



A Level Biology

Key contacts: Mr Lyall (Head of Biology)
Exam Board: OCR

Overview of the course:

Have you ever wondered...

- Why your sister looks like you?
- How medicines work?
- What DNA is?
- Do clones exist?
- Who Darwin was?

... **Study A Level Biology to find the answers**

What will you study?

- Development of practical skills in Biology
- Cell structure
- Biological molecules
- Nucleotides and nucleic acids
- Enzymes
- Biological membranes
- Cell division, cell diversity and cellular organisation
- Exchange surfaces
- Transport in animals
- Transport in plants
- Communicable diseases, disease prevention and the immune system
- Biodiversity
- Classification and evolution
- Communication and homeostasis
- Excretion as an example of homeostatic control
- Neuronal communication
- Hormonal communication
- Plant and animal responses
- Photosynthesis
- Respiration
- Cellular control
- Patterns of inheritance
- Manipulating genomes
- Cloning and biotechnology
- Ecosystems
- Populations and sustainability

There are often opportunities for learning experiences that take place outside the College, e.g. Dartmoor Zoo, Peninsula Medical School, Plymouth, Ecology Field Studies.

Emphasis throughout the course is on increasing knowledge, developing competence and confidence in practical skills and developing problem solving. You will learn how society makes decisions about scientific issues and how science contributes to the success of the economy and society.

What do I need to take this course?

Five GCSE grades 9-6 including Biology or Combined Science and Maths along with an interest in living things and how they work and a willingness to work hard. There is a substantial mathematical content in A Level Biology so a good grade in GCSE Maths is essential. Biology will offer bridging materials and support to Combined Science students to prepare them for the higher standard of study required.

Is it difficult?

Biology is not a soft option; it is an interesting and challenging learning experience, linking key biological ideas and understanding how they relate to each other. The course will develop transferable skills including: investigative, problem solving, research, decision making, mathematical skills and analytical skills.

Assessment

Total of six hours assessment split over three examination papers (two x 2 hours 15 minutes and one x 1 hour 30 minutes) taken at the end of the two year course. A wide range of question types including: multiple choice, short answer and extended response questions.

Opportunity to demonstrate your knowledge of both theory and practical skills through the examinations. In order to achieve a Practical Endorsement, through a range of experiments, you will become competent in:

- Following procedures
- Applying an investigative approach when using instruments and equipment
- Working safely
- Making and recording observations
- Researching, referencing and reporting.

Possible career path?

A Level Biology is an excellent base for a university degree in healthcare, such as medicine, veterinary or dentistry, as well as the biological sciences, such as biochemistry, molecular biology or forensic science. Biology can also complement sports science, psychology, sociology and many more. A Level Biology can open up a range of career opportunities including: biological research, medical, environmental, forensics, sports and science communication. The transferable skills you will learn, such as problem solving, are also useful for many other areas, such as law.

Entry requirements

Five GCSEs at Grade 6 or above including Biology/Science and Mathematics.