

# A Level Biology

## What is Biology?

Biology is the study of living organisms, interactions between them and the environment.

## Why study Biology?

Biology explains about us! From the smallest parts of you, how you work, how the environment and organisms around us work.

## What makes a successful Biology student?

A successful Biology student is hard-working, good at learning large amounts of information, has good practical skills, is interested in how living things work, reads around a topic and relates concepts in a number of contexts.

## To study this course, what qualifications will I need and in which subjects?

Students considering Biology must have at least grades 6 in GCSE Core and Additional Science or grade 6 in Biology and a grade 5 in GCSE Maths (preferably from the Higher Tier).

## What is the structure of the course?

Year 12 Units	Year 13 Units
<b>Unit 1 - Biological molecules</b> <b>Term: Year 12 Autumn</b> All life on Earth shares a common chemistry. This unit explores key biological molecules including proteins, lipids, carbohydrates, DNA and bonding.	<b>Unit 5 – Energy Transfers</b> <b>Term: Year 13 Autumn</b> This unit examines the biochemical pathways of photosynthesis and respiration. It also delves into how energy is transferred and how nutrients are recycled within ecosystems.
<b>Unit 2 - Cells</b> <b>Term: Year 12 Autumn</b> This unit provides a closer look at cells; it covers the ultrastructure of cells, cell division, how substances are transported across cell membranes and the immune system.	<b>Unit 6 - Organisms respond to changes in their environments</b> <b>Term: Year 13 Autumn</b> This unit looks at how organisms maintain a stable internal environment. It also provides deeper knowledge and understanding of nerves, hormones and heart rate control.
<b>Unit 3 – Exchange and Transport</b> <b>Term: Year 12 Spring</b> This unit delves in to how substances are exchanged in animals, plants and insects. The heart, lungs and digestive system are explored in detail.	<b>Unit 7 - Genetics, populations, evolution and ecosystems</b> <b>Term: Year 13 Spring</b> This unit explores patterns of inheritance, the process of evolution and how organisms interact within communities and ecosystems.
<b>Unit 4 – Genetic information, variation and relationships between organisms</b> <b>Term: Year 12 Spring</b> This unit provides an overview of the role of DNA and looks at relationships between organisms including classification and biodiversity.	<b>Unit 8 – The control of gene expression</b> <b>Term: Year 13 Spring</b> This cutting edge unit provides insight into the forefront of science, looking at gene expression, genome projects and gene technologies including applications in industry and medicine.
<b>Practical Endorsement</b> The development of practical skills is an important feature in A-Level Biology. Over the two years 12 required practical activities will be undertaken in which various skills will be assessed (non-exam). Students receive a practical endorsement along with their overall grade on their A-level certificate.	
<b>Assessment - Two 1h30' written papers, worth 50% each.</b>	<b>Assessment – Two 2h written papers, worth 35% each; one 2h paper worth 30%.</b>

## What opportunities are there for me to study beyond the classroom?

We offer local field trips for practical sessions and trips around the Norfolk and Norwich University Hospital for careers day. There is access to online text books, journals and many resources and links on ClassCharts or Google Drive. Information is offered on a variety of sessions and events hosted external to sixth form.

## What kind of career does this subject/qualification prepare me for?

Biology is a great choice of subject for people who want a career in health and clinical professions, such as medicine, nursing, biochemistry, midwifery, dentistry or forensic science. It will also equip you for a career in industry, for example in the pharmaceutical industry, zoo, veterinary nursing, horticulture, microbiology etc.