



### Biology Curriculum Overview

#### **What are the aims of the Biology curriculum?**

Our Biology curriculum aims to provide students with an exciting insight into the world of biology, allowing them to explore the biological processes that take place within organisms, as well as the interactions between organisms and their environment. As students move into KS4 we aspire for our students to be safe and methodical biologists working through experiments and problems with fluency and accuracy. Key Stage 5 is an excellent preparation for students wishing to progress onto university or work in STEM related fields. It covers the key concepts of biology and the underlying practical skills that underpin the developments in understanding biology.

#### **How does the Biology curriculum support the Seaton Valley Federation's curriculum vision and intent?**

Biology provides students with a challenging curriculum with many interesting and engaging topics that link to contemporary and cultural issues in the world around us. Students use their literacy and numeracy skills to solve problems and conduct experiments throughout the curriculum. Biology also allows our students to become independent learners through trial and error, encouraging independent problem solving skills to develop as well as encouraging discussions around the ethics and applications of science within society.

#### **How is the Biology curriculum sequenced to support pupils to make effective progress and how is transition managed between key stages?**

The fundamental skills and knowledge required are woven through the biology curriculum. At key stage 3 students should develop their confidence of understanding basic cell structure and organisation, focusing on the skeletal, muscular, digestive, gas exchange and reproductive systems of organisms.

During KS4 these foundations are explored to a deeper level of understanding, investigating the role of cellular components and reactions within organisms, such as the function of organelles, photosynthesis, respiration, enzymes and hormones. The application of biology is explored when studying inheritance, ecology and through the completion of required practicals in a wide range of aspects of the biology curriculum. The key stage 5 curriculum builds on the prior key stages, challenging the students' understanding of familiar concepts by introducing more biochemical aspects and a much greater level of detail across all modules. Throughout all areas of the curriculum the practical skills that underpin the understanding of biology are developed during experiments (PAGs).

Smooth transition between key stage 3 and 4 is ensured through the consistent interweaving of the fundamental skills required in biology, along with a spiral structure to



the curriculum that reflects back on prior learning before adding in new detail, then allowing students to apply themselves to the new knowledge introduced.

**How is assessment and feedback used to aid progress?**

Regular formal assessment is carried out throughout the curriculum, to monitor students progress and performance; this can take the format of a mini assessment mid way through a topic and formal assessment at the end.  
Teachers assess students regularly through oral feedback and students, particularly at key stage 3, use peer assessment to consolidate and confirm their learning and understanding.

**How is staffing organised within the [subject]?**

At KS3 the biology curriculum is delivered by a range of science teachers.  
KS4 and KS5 are delivered by specialist biology teachers, where a class is shared and the staff will teach the topics within their particular area of expertise.  
At present the specialist biology teachers are Mrs Pawsey, Mr Pallas and Mrs Kelly.

**Examined courses – exam board and course code (exams and controlled assessment elements)**

AQA GCSE Biology (8461)  
AQA GCSE Combined Science (Trilogy) (8464)  
OCR A Level Biology (H420) from 2015