Curriculum Plans: Year 11 (Biology TRILOGY)

	Topic	Knowledge: By the end of the unit students will know:	Skills: What skills will students have developed by the end of this unit?	Key terms: What new key terms and vocabulary will be learnt in this unit?	Summative Assessment: How will pupils be assessed in this unit?
Michaelmas 1	**4.6.1 Reproduction** *(Inheritance)*	• Sexual and asexual reproduction • Meiosis • DNA and the genome • Inheritance • Inherited disorders (Cystic fibrosis and polydactyly • Sex determination (male and female chromosomes)	• Experimental data evaluation • Comparisons of processes • Evaluation of ethical, economic and social issues concerning embryo screening	Sexual reproduction Asexual reproduction Haploid Diploid Gamete Genome Chromosome Gene Allele Dominant Recessive Homozygous Heterozygous Genotype Phenotype.	TEST_Reproduction
Michaelmas 2	**4.6.2 Variation and evolution** **4.6.3 The development of understanding of genetics and evolution** *(evidence for evolution)*	• Variation (differences in the characteristics of individuals in a population) • Mutations • The theory of evolution • Describe the evidence for evolution (antibiotic resistance and fossils) • Extinction Classification of living organisms	• Use the theory of evolution by natural selection in an explanation • Describing how scientific theories and methods develop over time • Interpretation of evolutionary trees • Extract and interpret information from charts, graphs and tables	Mutation Genome Variation Environmental factors Species Natural selection Evolution Antibiotic resistance Extinction	EXAM_mock GCSE (mix paper 1 + paper 2 content)
Lent 1	**4.6.4 Classification of living organisms** **4.6.2 Variation and evolution** *(manipulating genomes)*	• The process of selective breeding • Advantages and disadvantages of selective breeding • Genetic engineering (benefits and risks)	• Explain the benefits and risks of selective breeding given appropriate information and consider related ethical issues. • Extract and interpret information from charts, graphs and tables	Carl Linnaeus Kingdom Phylum Class Order Family Genus Species	TEST_Variation and evolution

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Lent 2	**4.7.1 Adaptations, interdependence and competition** **4.7.2 Organisation of an ecosystem** **4.7.3 Biodiversity and the effect of human interaction on ecosystems**	• Interaction between individuals in communities (interdependence and competition) • The impact of biotic and abiotic factors on communities • Adaptations of organisms • Food chain and levels of organisation • Experimental methods to determine population size and abundance • The carbon and the water cycle, including the role of microorganisms in cycling material • Biodiversity worldwide and within ecosystems • The impact of deforestation and global warming on biodiversity • The impact of pollution and waste management (water, air and land pollution) on biodiversity • The reason and the impact of peat bog destruction • Positive and negative impact of human interaction in an ecosystem • Human efforts to maintain biodiversity	• Interpretation of graphs showing predator-prey cycles • Calculation of efficiency of biomass transfer between trophic levels • Extract and interpret information from charts, graphs and tables relating to global warming • Evaluation of the environmental implication of deforestation • Evaluation of information given regarding problems caused by human activities	Interdependence Communities Population Habitat Ecosystem Biotic Abiotic Stable community Environmental factors Food chain Transect Quadrats Predator Apex predator prey Mean Mode Median Biodiversity Peat bog	TEST_Ecosystems
Trinity 1	**Revision**				
Trinity 2	N/A				N/A