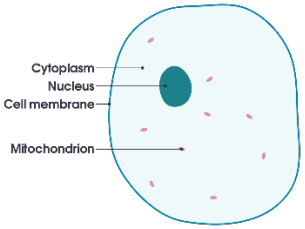
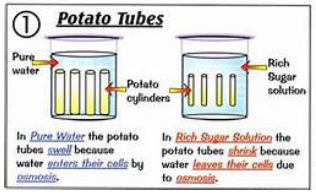
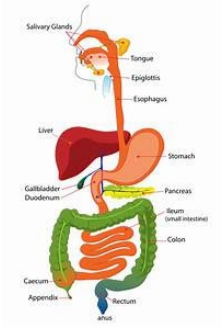
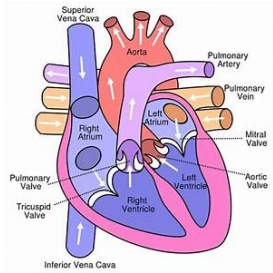
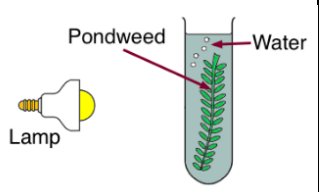
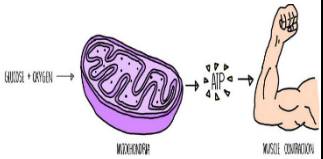
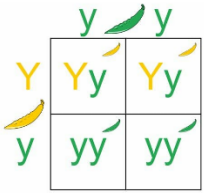
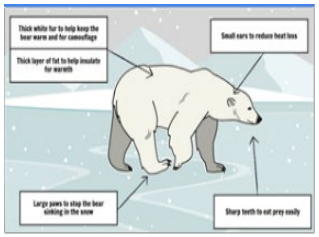
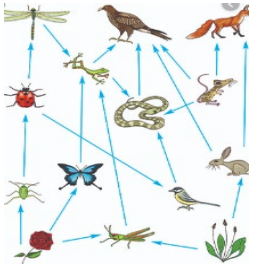
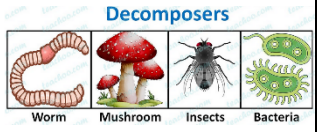
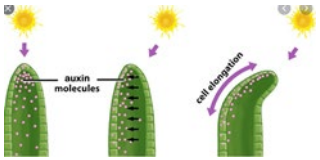
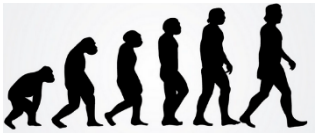
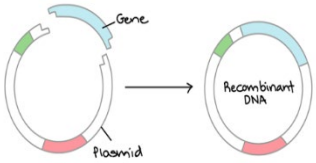
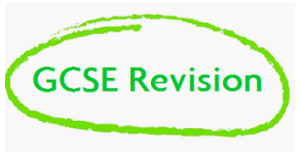
Upton Hall FCJ KS4 Curriculum Map 2025-2026 GCSE BIOLOGY/TRILOGY

	Autumn term 1	Autumn term 2	Spring term 1	Spring term 2	Summer term 1	Summer term 2
Year 9						
	Cell Biology Eukaryote and prokaryote structure Cell specialisation and differentiation Organisation Microscopy including IMO calculation RP1 - use of light microscopes	**Transport in cells** Diffusion Osmosis Active transport RP3 – osmosis experiment	**Digestion and Enzymes** Structure of the human digestive system Enzymes and enzyme reactions RP4 – Food tests RP5 – Effect of pH on enzyme reactions	**Circulatory System** Circulatory system Blood, heart and blood vessels Cardiovascular disease	**Non-communicable Diseases** Health and disease Lifestyle and its effect on non-communicable diseases Cancer **End of Year Examination**	**Plants** Plant structure and function Plant tissues and organs Transpiration and translocation Photosynthesis and the use of glucose

YEAR 10						
						
	Plants continued RP6 – Rate of photosynthesis Plant diseases Plant defence responses **Respiration** Aerobic and anaerobic respiration Metabolism and response to exercise	**Communicable diseases** Viral, bacterial and fungal diseases Human defence systems Vaccination and antibiotics Drug development RP2 – Effect of antimicrobials on bacteria *Monoclonal antibodies* *Production and use of monoclonal antibodies*	**Cell division & Reproduction** *DNA structure* DNA and the genome Chromosomes Mitosis, the cell cycle and stem cells Meiosis Sexual and asexual reproduction *Advantages of sexual and asexual reproduction*	**Cell division & Reproduction continued** Genetic inheritance Inherited disorders and sex determination *The understanding of genetics*	**Adaptations, interdependence and competition** Communities Abiotic and biotic factors Adaptations How materials are recycled **End of Year Examination**	**Organisation of an ecosystem** Levels of organisation in an ecosystem RP9 – sampling techniques to estimate population size Trophic levels *Pyramids of biomass* *Transfer of biomass* *Decomposition* *RP10 – investigating the effect of temperature on decay* 

YEAR 11						
	Biodiversity and food production project delivered as a series of homework tasks Waste management, land use, deforestation and global warming *Impact of environmental change* *Factors affecting food security* *Farming techniques* *Sustainable fisheries*  **Human nervous system** Structure and function of the nervous system *Brain and the eye* RP7 – investigation into human reaction times *Control of body temperature and negative feedback*	 **Homeostasis & response** Human endocrine system Control of blood glucose concentration *Water and nitrogen balance* Hormones and human reproduction  ***Plant hormones*** *Control and coordination* *RP8 – investigating the effect of light/gravity of germinating seedlings* *Use of plant hormones* **Mock examinations**	 **Variation and evolution** Variation Evolution **Development and understanding of genetics and evolution** Evidence for evolution Extinction and Fossils *Theory of evolution* *Speciation* Classification of living organisms	 **Use of Biotechnology** Selective breeding Genetic engineering *Role of biotechnology* *Cloning*	 **Examination preparation**	 **GCSE Examinations**

Text in italics indicates syllabus content that is Separate Science Biology only RP indicates a required practical