What will you learn?

At St Helen’s we start teaching the Edexcel IGCSE syllabus to students in Year 9, enabling us to teach topics more thoroughly and allowing plenty of time for practical work. Students have a choice between double award and separate science at the start of Year 10, both courses being excellent preparation for biology A level.

The topics taught each year are as follows:

**Year 9**: ecology, biological molecules, cell structure, diet, digestion and classification.

**Year 10**: transport into and out of cells, photosynthesis, plant transport, respiration, breathing, circulation and plant and animal reproduction.

**Year 11**: the nervous system, homeostasis, genetics, evolution and the effect of humans on the environment.

There is no coursework and so all of the material, including understanding of practical techniques, is examined in written papers taken at the end of Year 11.

How is the subject taught?

All Middle School students have specialist biology teachers whether they choose double award or separate sciences for IGCSE. Lessons combine whole class discussions and explanations with tasks done individually, in pairs or in small groups. Girls will undertake plenty of practical work, to develop their understanding of concepts as well as to develop their practical skills including microscopy, dissection, qualitative testing and sampling.

There are a number of opportunities for girls’ knowledge to be extended beyond the confines of the IGCSE syllabi. For example all Year 10 students are entered for the British Biology Challenge, an online competition run by the Society of Biology, and many girls attend CREST Club, where they undertake scientific investigations to gain Bronze or Silver Certificates. Relevant competitions, such as essay writing or photography competitions are advertised within the department.

Who teaches it?

The St Helen’s Biology department currently consists of three full time teachers and a number of part-time teachers. The teachers have specialist interests in a range of areas within biology. These include animal behaviour, neuroscience, entomology, molecular cell biology, biodiversity and conservation. All have a degree and a teaching qualification in the subject. We also have a full-time biology technician.

Rachel James, Head of Biology

Facilities, expeditions and more...

Biology lessons are taught in four spacious and well-equipped laboratories in the new Science Centre. The excellent resources and highly qualified full-time Biology technician enable girls to carry out many interesting and enjoyable practicals. When studying ecology, girls make use of the school grounds in order to practise their fieldwork techniques.

What do students say?

“Biology inspires me to be curious.”

“I love Biology. It gives me the opportunity to learn about everyday things we take for granted such as breathing! We sometimes forget how complex our body system is and I find it fascinating finding out how it works.”

“I love the practicals we do in Biology – especially cutting up pig’s lungs!”

“I love the hands on experience and imaginative classes.”