A level Biology

Why study Biology?

- Biology is the study of all life, not just human biology but everything from biochemistry to the evolution of life over the history of the earth.
- Biology is a foundation for progression into dentistry, medicine, veterinary science, pharmacy and the full range of subjects embraced by the term Biology. It is also a sound basis for progression into nursing, physiotherapy and other caring professions.
- Biology embeds the transferable skills of curiosity, problem solving, critical analysis, maths, literacy and ICT skills that are needed for all degree choices, apprenticeships and employment.
- Biology complements all A Level combinations; from Maths, Chemistry and Physics to Psychology, Physical Education and Art.

Why study Biology at Solihull Sixth Form College?

- We have a dedicated team of A Level Biology subject specialists who deliver high quality lessons.
- Many teachers are also examiners for AQA so know how to embed exam skills into your learning.
- We have well equipped subject specific laboratories, so all lessons take place in a stimulating environment.
- We have a wide range of teaching resources from topic specific & exam practice booklets to Moodle & Kerboodle to aid your learning in and out of lessons. Tests are set at the end of each topic area to allow learners to assess their level of understanding within it.
- We are furnished with excellent lab equipment, so your practical lessons are fully hands-on and minds-on.
- We have plenty of enrichment opportunities: the Pre-Medical Academy, visits to universities, museums and zoos, and speakers from the world of academia and employment. A new STEM Programme has also launched, which allows students to develop skills and passion for Science, Technology, Engineering and Maths, whilst working towards a CREST award.
- Our learners progress to a plethora of degree subjects across the country and abroad.
- The EPQ and Core Maths Enrichment courses complement your studies and enable you to get an extra qualification.

Case Study

Among the recent successful learners to have taken this course is **Hana Mian**.

She came to the College from King Edwards VI Camp Hill School and achieved all A* and A grades in A level Biology, Chemistry and Geography. She has progressed to the University of Glasgow to study Medicine

"I find that the environment I'm in really affects my motivation to work and learn, so have greatly valued the welcoming and supportive environment at the College. The many enrichments, like Team Gambia and the Student Council, were really valuable for my personal statement, and I also think the College has been a good stepping stone from school, setting me up well for university."
- student Hana Mian

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Course Outline

This is a 2 year A Level course, which consists of 8 topics.

1) **Biological molecules** - All life on earth shares a common chemistry. Carbohydrates, lipids, proteins, nucleic acids and water interact to ensure the correct functioning of all living organisms.
2) **Cells** - All life on Earth exists as cells. These have basic features in common. Differences between cells are due to the addition of extra features. Cells must be able to divide and communicate with each other.
3) **Organisms exchange substances with their environment** - The internal environment of a cell or organisms if different from its external environment. Substances must be exchanged across specialised surfaces to cope with any changes.
4) **Genetic information, variation and relationships between organisms** - Genetic diversity within and between species is caused by variation within the DNA. Mutations in the DNA lead to variations in organisms structure and function.
5) **Energy transfers between organisms** - Life depends on continuous transfers of energy. Respiration and photosynthesis are the two most important reactions which allow this transfer.
6) **Organisms respond to changes in their internal and external environment** - There are changes in the internal and external environment in all organisms. Once a change or stimulus occurs, organisms must initiate and control their response.
7) **Genetics, populations, evolution and ecosystems** - The theory of evolution underpins modern Biology. All new species arise from existing species living in changing environmental conditions.
8) **The control of gene expression** - Cells are able to control their metabolic activities by regulating the transcription and translation of their genome. This allows them to become more specialised, forming tissues and organs.

There are 12 set practical activities and the written papers will assess knowledge and understanding of these.

Assessment

100% Examination (no coursework) – There will be three two hour papers at the end of the course. Paper 1 (35%) will examine topics 1-4 and Paper 2 (35%) will examine topics 5-8. Paper 3 is based on the whole specification and will include critical analysis of some experimental data and one essay from a choice of two titles. All written exams will require knowledge of relevant practical skills. In addition to this, a certificate of practical competence is awarded, dependent upon performance within specified practical work.
Examining Board – AQA

Special Entry Requirements

Grade 6 in Maths, grade 6 in Biology and grade 6 in either Chemistry or Physics or grade 6-6 in Combined Science is required. In addition, standard A level entry requirements apply - www.solihullsfc.ac.uk/courses/entry-requirements.

Prohibited Options

None.

What do our learners go on to do?

Biology is a useful qualification for anyone interested in further study of natural sciences and health care. It also directly links to careers within environmental science, food science, genetics, health and beauty science and sport science. Most students go to university to study a range of subjects. In the past few years this has included: Accounting and Finance, Nursing, Aeronautical Engineering, Architecture, Arts and Festivals Management, Biochemistry, Biology, Engineering, Chemistry, Computer Science, Construction Management, Criminology, Radiography, Economics, Health, Sport and Social Care, Geography, Law, Marketing, Mathematics, Medicine, Occupational Therapy, Optometry, Palaeobiology, Paramedic Science, Pharmacy, Physiotherapy, Politics, Philosophy and Economics, Psychology, Sports Therapy & Zoo Biology.

Cost Implications

None.

Examination Results

In the past two years, this course has seen high levels of achievement:

Year	Pass Rate A*-E%	A*-C%
2023	97%	70%
2024	94%	59%

Contact

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