

## Achievement Standard

<b>Subject Reference</b>	Biology 1.4		
<b>Title</b>	Demonstrate understanding of biological ideas relating to the life cycle of flowering plants		
<b>Level</b>	1	<b>Credits</b>	4
		<b>Assessment</b>	External
<b>Subfield</b>	Science		
<b>Domain</b>	Biology		
<b>Status</b>	Registered	<b>Status date</b>	30 November 2010
<b>Planned review date</b>	31 December 2019	<b>Date version published</b>	20 November 2014

This achievement standard involves the demonstration of understanding of biological ideas relating to the life cycle of flowering plants.

### Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none"> <li>Demonstrate understanding of biological ideas relating to the life cycle of flowering plants.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate in-depth understanding of biological ideas relating to the life cycle of flowering plants.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate comprehensive understanding of biological ideas relating to the life cycle of flowering plants.</li> </ul>

### Explanatory Notes

- This achievement standard is derived from *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007, Level 6. It is aligned with the Life Process achievement objective in the Living World strand, and is related to the material in the *Teaching and Learning Guide for Biology*, Ministry of Education, 2010 at <http://seniorsecondary.tki.org.nz>.

This standard is also derived from Te Marautanga o Aotearoa. For details of Te Marautanga o Aotearoa achievement objectives to which this standard relates, see the [Papa Whakaako](#).

- Demonstrate understanding* involves defining, using annotated diagrams, and giving characteristics of, or an account of, the life cycle of flowering plants.
- Demonstrate in-depth understanding* involves explaining the plant processes and biological ideas relating to the life cycle of flowering plants.

- 4 *Demonstrate comprehensive understanding* involves linking biological ideas relating to the life cycle of flowering plants. It may involve explaining, elaborating, applying, justifying, relating, evaluating, comparing and contrasting, or analysing.
- 5 The plant processes related to *the life cycle of flowering* plants will be selected from:
- asexual and sexual reproduction of flowering plants (including dispersal)
  - germination and growth (including development such as flowering, primary and secondary growth and photosynthesis).
- 6 Biological ideas relating to *the life cycle of flowering plants* will be selected from:
- related life processes
  - structural components involved with the plant processes
  - the functioning of the structural components
  - the overall functioning of the plant processes
  - products or outcomes of the plant processes (including raw materials and requirements)
  - the effect of environmental factors, such as light intensity, temperature, wind, moisture and oxygen, on the selected plant processes.
- 7 Assessment Specifications for this achievement standard can be accessed through the Biology Resources page found at [www.nzqa.govt.nz/ncea/resources](http://www.nzqa.govt.nz/ncea/resources).
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### Quality Assurance

- 1 Providers and Industry Training Organisations must have been granted consent to assess by NZQA before they can register credits from assessment against achievement standards.
- 2 Organisations with consent to assess and Industry Training Organisations assessing against achievement standards must engage with the moderation system that applies to those achievement standards.

Consent and Moderation Requirements (CMR) reference

0233