

Biology

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Curriculum Intent: To ensure students maintain and develop their curiosity and excitement about the natural world. To develop all students to be scientists by embedding a culture of confidence and mastery underpinned by scientific enquiry. To develop their ability to see connections between science subject areas and become aware of some of the big ideas for understanding the world. To provide a high challenge, high quality Science education for all our learners.

	Core Knowledge		Procedural Knowledge
	Y10	Y11	
Autumn Half Term 1	Organisation in plants Communicable diseases	The human nervous system	Students will: Use scientific theories & explanations to develop hypothesis. Evaluate methods & suggest possible improvements. Apply a knowledge of sampling techniques to ensure any samples collected are representative. Apply a knowledge of a range of techniques, apparatus, & materials to select those appropriate for both field work & for experiments. Translate data from one form to another. Represent distributions of results & make estimates of uncertainty. Carry out & represent mathematical & statistical analysis. Explain everyday technological applications of science. Use a variety of concepts & models to develop scientific explanations. Appreciate the power of limitations of science & consider ethical issues.
Autumn Half Term 2	Preventing and treating disease	Hormonal coordination	
Spring Half Term 1	Non- communicable diseases Photosynthesis	Maintaining balance in the body	
Spring Half Term 2	Respiration	Reproduction and genetic inheritance	
Summer Half Term 1	Adaptations, interdependence and competition Organising an ecosystem	Variation and selection Evolution and classification	

Summer Half Term 2	Biodiversity and ecosystems		
Homework: One homework will be set for every four hours of learning and take approximately 45 minutes to complete. Biology homework will be set using Educake, an online learning platform designed to support students in developing their knowledge and understanding of science. Students will be set quizzes based on what they are learning in lessons or on topics that they need to revise for an assessment. The quizzes are automatically marked giving students instant feedback so they can see where they have done well and where they need to improve. This will reinforce what they have learnt in lessons, identify gaps in their knowledge early, build confidence through regular practice and prepare effectively for assessments and exams. Students can log into Educake using their school email and password and can complete their work on any internet-enabled device (computer, tablet, or smartphone).			
Assessment: Exam board: AQA In Y10 there will be several Low Stake Assessments (LSAs) across the year following the completion of modules of learning. There are also two assessment weeks. The October exam will cover Cell biology, organisation and infection and response (Kerboodle topics 1-5) and the exam in April will include Cell biology, organisation, infection and response and bioenergetics (Kerboodle topics 1-9). In Y11 there will be several Low Stake Assessments (LSAs) across the year following the completion of modules of learning. There are also two assessment weeks. The October exam will cover Cell biology, organisation, infection and response and bioenergetics (Kerboodle topics 1-9) and the exam in February will include Homeostasis and response, inheritance, variation and evolution and ecology (Kerboodle topics 10-13).			
Links to Personal Development: Enabling students to recognise risks to their own wellbeing. Social development: Practise using a range of social skills in different situations. Confidence, Resilience & Knowledge: Mentally healthy, physically healthy, active lifestyle, healthy relationships.			
How is my knowledge developed further at Key Stage Five? Knowledge & skills gained through a study of GCSE Biology are a starting point for further study at KS5. A Level Biology explores the functions of cells, organ systems, organisms, populations & ecosystems. Starting with the biological molecules that make up living things, it then covers the delicate balance needed for a healthy, functioning body & the interaction of diverse species in ecological settings.			