

Biology Department

Senior National 5 Biology guide

Entry Requirements

The preferred entry level is a pass at National 4 Biology or a National 5 pass at another Science. This is to ensure that you are prepared for the demands of the course and that you are doing a level which is appropriate for you.

The Course Content

The course consists of three units (40 hours each):

Unit 1 Cell Biology

Subtopics:

- Cell structure
- Transport across membranes
- Producing new cells
- DNA and the production of proteins
- Proteins and enzymes
- Genetic engineering
- Photosynthesis
- Respiration

Unit 2 Multicellular organisms

Subtopics:

- Cells, tissues and organs
- Stem cells and meristems
- Control and communication
- Reproduction
- Variation and inheritance
- The need for transport
- Effect of lifestyle choices on transport and exchange systems

Unit 3 Life on earth

Subtopics:

- Biodiversity and the distribution of life
- Energy in ecosystems
- Sampling techniques and measurements of biotic and abiotic factors
- Adaptation, natural selection and evolution
- Human impact on the environment

Assessment

There are several pieces of assessment during this course.

1) Outcome 1 –

- **Assessment standards 1.1-1.6 ‘Investigation’**
- You will conduct an investigation and produce an accurate scientific report.

2) Outcome 2 –

- **Assessment standard 2.1/2.2 ‘Key Area Test’ (KAT).**
- This assesses knowledge and understanding as well as problem solving skills. The problem solving skills covered are analysing, selecting, processing and predicting. These are completed in class and marked by staff to SQA exam board standards.

3) Assignment

- You are required to research an aspect of biology and write about its effect on society and the environment. You are expected to select, analyse and present data in your work as well as to reference where your information came from.
- This work is worth 20 marks, which is 20% of your final exam marks.

4) The final exam.

- The paper is worth 80marks, 20 multiple choice, 60 extended answer questions. It will last 2 hours.

You must pass all forms of assessment before you can receive a course award.