

# ANNUAL LESSON PLAN FOR BIOLOGY, KEY STAGE 5, AS BIOLOGY (2021-2022)



Key Concepts



Term 1, September – December	Unit 4 Topic 5 Energy Flow, Ecosystems and the Environment	The need for energy in living organisms Work ATP Respiration Mitochondrial structure and function Respiration without oxygen Respiratory substrates Adaptations of rice for wet environments	60
	Topic 6 Microbiology, Immunity and Forensics	An energy transfer process The light dependent reactions of photosynthesis The light independent reactions of photosynthesis Chloroplast structure and function Factors necessary for photosynthesis C4 plants Trapping light energy	60
Term 2 – January – March	Unit 5 Topic 7 Respiration, Muscles and the Internal Environment	Homologous chromosomes Two types of nuclear division Meiosis Genetics Genotype affects phenotype Inheriting genes Multiple alleles Sex inheritance Sex linkage	30
	Topic 8 Coordination, Response and Gene Technology	Nervous communication Muscle contraction Hormonal communication Birth control Control and coordination in plants Variation Natural selection Evolution Artificial selection The Darwin–Wallace theory of evolution by natural selection Genetic engineering Tools for the gene technologist Genetic technology and medicine Gene therapy Genetic technology and agriculture	30

	Biodiversity, classification and conservation	Ecosystems Biodiversity Simpson's Index of Diversity Systematic sampling Correlation Classification	28
Term 3, April – June	Practical skills		30
	Revision -all topics		38
	Revision -all topics		36
			312