**SUBJECT: BIOLOGY**

**AWARD RECEIVED: HIGHER**

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

The Higher Biology course gives candidates the opportunity 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. Candidates are able to develop their communication, collaborative working and leadership skills, and are able to apply critical thinking in new and unfamiliar contexts to solve problems.

**ENTRY LEVEL**

Students should ideally have N5 Biology, at A or B. It could be possible for a student without previous experience of Biology to follow this course, in which case they should speak to Mrs McDowell (Principal Teacher of Biology & Chemistry) for advice.

**COURSE CONTENT**

The course content includes the following areas of biology:

**DNA and the genome**
The key areas covered are:

- structure of DNA
- replication of DNA
- gene expression
- cellular differentiation
- the structure of the genome
- mutations
- evolution
- genomic sequencing

**Metabolism and survival**
The key areas covered are:

- metabolic pathways
- cellular respiration
- metabolic rate
- metabolism in conformers and regulators
- metabolism and adverse conditions
- environmental control of metabolism
- genetic control of metabolism

**Sustainability and interdependence**
The key areas covered are:

- food supply, plant growth and productivity
- plant and animal breeding
- crop protection
- animal welfare
- symbiosis
- social behaviour
- components of biodiversity
- threats to biodiversity

## ASSESSMENT

To gain an overall Award for this Course, students need to pass the:

**Course Assessment** components, marked by the SQA**:**

1. **Assignment** (represents 20% of the overall marks for the course assessment)

2. **Exam** (represents 80% of the overall marks for the course assessment)

## CONDITIONS OF AWARD

Candidates' overall grades are determined by their performance across the course assessment. The course assessment is graded A–D on the basis of the total mark for all course assessment components.

## HOMEWORK

Homework is an essential part of the course. Homework will include practice problems, questions from a textbook and regular revision of all the material covered in the course.

## TRANSFERABLE SKILLS

There are many very useful and valuable transferable skills gained by studying Higher Biology, including: researching, ICT, reporting, numeracy, literacy, graphing, investigating, practical experimental skills, analysing, presentation, evaluating, to name a few.

## PROGRESSION

There is very good progression from this Course on to Advanced Higher Biology.