A level Biology Curriculum Plan

Students study the AQA A level Biology specification. This will be delivered by 2 teachers in line with the following curriculum plan and using the AQA scheme of work and Kerboodle resources. Practical skills will be developed in year 12 with pupils given frequent opportunities to develop skills by following written procedures. In year 13, pupils will be given less guidance and there will be more of a focus on investigations.

Year 12

Half Term	**Teacher A** OWS		**Teacher B** KCR / LCN	
	Content 3.1 and 3.4	Required practical	Content 3.2 and 3.3	Required practical
1	3.1.1 Monomers and polymers 3.1.2 Carbohydrates 3.1.3 Lipids 3.1.4.1 General properties of proteins	Required practical 1: Investigation into the effect of a named variable on the rate of an enzyme controlled reaction	Cells 3.2.1.1 Structure of eukaryotic cells 3.2.1.2 Structure of prokaryotic cells and of viruses 3.2.1.3 Methods of studying cells 3.2.2 All cells arise from other cells	Required practical 2: Preparation of stained squashes of cells from root tips
2	3.1.4.2 Many proteins are enzymes 3.1.5.1 Structure of DNA and RNA 3.1.5.2 DNA replication 3.1.6 ATP 3.1.7 Water 3.1.8 Inorganic Ions		3.2.3 Transport across cell membranes	Required practical 3: Production of a dilution series of a solute to produce a calibration curve with which to identify the water potential of plant tissue Required practical 4: Investigation into the effect of a named variable on the permeability

				of cell-surface membrane
3	3.4.1 DNA, genes and chromosomes 3.4.2 DNA and protein synthesis		3.2.4 Cell recognition and the immune system 3.3.1 Surface area to volume ratio	Required practical 6: Use of aseptic techniques to investigate the effect of antimicrobial substances on microbial growth.
4	3.4.3 Genetic diversity can arise as a result of mutation or during meiosis 3.4.4 Genetic diversity and adaptation		3.3.2 Gas exchange 3.3.3 Digestion and absorption	
5	4.4.5 Species and taxonomy 3.4.6 Biodiversity within a community 3.4.7 Investigating diversity	RP 12 Distribution of species	3.3.4.1 Mass transport in animals 3.3.4.2 Mass transport in plants	Required practical 5: Dissection of animal or plant gas exchange system or mass transport system or of an organ within such a system
6	Consolidation of year 12 3.7.4 Populations in ecosystems		Consolidation of year 12 3.7.4 Populations in ecosystems	

Term	Teacher B		Teacher A	
	Content	Required practical	Content	Required practical
1	3.5 Energy transfers in and between organisms 3.6 Organisms respond to changes in their internal changes in their internal and external environments 3.5.2 Respiration	9. Investigation into the effect of a named variable on the rate of respiration of cultures of single-celled organisms	3.7 Genetics, populations, evolution and ecosystems 3.8 The Control of Gene Expression 3.7.1 Inheritance	
2	3.5.1 Photosynthesis	7. Use of chromatography to investigate the pigments isolated from leaves of different plants, eg leaves from shade tolerant and shade intolerant plants or leaves of different colours 8. Investigation into the effect of a named factor on the rate of dehydrogenase activity in extracts of chloroplasts	3.7.2 Populations 3.7.3 Evolution may lead to speciation	
2	3.5.3 Energy and ecosystems	10. Investigation into the effect of an environmental variable on the	3.8.1 Alteration of the sequence of bases	

Year 13 Mock 1 – Paper 1	3.5.4 Nutrient cycles 3.6.1 Stimuli, both internal and external, are detected and lead to a response	movement of an animal using either a choice chamber or a maze	in DNA can alter the structure of protein	
3 Year 13 Mock 2 Paper 2	3.6.2 Nervous coordination 3.6.3 Skeletal muscles are stimulated to contract by nerves and act as effectors		3.8.2 Gene expression is controlled by a number of features	
4	3.6.4 Homeostasis is the maintenance of a stable internal environment	11. Production of a dilution series of a glucose solution and use of colorimetric techniques to produce a calibration curve with which to identify the concentration of glucose in an unknown 'urine' sample	3.8.3 Using genome project 3.8.4 Gene technologies	
5	Revision and paper 3 preparation		Revision and paper 3 consolidation	

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