

2025 to 2016 O Level Biology 6093 Practical Analysis

Year	Experiments (Chapters)	Planning/ Question
2025	-Investigate the effect of different concentrations of enzyme extract from the pineapple fruit on the firmness of gelatin. (Chp 4) -Drawing of Mitochondria, Endoplasmic Reticulum with ribosomes. -Functions of Golgi body and mitochondria in cilia and role of cilia (Chp 1 and 7)	-Plan an investigation to find out the lowest temperature of fresh pineapple must be heated to for the jelly to be fully set.
2024	-Investigate the different concentrations of sodium chloride solution on the bending of pieces of a plant tissue. (Chp 2) -Xylem vessels features identification -Investigation of the effect of variation in light intensity on the rate of water uptake of leafy shoots of Angsana (Chp 12)	Describe the steps that student should follow to collect data for the investigation of effect on different air speeds on the rate of water uptake of leafy shoots of Angsana.
2023	-Investigate the effect of different concentration of glucose on the rate of respiration of a suspension of yeast cells. (Chp 7) -Drawing of Villus and explanation of structural features of small	Investigate the effect of temperature on the activity of mitochondria by suggesting one suitable control experiment and two variables to be kept constant.

	<i>intestine for absorption. (Chp 5)</i>	
2022	-Investigate the effect of hydrogen peroxide solution on the activity of catalase inside yeast cells. (Chp 4) -Investigation of inheritance of wing size. (Chp 18) -Drawing of sperm cells	<i>Plan an investigation to find optimum pH for catalase in yeast.</i>
2021	-Investigate the effect of the surface area: volume ratio on diffusion into model cells made of agar. (Chp 2) -Drawing of seeds of white mustard	TTC diffuses into cells and becomes pink or red colour where it comes in contact with active mitochondria a darker colour of the stain indicates where there are more active mitochondria. Plan an investigation to find out how the activity of mitochondria in root cells changes during the growth of a seed into a young plant.
2020	-Investigate the concentration of glucose in urine samples taken from a sample of healthy and unhealthy people. (Chp 3 and 8) -Drawing of lime fruit -Adaptions for Pollination (Chp 16)	<i>Plan an investigation to determine effect of temperature on the rate of diffusion of glucose through visking tubing.</i>
2019	-Investigate the effect of using chloroplast suspensions of different concentrations on rate of photosynthesis. (Chp 12) -Drawing of onion cell that has been plasmolyzed. (Chp 2)	<i>Outline how you would investigate the effect of light intensity on the rate of photosynthesis of a chloroplast suspension.</i>
2018	<i>-Investigate the rate of respiration of a</i>	<i>Outline a method that you could use to find the</i>

	<i>suspension of yeast cells at two different temperatures. (Chp 7)</i> <i>-Drawing of hibiscus leaf and labelling of vertical section leaf (Chp 12)</i>	<i>effect of pH on the rate of respiration of a suspension of yeast cells.</i>
2017	<i>-The concentration of ascorbic acid can be estimated using a modification of the starch test. (Chp 3)</i> <i>-Drawing of the artery and comparison of cross-sectional area of artery and capillary (Chp 6)</i>	<i>Outline the procedure that you would follow to find out if there is a relationship between light intensity and the concentration of ascorbic acid in leaves.</i>
2016	<i>-Investigate the effect of temperature on the activity of amylase. (Chp 3 and 4)</i> <i>-Drawing of the structures immediately surrounding the eye which provides it with protection (Chp 10)</i>	<i>Explain how you would modify the investigation that you carried out to estimate relative quantities of maltose produced at different temperatures. 150 seconds after reaction starts knowing that different concentrations of maltose gives a range of colours from green to red when tested using benedicts solutions.</i>
2015	<i>- Investigate the effect of soaking pieces of eggplant fruit in solutions of sodium chloride of different concentrations. (Chp 2)</i> <i>-Drawing of four different species of leaves.(Chp 12)</i> <i>-Variation (Chp 18)</i>	<i>Describe in detail how you used the apparatus provided to make the 7g/dm³ solution of sodium chloride.</i>

