



Academic Learning Plan 2023-2024

Year 11 Biology

Intent: Students should study the sciences in ways that help them to develop curiosity about the natural world, that give them an insight into how science works and that enable them to appreciate its relevance to their everyday lives. The scope and nature of the study should be broad, coherent, practical, and satisfying. It should encourage students to be inspired, motivated, and challenged by the subject and its achievements.



Year 11 Units	Term 1	Term 2	Term 3
	Triple – Ecosystems and Material cycles - SB9a-SB9m Combined – Ecosystems and Material cycles - CB9a-CB9i	Triple – Genetics - SB3a-SB3k Combined – Genetics - CB3a-CB3f	Triple – Animal coordination, control and homeostasis - SB7a-SB7i Combined – Animal coordination, control and homeostasis - CB7a-CB7f
Biology concepts	Common to Triple & Combined Sciences: <ul style="list-style-type: none"> Ecosystems Abiotic factors and communities Core practical – quadrats and transects Biotic factors and communities Parasitism and mutualism Biodiversity and humans Preserving biodiversity The water cycle The carbon cycle The nitrogen cycle Triple only: <ul style="list-style-type: none"> Assessing pollution Food security Rates of decomposition 	Common to Triple & Combined Sciences: <ul style="list-style-type: none"> Meiosis DNA DNA extraction Alleles Inheritance Gene mutation Variation Triple only: <ul style="list-style-type: none"> Sexual and asexual reproduction Protein synthesis Genetic variants and phenotypes Mendel Multiple and missing alleles 	Common to Triple & Combined Sciences: <ul style="list-style-type: none"> Hormones Hormonal control of metabolic rate The menstrual cycles Hormones and menstrual cycle Control of blood glucose Type 2 diabetes Triple only: <ul style="list-style-type: none"> Control of blood glucose Thermoregulation Osmoregulation The kidneys
Year 11 Units	Term 4	Term 5	Term 6
	Triple – Exchange and transport in animals - SB8a-SBe Combined – Exchange and transport in animals - CB8a-CB8d		
	Common to Triple & Combined Sciences: <ul style="list-style-type: none"> Efficient transport and exchange The circulatory system The heart Cellular respiration Core practical – respiration rates 		

Examinations

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Literacy	SB9 and CB9 – Ecosystems and material cycles	SB3 and CB3 – Genetics	SB7 and CB7 – Animal coordination, control and homeostasis	SB8 and CB8 – Exchange and transport in animals – reteach and revision	Exams Revision	Exams
Knowledge organiser	SB9 and CB9 – Ecosystems and material cycles	SB3 and CB3 – Genetics	SB7 and CB7 – Animal coordination, control and homeostasis	SB8 and CB8 – Exchange and transport in animals – reteach and revision	Exams Revision	Exams
Assessment:	Separate assessments for Triple and Combined science	Separate assessments for Triple and Combined science	Separate assessments for Triple and Combined science			
GCSE AO Link (or other) if applicable	<p>In science the assessment objectives are:</p> <p>AO1 Demonstrate knowledge and understanding.</p> <p>AO2 Apply knowledge and understanding.</p> <p>AO3 Analyse information and ideas.</p> <p>These are all covered in each block of three modules.</p>					
Homework	One piece of homework per fortnight, for up to 45 minutes. Tasks to include, key word tasks, reading comprehension, teams quizzes and a homework assessment questions booklet.					
CEIAG- STEM careers that link to these topics:	Ecologist Environmental scientist Biologist Marine biologist Zoologist	Geneticist Laboratory technician Microbiologist	Medicine Endocrinologist Gynaecologist IVF specialist Laboratory technician			
Enrichment	Additional Content at A level will be provided to the Triple Scientists as appropriate topics are covered.					