

Compulsory Practical Work in AS Biology

Unit 1

Practical work to include qualitative and quantitative biochemical tests for starch, reducing and non-reducing sugars and proteins using iodine solution, Benedict's reagent and biuret reagent, as appropriate.

Practical work to include experiments to investigate the effects of temperature, pH and enzyme concentration on enzyme activity using suitable enzymes; illustrations of enzyme immobilisation using lactase; the use of pectinase in the production of fruit juice

Practical work to include the setting up and use of a light microscope to view slides of suitable tissues and cells. Candidates should be able to make accurate drawings of cells and plans of tissues and should also be able to use a suitable graticule to make measurements and understand the concept of scale in relation to their drawings.

Practical work to include preparation and staining of root tip squashes to recognise and study stages in mitosis using a light microscope.

Unit 2B

Practical work should include the use of simple respirometers

Practical work to include demonstrations and measurements of transpiration using a potometer, stomatal counts.

Practical work to include the microscopic examination of stained blood films and the identification of cells.

Practical work to include an experimental investigation into the factors affecting the growth of pollen grains; make observations on preparations of insect testis squash.

Unit 2H

Practical work to include the use of simple apparatus to estimate vital capacity, variation of breathing rates with physical activity and quantitative comparisons of inspired and expired air.

Practical work to include investigation of the effects of physical activity on pulse rate.

Practical work to include the microscopic examination of stained blood films and the identification of cells.

Practical work to include microscopic examination of the histology of ovary and testis.

Unit 3

Practical work to include the estimation of pyramids of numbers and of fresh biomass using simple techniques for the collection and determination of fresh mass.