



Year 11 Curriculum Grid

Separate Biology

Year/Term	Unit	Intent
Curriculum purpose		<ul style="list-style-type: none"> • Ensure students have a secure understanding of the key concepts of Biology, building on knowledge from KS3. • Encourage students to carry out practical work safely with increasing independent skills. • Enthuse students with a love of Biology by incorporating a holistic approach and relating concepts to actions and behaviours.
Autumn	SB8 - Exchange and Transport in Animals, SB9 - Ecosystems and Material Cycles (start)	<ul style="list-style-type: none"> • Explain how the lungs are adapted for gas exchange • Describe the factors affecting the rate of diffusion • Calculate the rate of diffusion using Fick's law • Explain how the structure of the blood vessels, heart and blood is related to their function • Calculate heart rate, stroke volume and cardiac output • Compare the process of aerobic respiration with the process of anaerobic respiration • Describe the different levels of organisation from individual organisms to the whole ecosystem • Carry out field-work techniques • Explain how communities can be affected by abiotic and biotic factors
Spring	SB9 - Ecosystems and Material Cycles (continued)	<ul style="list-style-type: none"> • <i>Students will sit their PPEs at the start of this term</i> • Describe how the survival of some organisms is dependent on other species, including parasitism and mutualism • Explain the positive and negative human interactions within ecosystems and their impacts on biodiversity • Describe the biological factors affecting levels of food security • Describe how different materials cycle through the abiotic and biotic components of an ecosystem • Explain the effects of temperature, water content and oxygen availability on the rate of decomposition in composting
Summer	SB1-SB9 Revision	<ul style="list-style-type: none"> • Practise examination technique and time management • Revisit core practicals and assess understanding • Prepare for the public examinations • Students are encouraged to become more reflective of their learning through self-assessment of their examination answers • Students will have frequent exposure to exam style questioning and practice papers • Intervention sessions will allow students to revisit topics from Years 9 and 10 up until the summer examinations