

Trilogy (Combined) FOUNDATION BIOLOGY Checklist – Paper 1

Green – topics assessed

Black – may appear as low mark question or via 'linked questions'

Red – topics NOT assessed

Topic 1 - Cell Biology				
4.1.1 - Cell Structure	Eukaryotes and Prokaryotes			
	Animal and Plant Cells			
	Cell specialisation			
	Cell differentiation			
	Microscopy			
	Required practical activity 1: use a light microscope			
4.1.2 - Cell Division	Chromosomes			
	Mitosis and the cell cycle			
	Stem cells			
4.1.3 Transport in cells	Diffusion			
	Osmosis			
	Required practical activity 2: investigate the effect of a range of concentrations of salt or sugar solutions on the mass of plant tissue			
	Active transport			
Topic 2 - Organisation				
4.2.1 Principles of organisation	Principles of organisation			
4.2.2 Animal tissues, organs and organ system	The human digestive system			
	Required practical activity 3: use qualitative reagents to test for a range of carbohydrates, lipids and proteins			
	Required practical activity 4: investigate the effect of pH on the rate of reaction of amylase enzyme			
	The heart and blood vessels			
	Blood			
	Coronary heart disease: a non-communicable disease			
	Health issues			
	The effect of lifestyle on some non-communicable diseases			
	Cancer			

4.2.3 Plant tissues, organs and systems	Plant tissues			
	Plant organ system			
Topic 3 - Infection and response				
4.3.1 Communicable diseases	Communicable (infectious) diseases			
	Viral diseases			
	Bacterial diseases			
	Fungal diseases			
	Protist diseases			
	Human defence systems			
	Vaccination			
	Antibiotics and painkillers			
Discovery and development of drugs				
Topic 4 - Bioenergetics				
4.4.1 Photosynthesis	Photosynthetic reaction			
	Rate of photosynthesis			
	Required practical activity 5: investigate the effect of light intensity on the rate of photosynthesis using an aquatic organism such as pondweed			
	Uses of glucose from photosynthesis			
4.4.2 Respiration	Aerobic and anaerobic respiration			
	Response to exercise			
	Metabolism			

Trilogy (Combined) FOUNDATION BIOLOGY Checklist – Paper 2

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Topic 5 - Homeostasis and response				
4.5.1 Homeostasis	Homeostasis			
4.5.2 The human nervous system	Structure and function			
	Required practical activity 6: plan and carry out an investigation into the effect of a factor on human reaction time			
4.5.3 Hormonal coordination in humans	Human endocrine system			
	Control of blood glucose concentration			
	Hormones in human reproduction			
	Contraception			
Topic 6 - Inheritance, variation and evolution				
4.6.1 Reproduction	Sexual and asexual reproduction			
	Meiosis			
	DNA and the genome			
	Genetic inheritance			
	Inherited disorders			
	Sex determination			
4.6.2 Variation and evolution	Variation			
	Evolution			
	Selective breeding			
	Genetic engineering			
	Evidence for evolution			
	Fossils			
	Extinction			
	Resistant bacteria			
4.6.4 Classification of living organisms	Classification			

4.7 Ecology				
4.7.1 Adaptations, interdependence and competition	Communities			
	Abiotic factors			
	Biotic factors			
	Adaptations			
4.7.2 Organisation of an ecosystem	Levels of organisation (Food Chains and Food Web)			
	Required practical activity 7: measure the population size of a common species in a habitat. Use sampling techniques to investigate the effect of a factor on the distribution of this species.			
	How materials are cycled			
4.7.3 Biodiversity and the effect of human interaction on ecosystems	Biodiversity			
	Waste management			
	Land use			
	Deforestation			
	Global warming			
	Maintaining biodiversity			