

Biology A Level



Exam Board: AQA

Entry requirements: Grade 5 in Maths GCSE, Grade 5 in English Language GCSE and two Grade 6s in Science GCSE to include Biology or Combined Science

Intent

Structure

The AQA A Level Biology course has been developed to follow on from the Combined Double and Separate GCSE Chemistry courses. It will develop candidate's knowledge and understanding and provides a pathway to further study in a wide variety of subject areas. It covers a wide variety of different topics from the different types of cells and how they are structured within organisms to how those organisms interact between themselves and the environment around them. Near the end of the A-level course students also look at the genetics involved with gene mutations and how different populations may arise and how traits are passed on from parents to offspring.

Biology is the study of living things, but not just animals and plants. Students learn about the molecules that make living things work, the cells that they're made from, the systems within plants and animals, and the interconnections between organisms. Biology is different from physics and chemistry, in that living things don't always do what you expect them to do. You can't test one organism and assume all the rest will be the same, so students learn about the statistical analysis behind making claims.

Implementation

Content & Sequencing

Within the A-level course, there are eight different topic areas that students will cover. Within year 1 students covering the first four topics, and within the second year, students covering topics 5-8. The topics are taught as individual topic areas but throughout the two-year course students are then expected to make more in depth links between topic areas, as the examinations will expect fluidity between the content taught in the course.

In the first year of A-Level Biology students cover; 1. Biological molecules, 2. Cells, 3. Organisms exchange substances with their environment and 4. Genetic information, variation and the relationship between organisms.

Year two of the course students will cover: 5. Energy transfers in and between organisms, 6. Organisms respond to changes in their internal and external environments, 7. Genetics, populations, evolution and ecosystems and 8. The control of gene expression. Students are encouraged to become independent practitioners, exploring their own ideas and direction within their work.

Students will have 5 hours a week of taught lessons and will supplement this through 4 hours of independent study.

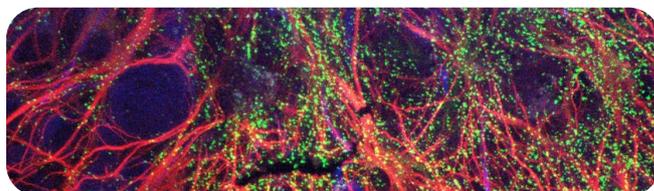
Assessment Methods

There are two separate assessment areas within the A-Level Biology course; three terminal examinations and the practical endorsement. The weighting for the examinations is shown below.

The assessment for the A-level consists of three exams

Paper 1	+	Paper 2	+	Paper 3
What's assessed <ul style="list-style-type: none">Any content from topics 1-4, including relevant practical skills		What's assessed <ul style="list-style-type: none">Any content from topics 5-8, including relevant practical skills		What's assessed <ul style="list-style-type: none">Any content from topics 1-8, including relevant practical skills
Assessed <ul style="list-style-type: none">written exam: 2 hours91 marks35% of A-level		Assessed <ul style="list-style-type: none">written exam: 2 hours91 marks35% of A-level		Assessed <ul style="list-style-type: none">written exam: 2 hours78 marks30% of A-level
Questions <ul style="list-style-type: none">76 marks: a mixture of short and long answer questions15 marks: extended response questions		Questions <ul style="list-style-type: none">76 marks: a mixture of short and long answer questions15 marks: comprehension question		Questions <ul style="list-style-type: none">38 marks: structured questions, including practical techniques15 marks: critical analysis of given experimental data25 marks: one essay from a choice of two titles

The practical endorsement comprises of twelve practicals that are carried out throughout the two-year period, and students are assessed on five different competency areas. Students are expected to show development in these five competencies throughout the twelve practicals and are not expected to show all five within each practical. Students are monitored on their competencies throughout the twelve practicals to ensure that they obtain their practical endorsement; which many Universities will want to see, especially if studying a pure science at degree level.





Impact

Onward Progression

Science subjects open up more future careers choices than any other subjects. Biology combines well with a wide range of other subjects, especially Chemistry, Physics, Mathematics, Psychology and PE. Biology is essential for a large number of careers including medicine, pharmacy, research science, Marine biology, Animal sciences, veterinary science, Sport and exercise science, and dentistry. Many people use an A-level in Biology in their future studies or work. Even if Students don't decide to work in biology, studying it still develops useful and transferable skills for other careers. Students develop research, problem solving and analytical skills, alongside teamwork and communication. Students could also progress into careers in pharmaceuticals, food technology, manufacturing, journalism and publishing, sales, forensics and teaching. Universities and businesses regard all of these very highly.

Further information contact

Mr Roger Nicholls - Assistant Director of Science
roger.nicholls@shoreham-academy.org