

DAPTO HIGH SCHOOL

PRELIMINARY BIOLOGY ASSESSMENT TASK

Outcomes to be Assessed:

- P6 – Explains how cell ultrastructure and the coordinated activities of cells, tissues and organs contribute to macroscopic processes in organisms
- P 11 - identifies and implements improvements to investigation plans
- P 12 - discusses the validity and reliability of data gathered from first-hand investigations and secondary sources
- P 13- identifies appropriate terminology and reporting styles to communicate information and understanding in biology
- P 14 - draws valid conclusions from gathered data and information
- P 15 - implements strategies to work effectively as an individual or as a team member

First Hand Investigation : Surface Area and Rate of Reaction

1. *Design an experiment that investigates the relationship between surface area and the rate of reaction.*
2. *Conduct the experiment using the equipment provided.*
3. *Complete and hand in the write up by the end of the assessment period.*

Marking Rubric:

Outcomes	1 Mark	2 Marks	3 Marks	4 Marks	5 Marks
P 6	Identifies that there is a relationship between surface area and rate of reaction	Identifies and describes the relationship between surface area and rate of reaction	Identifies, describes the relationship and has a concept of how that relationship affects organism	Identifies, describes the relationship and has a general understanding of how that relationship affects an organism	Identifies, describes the relationship and has a comprehensive understanding of how that relationship affects an organism
P 11	Conducts an experiment	Conducts an appropriate experiment	Identifies potential hazards and how they can be overcome	Correctly identifies the type of data to be collected	Identifies the Independent, Dependent and Controlling Variables
P 12	Collects some data	Collects appropriate data	Defines validity and reliability	Identifies elements within the investigation that might affect validity and reliability	Identifies elements within the investigation that might affect validity and reliability and discusses how those elements can be overcome

Outcomes	1 Mark	2 Marks	3 Marks	4 Marks	5 Marks
P 13	Uses general Biological terms	Uses specific Biological terms	Basic data collected and displayed	Comprehensive data collected and displayed in one form (ie a table or graph)	Comprehsnive data collected and displayed in more than one appropriate form (ie a table or graph)
P 14	Correctly identifies and explains the problem to be investigated	Identifies a possible hypothesis	Uses collected data to make some generalisations	Uses collected data to show cause and effect relationships	Draws valid conclusions based upon those cause and effect relationships whilst referring to the original hypothesis
P 15	Completes part of the experiment	Completes most of the experimental procedure	Uses time efficiently to complete the experimental procedure	Uses time efficiently to complete the experimental procedure + completes some of the write up	Uses time efficiently to complete the experimental procedure + completes all of the write up