



ORANGE HIGH SCHOOL

ASSESSMENT TASK NOTIFICATION

Subject	Biology
Topic	Cells as the Basis of Life
Class Teacher	Mrs J. Boardman & Miss A. Constant
Head Teacher	Mr A. Routh
Year	Year 11
Date Given	Term 1 Week 10
Date Due	Term 2 Week 3 (In double period – specific date to be given by classroom teacher)
Weighting	30 % (working scientifically 25%, knowledge 5%)

Assessment Outline

This task will involve you completing a first-hand practical investigation.

It will involve you conducting a practical task and completing an analysis of the task.

For this task you must have a good understanding of the scientific method. Aim, hypothesis, safety, equipment, material, method, results presentation and analysis, discussion and a scientific conclusion.

There could be questions asked on any aspect of the working scientifically skills, including practicals you have completed this year and an understanding of the biological knowledge involved in those practicals.

Non-completion of Task:

If you know you are going to be away on the day that the task is due, you must make alternative arrangements with your teacher beforehand. If you are suddenly away on the day that the task is due, you must contact your teacher or Head Teacher on your return to school. Documentation will be required in both classes.

Plagiarism:

Plagiarism, the using of the work of others without acknowledgement will incur serious penalties and may result in zero award. Any cheating will also incur penalties.

Failure to follow the above procedures may result in a zero award.

The policies and procedures that are outlined on the ROSA booklet will be followed regarding the non-completion of assessment tasks.

BIO11 – 2 Designs and evaluates investigations in order to obtain primary and secondary data and information

BIO11 – 3 Conducts investigations to collect valid and reliable primary and secondary data and information

BIO11 – 5 Analyses and evaluates primary and secondary data and information

BIO11 – 6 Solves scientific problems using primary and secondary data, critical thinking skills and scientific processes

BIO11 – 8 describes single cells as the basis for all life by analysing and explaining cells' ultrastructure and biochemical processes

The following syllabus outcomes may be assessed during the assessment task:

- investigate a variety of prokaryotic and eukaryotic cell structures, including but not limited to:
 - drawing scaled diagrams of a variety of cells
- investigate the way in which materials can move into and out of cells, including but not limited to:
 - conducting a practical investigation modelling diffusion and osmosis
- investigate the way in which materials can move into and out of cells, including but not limited to:
 - relating the exchange of materials across membranes to the surface-area-to-volume ratio, concentration gradients and characteristics of the materials being exchanged
- conduct a practical investigation to model the action of enzymes in cells
- relating the exchange of materials across membranes to the surface-area-to-volume ratio, concentration gradients and characteristics of the materials being exchanged
- conduct a practical investigation to model the action of enzymes in cells
- investigate the effects of the environment on enzyme activity through the collection of primary or secondary data
- derive trends, patterns and relationships in data and information
- assess the relevance, accuracy, validity and reliability of primary and secondary data and suggest improvements to investigations
- select qualitative and quantitative data and information and represent them using a range of formats, digital technologies and appropriate media
- employ and evaluate safe work practices and manage risks
- justify and evaluate the use of variables and experimental controls to ensure that a valid procedure is developed that allows for the reliable collection of data

An understanding of the following practicals may help you to answer some questions in the examination:

- Observing cells under a microscope, and identifying their structures
- Calculating the field of view under a microscope and using this to calculate cell size and scale diagrams
- Understanding the requirements for plant growth
- Practical activities that model diffusion and osmosis
- A practical that shows the effect of surface area to volume ratio on diffusion into cells
- Practicals that show the effect of different environmental factors on enzyme activity levels

In addition, you must understand the scientific method for each practical and you may be asked to answer questions on:

Aim, hypothesis, safety, method, equipment, results (including constructing graphs and tables), discussions and conclusions for any of these practical tasks where they are appropriate, and you have done them in class.