: This covers communication, homeostasis, excretion, photosynthesis, respiration. plant and animal responses, neurones and hormones

Module 6: Genetics, Evolution and Ecosystems: This covers cellular control, patterns of inheritance, biotechnology, cloning, manipulation of genomes, ecosystems, populations and sustainability.

Assessment

A level Biology A

Paper 1 – Biological Processes – 37% of total A Level. Candidates answer all questions in a 135 minute written paper comprising multiple choice questions, extended response and structured questions covering content from Modules 1, 2, 3 and 5.

Paper 2 – Biological Diversity – 37% of total A Level. Candidates answer all questions in a 135 minute written paper comprising multiple choice questions, extended response and structured questions covering content from Modules 1, 2, 4 and 6.

Paper 3 – Unified Biology – 26% of total A Level. Candidates answer all questions in a 90 minute written paper comprising extended response and structured questions covering content from Modules 1 to 6.

Practical Endorsement for Biology – Candidates complete a minimum of 12 practical activities and investigations covering key skills and topic areas over the two year course. Evidence of candidates meeting a series of competencies in practical skills is assessed by class teachers and moderated externally. Performance in this assessment is reported separately to the A Level grade as a pass/fail certificated endorsement. It does not count towards the final A Level grade.

Entry qualifications

GCSE grade 6/6 in core and additional science or grade 6/6/5 (6 in biology) if the triple science route was followed at GCSE. Students applying for this course must also have a grade 6 in mathematics and should be prepared to complete high levels of independent study and must therefore show interest and motivation for the subject.

Career Prospects

Biological careers can be fascinating and rewarding. A Level biology prepares you to progress onto further or higher education, to follow courses in biology, biology-related fields, one of the other sciences or subjects or to enter employment where knowledge of biology would be useful. It is an exceptionally good foundation for careers in human biology, ecology, environmental biology, cell and molecular biology and in applied areas such as forestry, wildlife or biotechnology. Biology also is an excellent foundation for students planning to attend medical, dental, veterinary, chiropractic, physical therapy, physician's assistant or optometry schools.