RMGS
Science – BIOLOGY
A LEVEL (OCR)

What are the aims of the course?

1. To develop a broad knowledge of biological facts, concepts and principles; to appreciate their significance and have the skills to apply them in new and evolving situations.
2. To engender an enjoyment and interest in the study of living organisms.
3. To prepare students for further biological studies in higher education, or simply to act as a stimulating course on its own.

What does it involve?

The OCR Biology A course is followed at A-level (H420) and the specification can be viewed on the OCR website.
The course can be broken down into six modules:
Module 1: Development of practical skills in biology (planning, analysis and evaluative skills are throughout the course in the numerous experiments carried out).
Module 2: Foundations in biology (includes topics such as cell structure, biological molecules, enzymes, nucleic acids, biological membranes and cell division).
Module 3: Exchange and transport (includes topics such as exchange surfaces, transport in plants and transport in animals).
Module 4: Biodiversity, evolution and disease (includes topics such as communicable diseases and classification and evolution).
Module 5: Communication, homeostasis and energy (includes topics such as nervous and hormonal communication, excretion, photosynthesis and respiration).
Module 6: Genetics, evolution and ecosystems (includes topics such as cloning and biotechnology, patterns of inheritance, manipulating genomes and ecosystems).

How is it assessed?

Paper 1: Biological processes is a 2-hour 15-minute written examination worth 37% of total A-level.

Paper 2: Biological diversity also is a 2-hour 15-minute written examination worth 37% of the total A-level.

Paper 3: Unified biology is a 1-hour 30-minute written examination worth 26% of the total A-level.

Practical Endorsement in Biology (non-exam assessment)

Are there any specific entry requirements?

- Students must have a minimum of a grade 7 in Biology.
- If students have taken the Combined Science route, they must have achieved a 7, 7 grade and a grade 7 in the Biology unit.
- In addition, a grade 6 in Mathematics is required.
- If students have a Level 2 BTEC, a Distinction and a grade 6 in Maths are required.

Why is it a useful qualification?

An important foundation for those wishing to pursue any career in which biology is a part, e.g. medicine, veterinary medicine, dentistry, forensic science, biotechnology, biochemistry, physiotherapy, nursing, marine biology, astrobiology or environmental science.

For all students (not just those wanting to pursue a biology-related career), studying A level biology allows the development of important transferrable skills including investigative, problem solving, research, decision-making, mathematical and analytical skills. Furthermore, it will enable students to make informed decisions on many current issues that are having or will have an impact on our lives, for example, the use of gene therapy in medicine and the effect of climate change on biodiversity.