

# **ASSESSMENT GUIDELINES**

## **Unit 22178**

Demonstrate knowledge of plant processes and  
plant life cycles

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Level 3, Credit 5, version 1

# Demonstrate knowledge of plant processes and plant life cycles

Unit standard 22178

Level 3, Credit 5, Version 1

## Level of performance required for this unit standard

This is a level 3 unit standard. At this level trainees are expected to demonstrate the following abilities when completing assessment tasks:

- To work under general supervision, with some independence; with significant responsibility for the standard of the outcome achieved.
- To apply technical skills and knowledge to complete the task to the specified standard, in a familiar context.
- To interpret available information, and use discretion and judgment.

## Workplace assessment:

For guidelines on Workplace Assessment, please refer to the NZHITO Workplace Assessors Manual, and for further information, please contact: NZHITO, P O Box 8638, Christchurch. Ph 03 9644 735, fax 03 9644 737, website [www.hortito.org.nz](http://www.hortito.org.nz)

## Special notes:

None

**Unit 22178: Demonstrate knowledge of plant processes and plant life cycles  
(Apprentice copy)**

<b>ELEMENT</b>	<b>Competent</b>	<b>Range of evidence an assessor should consider</b>
<b>Element 1</b> Demonstrate knowledge of plant processes.	<b>Yes/No</b>	<ul style="list-style-type: none"> <li>▪ Describe photosynthesis in terms of its importance to plant growth and development.</li> <li>▪ Describe respiration in terms of its importance to plant growth.</li> <li>▪ Describe water uptake, movement and transpiration, in terms of plant growth and development.</li> <li>▪ Describe the nutrient uptake and uses in terms of plant growth.</li> <li>▪ Describe pollination, fertilization, seed and fruit formation in terms of their importance to plant regeneration.</li> </ul>
<b>Element 2</b> Describe how environmental factors affect plant processes. Range: light, temperature, water, wind, oxygen, and carbon dioxide.	<b>Yes/No</b>	<ul style="list-style-type: none"> <li>▪ Describe photosynthesis in terms of how it is affected by environmental factors.</li> <li>▪ Describe respiration in terms of how it is affected by environmental factors.</li> <li>▪ Describe water uptake and transpiration in terms of how they are affected by environmental factors.</li> <li>▪ Describe the nutrient uptake terms of how it is affected by environmental factors.</li> <li>▪ Describe pollination, fertilization, seed and fruit formation in terms of how they are affected by environmental factors.</li> </ul>
<b>Element 3</b> Demonstrate knowledge of plant life cycles.	<b>Yes/No</b>	<ul style="list-style-type: none"> <li>▪ Describe plant life cycles in terms of their specific characteristics. Range: annuals, biennials, perennials.</li> <li>▪ Compare plant life cycles in terms of their ability to regenerate offspring. Range: bryophytes, ferns, gymnosperms and angiosperms.</li> </ul>

\_\_\_\_\_  
*(Name of Apprentice)*

is **Competent / Not yet competent** in Unit Standard 22178. (version 1)

**Signed (Assessor):** \_\_\_\_\_

WPA Registration Number: \_\_\_\_\_ Date: \_\_\_\_\_

**Unit 22178: Demonstrate knowledge of plant processes and plant life cycles  
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