

AS / A Level Biology

Candidate Name .....

Topic	Specified practical work	Date completed	Competency					Teacher / Student comments
			1	2	3	4	5	
Biological Compounds	Food tests							
Cell structure	Calibration of the light microscope							
	Preparation and scientific drawing of a slide of living cells							
Cell membranes and transport	Determination of water potential by measuring changes in mass or length							
	Determination of solute potential by measuring the degree of incipient							
	Investigation into the permeability of cell membranes using beetroot							
Enzymes	Investigation into the effect of temperature or pH on enzyme activity							
	Investigation into the effect of enzyme or substrate concentration							
Nucleic Acids	Simple extraction of DNA from living material							
Genetic information is copied and passed on	Scientific drawing of cells from slides of root tip to show stages of mitosis							
	Scientific drawing of cells from prepared slides of developing anthers to show stages of meiosis							
All organisms are linked through their evolutionary history	Investigation into biodiversity in a habitat							
Adaptations for gas exchange	Investigation into stomatal numbers in leaves							
	Dissection of fish head to show the gas exchange system							
	Scientific drawing of a low power plan of a prepared slide of T.S. leaf							

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Adaptations for transport	Investigation into transpiration using a simple potometer							
	Scientific drawing of a low power plan of a prepared slide of T.S artery and vein							
	Dissection of mammalian heart							
Importance of ATP	Investigation of dehydrogenase activity using artificial hydrogen acceptors							
Photosynthesis	Investigation into the separation of chloroplast pigments by chromatography							
	Investigation into factors affecting the rate of photosynthesis							
	Investigation into the role of nitrogen and magnesium in plant growth							
Respiration	Investigation into factors affecting the rate of respiration in yeast							
Microbiology	Investigation into the numbers of bacteria in fermented milk							
Population size	Investigation into the abundance and distribution of organisms in a habitat							
Sexual reproduction in plants	Investigation of the digestion of starch agar using germinating seeds							
	Dissection of wind and insect-pollinated flowers							
	Scientific drawing of a low power plan of a prepared slide of an anther, including calculation of actual size and magnification of drawing							
Inheritance	Experiment to illustrate gene segregation including the use of the chi squared test in testing the significance of genetic outcomes							
Variation and evolution	Investigation of continuous variation in a species (including use of the Student's t-test)							
Homeostasis and the kidney	Dissection of kidney							