



Year 9 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	SB1 - Key concepts in Biology SB2 - Cells and Control (start)	<ul style="list-style-type: none"> • Understand changes in microscope technology • Explain how the structures of eukaryotic and prokaryotic cells are related to their function • Explain the importance of enzymes as biological catalysts • Explain how substances are transported into and out of cells • Describe the stages in the cell cycle and the importance of mitosis • Describe growth in organisms and explain the importance of cell differentiation
Spring	SB2 - Cells and Control (continued) SB3 - Genetics	<ul style="list-style-type: none"> • Discuss the potential risks and benefits associated with stem cell use • Describe the structures and functions of the brain, nervous system and eye • Explain the role of meiotic cell division in the formation of gametes (sex cells) • Outline the structure of DNA and explain its role in controlling the genome • Determine how alleles are inherited using genetic diagrams • Describe the impacts of gene mutations and the outcomes of the Human Genome Project
Summer	SB4 - Natural Selection and Genetic Modification SB1-SB4 revision	<ul style="list-style-type: none"> • Describe the evidence for human evolution based on fossils and stone tools • Describe the work of Darwin and Wallace in the development of the theory of evolution by natural selection • Describe the process of tissue culture and its advantages in medical research and plant breeding programmes • Evaluate the benefits and risks of genetic engineering and selective breeding • Explain the advantages and disadvantages of agricultural solutions to the demands of a growing human population