

Achievement Standard

Subject Reference Biology 1.5

Title Describe the control of an introduced species that affects native species

Level 1 **Credits** 2 **Assessment** Internal

Subfield Science

Domain Biology

Status Registered **Status date** 5 November 2007

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This achievement standard involves the description of the control of an introduced species that affects native species.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none"> Describe the control of an introduced species that affects native species. 	<ul style="list-style-type: none"> Explain the control of an introduced species that affects native species. 	<ul style="list-style-type: none"> Discuss the control of an introduced species that affects native species.

Explanatory Notes

- This achievement standard is derived from *Biology in the New Zealand Curriculum*, Learning Media, Ministry of Education, 1994, p. 14, achievement objective 6.3 (a).
- Procedures outlined in *Safety and Science: A Guidance Manual for New Zealand Schools*, Learning Media, Ministry of Education, 2000, should be followed. Investigations should comply with the Animal Welfare Act 1999, as outlined in *Caring for Animals: A Guide for Teachers, Early Childhood Educators, and Students*, Learning Media, Ministry of Education, 1999.
- Both the *introduced* and *native species* need to be clearly identified using common or scientific names, eg kiwi, not just 'birds'. It is appropriate to name a community where the effect of the introduced species is non-selective, eg old man's beard grows over the tall trees in a bush community, wild ginger replaces the forest floor layer.
- Information about how an introduced species affects native species could come from direct observations, collection of field data, interviews, guest speaker, tables, graphs, resource sheets, photos, videos, websites, reference texts.

- 5 Students are expected to produce information relating to:
- how the introduced species affects native species
 - methods used to control the introduced species
 - effectiveness of the control methods.
- 6 How the *introduced species affects the native species* could relate to: change in population numbers, change in reproduction rate, changes in age structure, inability to carry out part of a life cycle, habitat reduction or increase, reduced or increased availability of resources (eg shading), increased competition.
- 7 The method used *to control the introduced species* could be: biological, mechanical, chemical or cultural. For example, introducing seed-eating insects (biological), digging out roots, trapping (mechanical), spraying with weed killer (chemical), and removal of a habitat requirement (cultural, manipulation of the environment).
- 8 The effectiveness of control methods could relate to: short- or long-term consequences for introduced and native species, biological limitations of the method (fitting with life cycle, time of year, effect on non-target species, effect on the food chain, accumulation in environment, etc), other limitations (lack of resources, cost, time taken, etc), advantages of the methods (species enrichment, acts on specific organisms, etc).
- 9 Terms:
- *Describe* requires the student to define, use annotated diagrams, give characteristics of, or an account of.
 - *Explain* requires the student to provide a reason as to how or why something occurs.
 - *Discuss* requires the student to show understanding by linking biological ideas. It may involve students in elaborating, applying, justifying, relating, evaluating, comparing and contrasting, and analysing.
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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

0226