S3 Biology

# Course Rationale

Biology is the study of all living things. In this course you will learn about organisms that live on land and sea, the interactions between them, and their links with the physical world. You will also find out how Biology is helping to find solutions to world problems. The course seeks to help you to recognise the impact the sciences makes on your life, the environment and on society, and to be able to express opinions and make decisions on social, moral, ethical, economic and environmental issues based upon sound scientific understanding.

Biology is a relevant qualification for many careers because it is recognised by employers as a valuable broad-based qualification. Career areas include medicine, nursing, dentistry, physiotherapy, food science, sport science, pharmacology and beauty therapy.

# Course Content

The S3 Biology course consolidates levels 3 experiences and outcomes, and extends learning to level 4 within the CFE areas of

* Planet Earth – biodiversity and interdependence, energy sources and sustainability, processes of the planet
* Biological Systems- body systems and cells, inheritance
* Topical Science

The S3 Biology course is organised into 3 units:

* **Cell Biology -** Cells, Enzymes, Cell Division, Diffusion, Aerobic Respiration
* **Multicellular Organisms -** Reproduction, Growth and Development, Homeostasis and Genetics
* **Life on Earth -** Environmental Biology, Interdependence and Adaptation

# Skills

In the context of the above areas you will continue to develop your knowledge and understanding of the big ideas and concepts of the sciences as well as skills in scientific literacy and numeracy. You will work with others in practical tasks to continue to develop the skills of scientific inquiry and investigation.

# Course Assessment

You will receive informal feedback throughout your learning and throughout each topic will complete small check tests, with a larger formal assessment at the end of each unit. The larger end of unit tests are available at two levels – core and extension.

# Progression

* National 4 Biology (for pupils achieving Level 3 in S3)
* National 5 Biology (for pupils achieving Level 4 in S3)
* National 4 Chemistry or Physics
* Progress to National 5 Chemistry or Physics in one year may be possible for pupils who achieve level 4 Biology in S3, however since these courses build on the work covered in S3/National 4 this requires a significant commitment to additional personal study if pupils have not studied these subjects in S3.

**Career Pathways**

Agricultural Engineer Biochemist Biotechnologist Clinical Psychologist Countryside Ranger Dentist Doctor Environmental Consultant Food Scientist Geneticist Midwife Marine Biologist Microbiologist Nurse Occupational Therapist Optometrist Pharmacologist Teacher Paramedic Pharmacist Technical Brewer Vet