

# BIOLOGY AT A LEVEL: AQA SPECIFICATIONS

Biology is a popular subject taught at St Joseph's College by seven teachers, Mrs Snape, Dr Hibberts, Mrs Gilding, Mr Jones, Dr Moran, Miss Montali and Dr Robinson.

This year (2018-19) 97 pupils take Y12 Biology, with 80 pupils taking it at in Y13. There are four groups each of which will be taught by two teachers for a total of ten hours per fortnight.

Extensive support in all areas of course is given by experienced teachers to enable pupils to gain a deeper understanding and enjoyment of this area of science. Pupils can use this 'A' level not only to study science courses or medicine/dentistry but also as an entry qualification to get into other non-science courses at university.

## **MODULES TAUGHT IN YEAR 12**

### **1. Biological molecules**

The structure of proteins, carbohydrates, lipids / The structure and function of water

### **2. Cells and exchange of substances with the environment**

Cell structure / Cell division / Transport across membranes / Immunology / Gas exchange and the lungs / Plant transport

### **3. Genetic information and variation**

DNA, genes and protein synthesis / Species and taxonomy / Biodiversity

Practical Sessions. Practical skills will be examined during lessons. Extensive experience will be given to pupils during the course of Year 12 to enable them to be confident in this area.

## **MODULES TAUGHT IN YEAR 13**

### **4. Energy transfers between organisms**

Energy and Respiration / Photosynthesis / Nutrient cycles

### **5. Organism's response to their environment**

Support and Locomotion / Sense Organs and the Reception of Stimuli / The Nervous System / Homeostasis / Kidney and osmoregulation

### **6. Control of gene expression, variation, and genetics**

Meiosis / Genetics and Gene Control / Selection and Evolution

Required practicals. Practical skills will be examined during lessons. Extensive experience will be given to pupils during the course of Year 12 and Year 13 to help them develop confidence in this area. This will enable the students to gain the compulsory practical endorsement component of the A-level. In order to deliver this area in full a £10 Lab pack contribution per year will be required from each student. In addition, the students need to undertake a field trip to fulfil one of the required practicals. This field trip will be to Talacre in North Wales in Y13 and will incur an approximate cost of £20 per student for the coach and insurance.

**Further information on the syllabus can be found at [www.aqa.org.uk](http://www.aqa.org.uk) and follow the links for the new biology specification.**