Biology

Exam Board: AQA

Contact teachers: Mrs K Storey

Why study Biology?

Are you fascinated by the lives of living organisms and how your body works? Are you interested in the developments of 'new' Biology topics, such as genetic engineering? Are you considering a career in a health-related profession, biotechnology or ecology and the environment? Or do you want to use Biology to support other qualifications such as Geography, Sport or other sciences?

Almost on a daily basis, the media presents items that relate to biological phenomena.

For example, the ethical issues involved in stem cell technology; that genetic engineering will solve our food problems and cure disease and that climate change is due to human impact.

As a consequence, it has never been more important that we develop an awareness of basic biological principles so that we can make sense of new developments presented by the media and understand how scientists interact with each other, and with society at large, in making use of new discoveries.

Course structure

Topic 1	Y12	Biological molecules
Topic 2	Y12	Cells
Topic 3	Y12	Organisms exchange substances with their environment
Topic 4	Y12	Genetic information, variation and relationships between organisms
Topic 5	Y13	Energy transfers in and between organisms
Topic 6	Y13	Organisms respond to changes in their internal and external environments
Topic 7	Y13	Genetics, populations, evolution and ecosystems
Topic 8	Y13	The control of gene expression

Scheme of Assessment

Paper 1: Students will be assessed on topics 1-4, including relevant practical skills (35% of A2). There will be a mixture of short and long answer questions (75 marks) and extended response questions (15 marks).

Paper 2: Students will be assessed on topics 5-8, including relevant practical skills (35% of A2). There will be a mixture of short and long answer questions (75 marks) and comprehension questions (15 marks).

Paper 3: students will be assessed on topics 1-8, including relevant practical skills (30% of A2). There will be a combination of structured questions, including practical techniques (38 marks) and analytical questions of experimental data (15 marks). There will also be one essay from a choice of two titles (25 marks).

How is the course taught and assessed?

The new AQA specification has been tailored to follow on from the GCSE course and it builds on the foundations laid down in Key Stage 3 and Key Stage 4. The course looks in much greater detail at concepts learnt at GCSE, as well as introducing new ideas such as DNA technology and gene expression.

The course includes a series of compulsory practicals as well as additional experiments and field work to develop the content of the specification. All the exam papers include testing of knowledge of the practical techniques carried out in class.

Students are also encouraged to read around the subject to see the implications and applications of the various topics covered.

Entry requirements

Ideally: Grade 7+ in GCSE Biology (Students achieving a Grade 6 will be considered individually).

Ideally Grade 7-7 or better in Combined Science (students achieving a Grade 6-6 will be considered individually).

Career routes and popular combinations

Students who take Biology often also study from a wide range of subjects, including Geography, Psychology, Sociology, PE, Chemistry, Physics, Philosophy, Health & Social Care, and Mathematics.

Biology is a great choice of subject for people who are considering a career in health and clinical professions, such as: medicine, dentistry, veterinary science, physiotherapy, pharmacy, optometry, nursing, zoology, marine biology or forensic science. It is also a facilitating subject because of the transferable skills developed during the course, and opens doors for a wide range of degrees.