



Year 13 Biology

Subject and Year Group	Autumn Year 13	Autumn 2 Year 13	Spring 1 Year 13	Spring 2 Year 13	Summer 1 Year 13	Summer 2 Year 13
Topic/Unit to be studied	Unit 5 (rest of) – Energy transfer in and between organisms Unit 7 (rest of) - Genetics, population, evolution and ecosystems		Unit 6 – Organisms respond to changes in their environment Unit 8 – Control of gene expression		Revision of content and maths skills	
Core Knowledge and skills	Energy transfer in and between organisms Respiration: Glycolysis Link reaction & Krebs Oxidative phosphorylation Energy in ecosystems: Food chains & energy transfer Productivity Nutrient cycles Fertilisers <u>Required practicals</u> RP9 – respiration in yeast Genetics, population, evolution and ecosystems Inheritance Genetic crosses Codominance & multiple alleles Sex- & Autosomal linkage Epistasis Population genetics Natural selection & evolution Isolation & speciation		Organisms respond Survival & response Plant growth factors Receptors & reflexes Heart rate Nervous coordination The nerve impulse Synapses Muscle contraction Skeletal muscles Homeostasis: Blood glucose The kidney & osmoregulation <u>Required practicals</u> RP10 – choice chambers/H mazes RP11 – Serial dilution and colorimetry Control of gene expression Mutations Stem cells Control of transcription & translation Epigenetics & cancer Recombinant DNA <i>In vivo</i> gene cloning <i>In vitro</i> gene cloning Screening & fingerprinting			
Assessment	End of Unit assessments including interleaving of previous topics (MCQ/short answer/long answer)		End of Unit assessments including interleaving of previous topics (MCQ/short answer/long answer)		End of Unit assessments including interleaving of previous topics (MCQ/short answer/long answer)	