



BIOLOGY

HEAD OF DEPARTMENT: MS SUSAN HAVIS
EXAMINATION BOARD: AQA

SPECIFICATION: 7402
QUALIFICATION: A-LEVEL BIOLOGY



The study of life itself; A-Level Biology explores the theories and principles involved in living systems, in all their intricacy.

A-Level Biology takes students beyond the detail at GCSE so, if you found yourself asking how or why does that happen a lot during the GCSE, then A-Level Biology is for you. Exciting new developments that are not covered lower down the school, like epigenetics also feature in the course.

Alongside an A-Level qualification, students are also given extensive opportunities to obtain the practical endorsement by carrying out both the required practicals and a range of additional ones. Students, therefore, develop as confident scientists who are well prepared for further study and work in this field.

Biology teachers at Truro School come from a range of different backgrounds, bringing to the department a wide variety of expertise and contacts. They also regularly include topical items in their lessons at appropriate points so students feel informed about topics in the news which affect coming generations.

Students are given extensive opportunity to develop as practical scientists, so routinely secure the practical endorsement and go on to the science-based courses with confidence in conducting practical work.

WHAT YOU WILL STUDY IN LOWER SIXTH

The Lower Sixth starts by exploring the structure of biological molecules including nucleic acids. You learn about the ultrastructure of cells, getting to explore the intricacies of the organelles, before moving on to study cellular transport and immunity. In the summer term you will learn about exchange of materials and how this is maximised by Fick's Law, a principle that is applicable to all surfaces where diffusion takes place. The exploration of how materials are transported, genetic coding, genetic diversity and biodiversity are also studied.

The content is covered through a range of interactive, engaging activities including practical tasks. The academic year ends with a field trip to Perran Sands to study succession as part of the practical work required to achieve the separate practical qualification. Practical and skills-based work is at the heart of our lessons. At each stage your skills in the practical and mathematical components of Biology will be developed and supported.

WHERE WILL AN A-LEVEL IN BIOLOGY TAKE YOU?

Biology is a desired A-Level for those students wishing to pursue a career in Medicine, Dentistry or Veterinary care, as well as being suited to those who are interested in becoming research scientists across multiple areas, such as Molecular Genetics, Food Technology, Pharmacology, Ecology and Sustainability.

Due to the nature of Biology requiring good numeracy, descriptive and evaluative skills, the subject skills you will learn are highly adaptable and can be applied to a wide range of professions in the working world.

TRIPS, VISITS AND FIELD WORK

Field trip to Perran Sands in the summer term of the Lower Sixth to study succession and to carry out practical project work.

EXTENSIONS AND OPPORTUNITIES

Stretch your knowledge further than the syllabus by taking part in the national Biology Olympiad and Intermediate Biology Olympiad; annual competitions for the most gifted Biologists.

Sign up to receive the quarterly Biological Sciences Review magazine to read about the latest research in biological fields, tips from lead examiners and possible career options.

Talk by, and links with, Professor Laurence Hurst, Truro School alumni, now president of the Genetics Society.

For those want to study medicine, dentistry or veterinary medicine, a comprehensive program throughout the sixth form equips students for each stage of the application process.

TOP-LEVEL FACILITIES

Each Biology laboratory is equipped with a video microscope as well as standard equipment for being able to carry out the range of practical activities included in the course. The department houses a suite of surfaces so that ICT can be part and parcel of lessons.



You have the chance to take part in supra-curricular activities such as Olympiads and running BioSoc, if you would like to extend your knowledge further. There are so many ways to get involved! The team of Biology teachers that we have at the school are always available and happy to help with anything that you ask them.

MAIYA-JADE



WHAT YOU WILL STUDY IN UPPER SIXTH

The Upper Sixth starts by studying the biochemistry of respiration and photosynthesis. You get the opportunity to explore nervous and homeostatic control in greater depth than at GCSE and cover genetics in more detail. The final section involves exploring the ever-expanding area of

control of gene expression, including the role of technology in manipulating this.

Skills work remains embedded within the program of study in the Upper Sixth year. You will develop as a biologist who truly understands the practical work being undertaken. There will be greater freedom to plan your own tasks as the year

progresses. You will also be provided with ample opportunity to fulfil the practical endorsement that sits alongside the A-Level.

To assist learning, all lesson resources are made available on Moodle so students can review them in their own time, including for revision.