



## Course Description Sheets - Level 3

**Examination Board:** Edexcel

**Duration:** AS - one year  
A2 - two years

**Minimum entry requirements:**

- Five GCSEs at grade A\*-C, including Bs in Double Science or separate Sciences (higher) and preferably, B in Mathematics (higher) and C in English

**Possible combinations:**

- AS/A level Chemistry, Environmental Studies, Geography, Mathematics, Psychology, Applied Science, Physics

**Enrichment opportunities:**

- All students have access to our enrichment programme

**Skills developed:**

- communication of scientific information
- dealing with data
- design of experiments
- dissection (not compulsory)
- handling apparatus
- problem-solving
- presentation
- research

**Likely next step opportunities:**

- Higher Education for degree courses in Biology, Medicine, Dentistry or other sciences
- Higher Education for degree courses in other subjects
- career opportunities in a wide range of paramedical and scientific occupations

**Assessment summary:** Examinations and coursework

	AS	A2	Method
Unit 1	40%	20%	External written exam
Unit 2	40%	20%	External written exam
Unit 3	20%	10%	Internal assessment
Unit 4	-	20%	External written exam
Unit 5	-	20%	External written exam
Unit 6	-	10%	Internal assessment

## BIOLOGY (Salters) AS/A LEVEL

### Course outline:

This course is designed to inspire you and develop your enthusiasm for biology. You will explore the world of biology through examining key biological concepts in contemporary contexts such as heart disease, stem cell technology, climate change and forensic science.

### Course structure:

#### AS Level

#### Unit 1 – Lifestyle, transport, genes and health

- the importance of lifestyle choices for good health and considers ideas about correlation, causation and risk in relation to cardio-vascular disease
- the genetic disease cystic fibrosis (CF), the potential of gene therapy as a treatment for CF, discussion of the social and ethical issues surrounding genetic screening.

#### Unit 2 – Development, plants and the environment

- development of multi-cellular organisms, cell structure and the importance of fertilisation, stem cells and gene expression
- biodiversity through adaptation and natural selection. Plant cell structure and function. Traditional and novel uses of plants. Conservation of endangered species.

#### Unit 3 – Issue or visit report and Practical Biology Skills

#### A2

#### Unit 4 – The natural environment and species survival

- photosynthesis and ecosystems. The impact of climate change on plants and animals. Ecology fieldwork
- forensic biology. Bacteria and viruses, immune response and antibiotics

#### Unit 5 – Energy, exercise and coordination

- physiology and exercise. Respiration and homeostasis. The use of performance enhancing drugs
- the role of the nervous system in vision. The brain and Parkinson's disease. The human genome project and GMOs

#### Unit 6 – Individual experimental investigation