

Achievement Standard

Subject Reference	Biology 2.3		
Title	Demonstrate understanding of adaptation of plants or animals to their way of life		
Level	2	Credits	3
		Assessment	Internal
Subfield	Science		
Domain	Biology		
Status	Registered	Status date	17 November 2011
Planned review date	31 December 2014	Date version published	17 November 2011

This achievement standard involves demonstrating understanding of adaptation of plants or animals to their way of life.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none"> Demonstrate understanding of adaptation of plants or animals to their way of life. 	<ul style="list-style-type: none"> Demonstrate in-depth understanding of adaptation of plants or animals to their way of life. 	<ul style="list-style-type: none"> Demonstrate comprehensive understanding of adaptation of plants or animals to their way of life.

Explanatory Notes

- This achievement standard is derived from *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007, Level 7. It is aligned with the following achievement objective in the Living World strand:
Life Processes
 - Explore the diverse ways in which animals and plants carry out the life processes and is related to the material in the *Teaching and Learning Guide for Biology*, Ministry of Education, 2010 at <http://seniorsecondary.tki.org.nz>.
- Demonstrate understanding* involves describing the adaptations and identifying the aspects of the adaptations that enable each organism to carry out its life process(es) in order to survive in its habitat.

Demonstrate in-depth understanding involves providing a biological reason that explains how or why the adaptations enable each organism to carry out its life process(es) in order to survive in its habitat.

Demonstrate comprehensive understanding involves showing understanding by linking several biological ideas. The linking of ideas may involve justifying, evaluating, comparing and contrasting, or analysing, and must include consideration of the two points from below appropriate to the chosen context.

In the context of *understanding of adaptation* related to one life process over three taxonomic or functional groups of multi-cellular plants or animals:

- comparing diversity of adaptation in response to the same demand across different taxonomic or functional groups
- limitations and advantages involved in each feature within each organism

In the context of *understanding of adaptation* across two related life processes within one taxonomic or functional group:

- connections between two life processes within each organism which enhance the effectiveness of both processes
- limitations and advantages involved in each feature within each organism.

- 3 *Understanding of adaptation* is demonstrated in relation to one life process over three taxonomic or functional groups of multi-cellular plants or animals, or across two related life processes within one taxonomic or functional group.
- 4 *Adaptation* involves the range of ways in which organisms have developed strategies to carry out the life processes. An adaptation refers to a feature and its function as it enables an organism to carry out a life process and thus occupy a specific ecological niche. It may include structural, behavioural, or physiological features of an organism. An adaptation provides an advantage for the organism in its specific habitat and ecological niche.
- 5 Way of life encompasses the ways in which an organism carries out all its life processes. It includes:
- relationships with other organisms – competition, predation, parasitism, mutualism
 - reproductive strategies
 - adaptations to the physical habitat.
- 6 Life processes are selected from:
- internal transport
 - gas exchange
 - transpiration
 - nutrition
 - excretion
 - support and movement
 - sensitivity and co-ordination
 - reproduction.
- 7 Conditions of Assessment related to this achievement standard can be found at www.tki.org.nz/e/community/ncea/conditions-assessment.php.

Replacement Information

This achievement standard replaced unit standard 6311.

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