

KS4 TRILOGY AND SEPARATE SCIENCE

BIOLOGY



	Autumn Term	Spring Term	Summer Term
Year 9	N/A	N/A	Module 2 Organisation <ul style="list-style-type: none"> • The breathing system • The cardiovascular system • Health and disease • Risk factors for non-communicable disease and cancer
Year 10	Module 1 Cell Biology <ul style="list-style-type: none"> • Cells and microscopes • Differentiation and specialisation • Chromosomes and mitosis • Binary fission • Culturing microorganisms • Stem cells • Diffusion, osmosis and active transport • Exchange surfaces and exchange Module 2 Organisation <ul style="list-style-type: none"> • Plant cell organisation Transpiration and translocation Enzymes, digestion and food tests 	Module 3 Infection and Response <ul style="list-style-type: none"> • Communicable disease • Pathogens • Fighting disease • Developing drugs • Monoclonal antibodies • Plant diseases Module 4 Bioenergetics <ul style="list-style-type: none"> • Photosynthesis • Respiration • Exercise 	Module 7 Ecology <ul style="list-style-type: none"> • Competition • Abiotic and biotic factors • Adaptations, Food chains • Quadrats and transects • Environmental change • Carbon cycle and decay • Biodiversity waste management • Global warming deforestation and land use • Maintaining ecosystems • Trophic levels, pyramids of biomass food security farming and biotechnology
Year 11	Module 5 Homeostasis <ul style="list-style-type: none"> • The nervous system and synapses • Reaction time • The brain and the eye • Controlling body temperature • The endocrine system • Controlling blood glucose • Kidneys and kidney failure • Puberty and menstrual cycle • Controlling fertility • Adrenaline and thyroxine • Plant hormones 	Module 6 Inheritance, Variation and Evolution <ul style="list-style-type: none"> • DNA and protein synthesis • Mutations Reproduction • Meiosis, X & Y chromosomes • Genetic diagrams and Inherited disorders • The work of Mendel • Variation Evolution • Selective breeding genetic engineering and cloning • Fossils • Antibiotic resistant bacteria speciation and classification 	Revision and Final exams