Demonstrate understanding of plant structure, functions, and processes.

Applied Assessment Task

Learner to complete.

Result:	Standard Achieved [ ]	Further Evidence Required [ ]
Comments/Areas to revisit:	_____	
Assessor's name:	_____	
Signature:	_____	Date: _____

Assessor to complete

Learner Name:	_____	
Learner Declaration:	I declare that all the work is my own.	
Signature:	_____	Date: _____

Re-assessment (if required) - Assessor to complete

Re-assessment date:	_____	
Result:	Standard Achieved [ ]	Further Evidence Required [ ]
Signature:	_____	Date: _____

Instructions

- Complete your details on the front page.
- You must show that you have achieved the standard by fully completing this assessment.
- If you do not attain the standard, you will have an opportunity to attempt the assessment again.

Outcome 1 – Describe plant structures and their functions.

Range: plant structures – cells, roots, stems, leaves, flowers, and fruits.

1.1 Describe the structure and functions of plant structures in terms of their importance for plant growth or reproduction.

Complete the table below to show how the following plant structures are important to plant growth or reproduction.

Category	**Why is it important for plant growth or reproduction?**
Cell	
Root	
Stem	
Leaf	
Flower	
Fruit	

Outcome 2 - Demonstrate knowledge of plant tissue structures and their importance for plant growth.

2.1 Describe plant tissue structures in terms of their importance to plant growth.

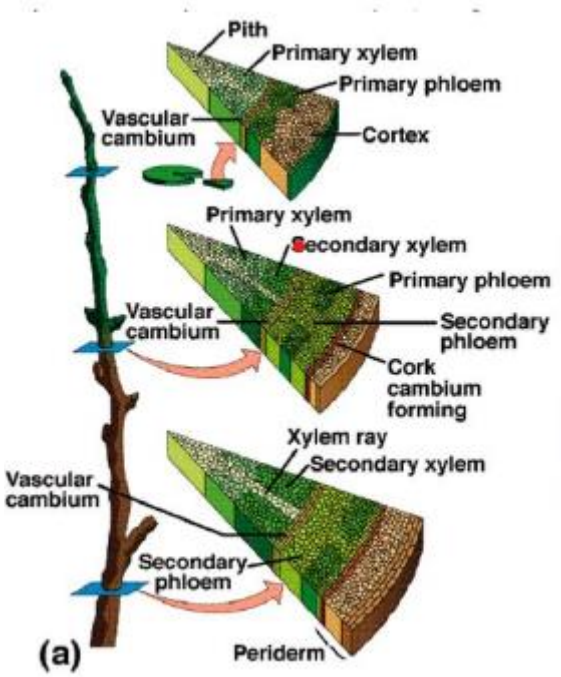
Range: plant tissue structures include but are limited to – vascular system, cambium tissue, meristem tissue, epidermal tissue, storage tissue.

Complete the table below to show how the following plant tissue types are important to plant growth.

Tissue type	Why is it important for plant growth?
Vascular system	
Cambium tissue	
Meristem tissue	
Epidermal tissue	
Storage tissue	

2.2 Identify the age of particular shoots in terms of the internal and external plant signs.

The diagram below shows secondary growth occurring in a young apple tree stem.



How could you tell the relative ages of a young shoot and a much older shoot than shown here by looking at the internal AND the external parts of the stem?

Outcome 3 – Describe the importance of plant processes for plant growth and/or development.

Range: plant processes – photosynthesis, respiration, water uptake and transpiration, nutrient uptake, pollination, fertilisation, seed, and fruit formation.

3.1 Describe plant processes in terms of their importance for optimum plant growth and/or development.

Complete the table below to show the importance of plant processes for optimum plant growth and/or development.

Plant process	Why is it important for optimum plant growth and/or development
Photosynthesis	
Respiration	
Water uptake and transpiration	
Nutrient uptake	

Pollination	
Fertilisation	
Seed and fruit formation	

Outcome 4 – Describe the effects of environmental factors on plant processes.

4.1 Describe environmental factors in terms of their effect on plant processes.

Range:

- plant processes include but are not limited to – photosynthesis, respiration, water uptake and transpiration, nutrient uptake, pollination, fertilisation, seed, and fruit formation.
- environmental factors may include but are not limited to – light, temperature, water, wind, oxygen, frost, and carbon dioxide.
- evidence of two environmental factors for each plant process is required.

Complete the table below to show the effects of environmental factors on plant processes. Choose two environmental factors for each plant process.

Plant Process	Environmental Factor	Effect of this Environmental Factor on this Plant Process
Photosynthesis	1)	
	2)	
Respiration	1)	
	2)	
Water Uptake and Transpiration	1)	
	2)	

Nutrient uptake	1)	
	2)	
Pollination	1)	
	2)	
Fertilisation	1)	
	2)	
Seed, and fruit formation.	1)	
	2)	

4.1 You are tasked with growing native trees from cuttings in a glasshouse. You want to reduce transpiration. This can be done by either providing a more humid atmosphere or by doing something to reduce photosynthesis. What are some specific things you could do? What is the best choice and why?

At least 5 correct answers are required.

General Comments

Assessors must make a comment regarding the candidate's overall competency in this unit standard.

Final Sign-off Candidate is competent for this unit standard.

Assessor name: _____

Assessor signature: _____

Date completed: _____