

Achievement Standard

Subject Reference Biology 1.4

Title Demonstrate understanding of biological ideas relating to the life cycle of flowering plants

Level 1 **Credits** 4 **Assessment** External

Subfield Science

Domain Biology

Status Registered **Status date** 30 November 2010

Planned review date 31 December 2016 **Date version published** 12 December 2013

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

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.
-

Quality Assurance

- 1 Providers and Industry Training Organisations must be accredited by NZQA before they can register credits from assessment against achievement standards.
- 2 Accredited providers and Industry Training Organisations assessing against achievement standards must engage with the moderation system that applies to those achievement standards.

Accreditation and Moderation Action Plan (AMAP) reference

0233