

*Biology is always in the news. Biomedical steps forward are happening all the time. Our impact on the environment is going to change the way we live. If you want to understand all of this, and maybe contribute to the news in the future, Biology is for you.*



**Are you interested in:**

- how living organisms function
- how modern Biotechnology impacts on our lives
- how living organisms interact with their environment

**Leading to a career in:**

- Medicine and other caring professions
- Veterinary Science
- Biomedical Sciences
- Pharmaceutical Industry
- Agriculture
- Environmental work

**Teacher to contact:**

Dr Beth Wydro

**Exam Board:** OCR

## A-level

Biology is an opportunity to take your GCSE knowledge and skills on to the next exciting level. You will have the opportunity to learn new skills, see how Biology impacts on the world around you and understand complex ideas at a micro and macro level. You will learn how organisms are organised at the cellular level, including the regulation of protein synthesis, genome function and how cells communicate. You will also look at how living organisms respond to their environment, control their internal conditions and also fit into the complex environment they find themselves to be a part of.

This is all taught in the context of teaching which includes practical investigation, discussion and research with experienced staff to help you to develop your knowledge, and support you along the way. You will be encouraged to be an active learner, to explore on a daily basis how Biology is relevant to current affairs, health, environmental issues, disease genomics conservation and so much more.

As a Biologist, you will gain skills and knowledge which will equip you for a wide variety of careers. Our students go on to careers in Medicine, Veterinary science, Biomedical sciences, Dentistry, Pharmacy, Sports Science, Physiotherapy and Nursing – to name just a few. Those that do not follow a direct path through science have found that their critical thinking skills, the ability to analyse data and the ability to make accurate observations, prepare them well for aspects of careers in business, media, psychology and even the arts. It fits well with studies in other sciences and maths, but also provides a complementary balance for students who study humanity subjects, psychology, sport science and the arts.

During Year 12, you will study the core elements of Biology including; Cell Structure, Biochemistry, Exchange and Transport in plants and animals, Disease and Immunity, Biodiversity and Classification.

As you move into Year 13, you will be challenged with the application of your core knowledge as you move on to study Communication and Homeostasis, Photosynthesis, Respiration, Inheritance and control of cell activities at the DNA level, Ecosystems and Sustainability.

You will face examinations at the end of Year 13 which involve 3 papers and a range of different question styles including multiple choice, structured questions and extended answers. You will be required to have a good grounding in the core facts, but also to apply them in new contexts.

Questions will also be centred on your ability to analyse data and explain how practical work is carried out to collect reliable data. The years of experience we have with the OCR examination board and their assessment process, means that we can prepare you to take these examinations with confidence.

Practical work is a key part of what we do and you will have the opportunity to build up a portfolio of practical activities and practical skills. The examination board has identified 12 key practical tasks which must be a part of the course. These will be the very minimum of the practical work that you do. You will be encouraged to use microscopes, to make observations, to plan investigations and to see biological processes happening before your eyes.

Field work is also a key part of the Biology course and we take great pride in the course that we have developed over several years, which teaches practical skills and puts them in the context of conservation and sustainability. We even give you the opportunity to learn the difference between a Pochard and a Pimpernel.

We also believe that it is vital that a Biologist should have the opportunity to see how their subject is relevant in the wider scientific community. Hence we have developed links with the Babraham Institute, the Sanger Institute and several University departments. Our students attend seminars and research days at the Babraham institute, we have visiting speakers and we take an annual trip to the ground breaking genome sequencing unit at Hinxton. We have visiting speakers in the department at regular intervals and our students have also carried out DNA analysis workshops in school. In the summer between Year 12 and 13, our students also have the opportunity to take on placements, and gain Gold Crest awards for their work, in local research and scientific institutions.



Biology is what it says in the name – the science of living things. We aim to make it relevant to you, and help you to see its relevance to your world.

**Dr Beth Wydro**  
**Head of Science**