

## **Biology National 5**

### **AWARD RECEIVED:**

You will be presented for National 5 Biology at the end of the year. The grade awarded is based on the total marks achieved across all course assessment components.

### **ENTRY LEVEL: What do I need to do it?**

Candidates should have achieved the fourth curriculum level or the National 4 Biology course or equivalent qualifications prior to starting this course. Candidates may also progress from relevant chemistry, environmental science, physics or science courses.

### **COURSE CONTENT: What will I learn?**

Biology, the study of living organisms, plays a crucial role in our everyday existence and is an increasingly important subject in the modern world. Biology affects everyone and aims to find solutions to many of the world's problems. Advances in technologies have made this varied subject more exciting and relevant than ever.

The National 5 Biology course allows candidates to understand and investigate the living world in an engaging and enjoyable way. It develops candidates' abilities to think analytically, creatively and independently, and to make reasoned evaluations. The course provides opportunities for candidates to acquire and apply knowledge to evaluate biological issues, assess risk, make informed decisions and develop an ethical view of complex issues.

The course content includes the following areas of biology:

#### **Cell biology**

The key areas covered are:

- cell structure
- transport across cell membranes
- DNA and the production of proteins
- Proteins
- genetic engineering
- respiration

#### **Multicellular organisms**

The key areas covered are:

- producing new cells
- control and communication
- reproduction
- variation and inheritance

- transport systems – plants
- transport systems – animals
- absorption of materials

### **Life on Earth**

The key areas covered are:

- ecosystems
- distribution of organisms
- photosynthesis
- energy in ecosystems
- food production
- evolution of species

### **ASSESSMENT: How will I be assessed?**

The course assessment has two components.

Component 1: Question paper worth 100 marks lasting 2 hours and 30 minutes. This is completed as a closed book exam as part of the SQA exam diet.

Component 2: Assignment 20 marks scaled to 25. 8 hours, of which a maximum of 1 hour and 30 minutes is allowed for the report stage. The research stage must involve an experiment that allows measurements to be made. Candidates must also gather data from the internet, books or journals to compare against their experimental results. The candidate's research may also involve gathering extracts from internet/literature sources to support their descriptions and/or explanations of the underlying chemistry. Candidates must produce a report on their research which is submitted to the SQA for marking.

### **HOMEWORK:**

Regular homework contains numeracy, literacy and problem-solving tasks and aims to develop skills and consolidate knowledge and understanding. It may also include revision of class work, completion of unfinished work and opportunities to complete small projects at home on selected areas of the curriculum. You will be given the chance to present your findings to your peers.

### **PROGRESSION:**

Higher Biology or Higher Human Biology or National 5 Laboratory Sciences.

### **COSTS:**

Pupils may be asked for replacement costs for lost or broken equipment.