

Biology A Level

Examination Board:
Edexcel A (Salters Nuffield)

Entry Requirements:
Grades 666 in Separate
Sciences OR Grades 66 in
Combined Science PLUS Grade
6 in Mathematics

Potential Career Opportunities:

Many careers can directly stem from studying Biology A Level when combined with other Science A Levels such as Chemistry or Physics. These include: Bioengineering, Genetics, Biochemistry, Forensic Science, Neuroscience, Conservation, Botany, Nursing and Physiotherapy, Medical Physics, Medicine and Veterinary Science.

However, when paired with other less conventional subjects, a Biology A Level can lead to some interesting degree options or careers, such as Biology with a Language, Forensic Anthropologist, Forensic Archaeologist, Medical Ethics, Environmental Consultant, Science Writer or Editor, Psychiatrist, Biological Illustrator, Microscope Photography and Imaging Specialist, Wildlife Cameraman or Lawyer.

Course Overview:

Each of the four units use a real-life context, through a storyline or contemporary issue, to provide a back-drop and a scaffold upon which to learn the biological theory. Core practicals will aim to develop your confidence in important practical skills, knowledge and understanding of the scientific method as well as mathematical and problem solving skills relevant to the study of Biology.

Unit 1: Lifestyle, Transport, Genes and Health

Topic 1 introduces the risks to health, our perception of risk and how our genetics and lifestyle choices can increase our risk of developing cardiovascular diseases such as atherosclerosis, CHD and Stroke. Topic 2 introduces how changes in our DNA can lead to genetic diseases, using the example of Cystic Fibrosis.

Unit 2: Development Plants and the Environment

Topic 3 looks at gamete structure and function and their role in fertilisation. Topic 4 will allow you to consider the importance of the biodiversity on Earth and how it came about. There is particular emphasis on how humans have relied on plants throughout history.

Unit 3: The Natural Environment and Species Survival

In Topic 5, we critically evaluate the evidence for climate change and its impacts on ecosystems. The molecular biology of photosynthesis and how the biochemical energy made by plants filters through the ecosystem. Topic 6 looks at how a dead body can provide evidence for forensic biologists as they try to identify a person and decide how and when they died.

Unit 4: Energy, Exercise and Co-ordination

Topic 7 looks at joints, movement and the detailed mechanism of muscle contraction. Respiration and the various energy systems that supply energy to muscles is studied. Topic 8 looks at visual perception, both the detection of light by the retina and the development of vision in young animals. The structures and functions of the different brain regions and the use of imaging techniques is studied.

Assessment:

Paper	Units	Length	Marks	% of A Level
1	1, 2, 3	2 hrs	100	33.3%
2	1, 2, 4	2 hrs	100	33.3%
3	1, 2, 3, 4	2 hrs	100	33.3%

Why would this course suit me?

Are you naturally curious about understanding how biological systems work? Are you passionate about the natural world? If the answer is 'yes', and you meet the course requirements, then this course could be for you! Biology is the link between the physical and social sciences and a subject respected and desired by universities. The Russell Group of Universities name Biology among its list of 'facilitating subjects'.

How does this course link to other subjects?

Other subjects that traditionally complement the study of Biology include: Chemistry, Geography, Mathematics, Psychology, Physics and Physical Education / Sport BTEC. However, when paired with other subjects, such as English, Art, History or Languages, it can lead to interesting degree options and careers.

