



BIOLOGY

A-Level Course Information



Qualification: Advanced Level Biology

Exam Board: OCR

Subject Leader: Mrs R. James

Entry Requirements:

Minimum Entry Requirements:

5 x 5s

4 in English and Maths

Subject Specific Entry Requirements:

6 in GCSE Biology if doing single sciences

or 6,7 in GCSE Double Science

6 in GCSE Maths

Why study Biology?

Biology is the 'study of life.' It allows us to understand the workings of our own bodies and the world around us. Today, biological science is still at the forefront of ground-breaking and rapid developments that will shape the future of human kind. Do you want to be part of these? If so, Biology is the course for you.

What can I do with Biology after A-Level?

Many students following this course go on to study biologically-related degrees that lead to careers in medicine, dentistry, health care, veterinary medicine, forensic science, physiotherapy, environmental work, food science, biological research, sports science and pharmacy. Other students find the broad base of skills and knowledge gained from the course useful when pursuing degree courses or careers in other areas including business, marketing, journalism, and psychology.

Biology Extras

The Biology course involves a range of hands-on practical lab work studies. Due to our close proximity to the University of Cambridge and the local science parks and institutes students will be able to attend lectures and seminars either remotely or in person. We have developed links with a number of these places including the Babraham Institute which offer virtual or actual opportunities for our students. Alongside this we undertake field work days when students can develop their practical investigation skills. We also offer support sessions for students when extra help is needed.

What will I study?

The Biology A-Level is made up 6 components:

Module 1 – Development of practical skills in biology

Planning
Implementing
Analysis
Evaluation

Module 2 – Foundations in biology

Cell structure
Biological molecules
Nucleotides and nucleic acids
Enzymes
Biological membranes
Cell division, cell diversity and cellular organisation

Module 3 – Exchange and transport

Exchange surfaces
Transport in animals
Transport in plants

Module 4 – Biodiversity, evolution and disease

Communicable diseases, disease prevention and the immune system
Biodiversity
Classification and evolution

Module 5 – Communication, homeostasis and energy

Communication and homeostasis
Excretion as an example of homeostatic control
Neuronal communication
Hormonal communication
Plant and animal responses
Photosynthesis
Respiration

Module 6 – Genetics, evolution and ecosystems

Cellular control
Pattern of inheritance
Manipulating genomes
Cloning and biotechnology
Ecosystems
Populations and sustainability.

Examined components:

Paper 1: Biological processes (37% of A-level)
Paper 2: Biological diversity (37% of A-level)
Paper 3: Unified Biology (26% of A-level)

The fourth component is the Practical Endorsement in biology non exam assessment. It rewards the development of practical competency in biology and is teacher assessed. Learners demonstrate competence in a range of skills and techniques. A minimum of 12 assessed practical activities are completed. At Comberton Sixth Form we pride ourselves on ensuring students get the opportunity to cover more than the minimum 12 tasks and have practical sessions at least once a week.