



Biology Curriculum Learning Journey

Knowledge & Concepts increase students depth/ challenge and build on previous learning where topics are revisited throughout their learning journey

Due to facility and resource considerations, not all classes study the same topics at the same time. The table below depicts the content covered within each year group and also how the curriculum progresses where topics are revisited.

		Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13
Half Term 1	Topics	Cells	Health and lifestyle	Cells	Cells and organisation	Biological responses	Biological molecules and Cells	Energy transfer in and between organisms, Organisms respond to changes in their environments
	Knowledge	Observing cells, microscopy, Plant and animals cell structures and Specialised cells,	Nutrients, Food tests, Unhealthy diet and digestive system, Bacteria and enzymes id digestion	Plant and animal cells, cell specialisation, respiration, diffusion, prokaryotic cell and active transport	Cell structure and transport	The human nervous system, Hormonal coordination, Homeostasis in action	Biological molecules, Nucleic acids,	Photosynthesis, Respiration and energy and ecosystems, Response to stimuli
Half Term 2	Topics	Cells	Health and lifestyle	Cell systems	Cell division and Organisation of organisms	Genetics and reproduction	Cells	Organisms respond to changes in their environments and
	Knowledge	movement into and out of cells, unicellular organisms	The effect of Drugs, Alcohol and smoking on the body	Cells to organ system, digestive system and enzymes, respiratory system and gas exchange, Leaf structure and photosynthesis, circulatory systems and transpiration	Stem cells, Mitosis and meiosis Organisation in animals and the digestive system	Reproduction, Variation and evolution, Genetics and evolution	Cell structure and Transport across cell membranes	Nervous coordination and muscles, Homeostasis,
Half Term 3	Topics	Structure and function of body systems	Ecosystems and adaptation	Fertilisation and Implantation in animals	Organising animals and plants	Ecology	Immunology	Genetics, Population and evolution
	Knowledge	Levels of organisation, gas exchange and breathing	Photosynthesis, Leaves, plants minerals chemosynthesis and aerobic and anaerobic respiration	Sexual reproduction, Preventing pregnancy and the menstrual cycle	Blood, blood vessels, heart and The respiratory system. Transport system in plants.	Adaptations, interdependence and competition, Organising and ecosystem,	Cell recognition and the immune system.	Inherited change, population and evolution and Population in ecosystems



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Half Term 4	Topics	Structure and function of body systems	Ecosystem processes	Fertilisation and Implantation in plants	Disease	Biodiversity and ecosystem	Organism exchange substances with their environment	The control of gene expression
	Knowledge	Skeleton, movement: joints and muscles	Food chains, food webs, disruption to food chains and webs, ecosystems	Investigating seed dispersal mechanisms, inheriting characteristics, asexual reproduction and cloning	Communicable diseases, Preventing and treating diseases,	Effect of Human population growth, air pollution, global warming and food security	Exchange and mass transport in animals and plants	Gene expression, Recombinant DNA technology
Half Term 5	Topics	Reproduction in animals	Adaptation and Inheritance	Variation	Disease	Exam revision	Genetic information, variation	Exam revision
	Knowledge	Adolescence, Puberty Male and female reproductive organs, Fertilisation and implantation, Development of fetus, The menstrual cycle	Competition and adaptation, adapting to change, variation – continuous and discontinuous	Genetic basis of Variation, adaptations, investigating competition	Non-communicable diseases – Cancer. Smoking and alcohol and their effects on body	Exam practice and technique	DNA, genes and protein synthesis,	Exam practice and technique
Half Term 6	Topics	Reproduction in plants	Adaptation and Inheritance	Natural selection	Bioenergetics	Exam revision	Variation and relationships between organisms	Exam revision
	Knowledge	Flowers and pollination, Fertilisation and germination, Seed dispersal	Inheritance, natural selection and extinction	Principle of Natural selection, Anti-biotic resistant bacteria, Maintaining biodiversity, ecosystems – biotic and abiotic factors	Photosynthesis and Respiration	Exam practice and technique	Genetic diversity, Biodiversity.	Exam practice and technique