

Year 12 Curriculum Map

Term	Teacher A (3 hrs/week)	Teacher B (3 hrs/week)	Notes
1	<p>Module 2.1: Cell structure Microscopy Magnification and Calibration Eukaryotic Cell Structure The Ultrastructure of Plant Cells Prokaryotic and Eukaryotic Cells</p>	<p>Module 2.2: Biological molecules Water Inorganic ions Carbohydrates Lipids Proteins Biochemical test</p>	PAG1: Microscopy PAG9: Biochemical tests PAG6: Chromatography of photosynthetic pigments
2	<p>Module 2.4: Enzymes Action of Enzymes Factors affecting enzymes Cofactors and enzyme inhibition Prosthetic groups</p> <p>Module 2.6: Cell division The cell cycle Mitosis Meiosis The organisation and specialisation of cells Stem cells</p>	<p>Module 2.3: Nucleotides & nucleic acids Nucleotides Polynucleotides Genes and protein synthesis Transcription and translation</p> <p>Module 2.5: Biological Membranes Structure and function of membranes Factors affecting membrane structure Diffusion and Osmosis Active transport</p>	PAG8: Diffusion PAG4: Enzymes PAG10 : Data logger PAG11: Transpiration
3	<p>Module 3.2: Transport in animals part 1 Transport systems in multicellular animals Blood vessels Blood, tissue fluid and lymph Transport of oxygen and carbon-dioxide in the blood The heart</p> <p>Module 3.3: Transport in plants part 2 Transport systems in dicotyledonous plants Water transport Transpiration Translocation Plant adaptations</p>	<p>Module 3.1: Exchange surfaces Specialized exchange surfaces Gaseous exchange in mammals Ventilation in Mammals Ventilation in Fish and Insects</p> <p>Module 5.1.1: Communication & homeostasis The principles of homeostasis Thermoregulation in ectotherms Thermoregulations and endotherms</p>	PAG5: Membranes PAG8: Diffusion PAG2: Heart/lung dissection

4	Module 5.1.4: Hormonal communication Hormonal communication Structure/function of pancreas Regulation of blood glucose Diabetes and its control Coordinated responses Controlling heart rate	Module 5.1.2: Excretion and homeostasis Structure and function of kidney Kidney and osmoregulation Urine and diagnosis Kidney failure	PAG3: Sampling techniques
5	Module 5.1.5: Plant response Plant hormones, growth in plants Plant responses to abiotic stress Plant response to herbivory Tropisms in plants Commercial use of plant hormones	Module 5.1.3: Animal response Nervous system Fight or flight Brain and reflex action Muscle contraction	PAG7: Photosynthesis light intensity
6	Practical Focus Week Module 5.2.1: Photosynthesis Energy cycles ATP synthesis Photosynthesis Factors affecting photosynthesis	Module 5.2.2: Respiration Glycolysis and link reaction Krebs cycle Oxidative phosphorylation Respiratory substrate Anaerobic respiration Practical Focus Week	Practical Focus Week Catch-up on all PAGs