

Topic	Specified practical work	Date completed	Teacher / Student comments
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		

Topic	Specified practical work	Date completed	Teacher / Student comments
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		
Respiration	Investigation into factors affecting the rate of respiration in yeast		
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		
Microbiology	Investigation into the numbers of bacteria in fermented milk		
Population size	Investigation into the abundance and distribution of organisms in a habitat		
Homeostasis and the kidney	Dissection of kidney		
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)		