Achievement Standard

Subject Reference Science 2.3

Title Describe the factors and processes involved in the evolution of New Zealand's plants and animals

Level 2 **Credits** 4 **Assessment** External

Subfield Science

Domain Science – Core

Registration date 20 October 2004 **Date version published** 20 October 2004

This achievement standard involves describing the factors and processes involved in the evolution of New Zealand's plants and animals.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
• Describe the factors and processes involved in the evolution of New Zealand's plants and animals.	• Explain the factors and processes involved in the evolution of New Zealand's plants and animals.	• Discuss the factors and processes involved in the evolution of New Zealand's plants and animals.

Explanatory Notes

1 This achievement standard is derived from *Science in the New Zealand Curriculum,* Learning Media, Ministry of Education, 1993, Making sense of the Living World pp. 66-67.
This achievement standard is also related to *Pūtaiao i roto i te Marautanga o Aotearoa,* Learning Media, Ministry of Education, 1996, Ō Mataora: Te Kune, pp. 30-31.

2 *New Zealand's plants and animals* means species of plant and animal that are endemic to New Zealand. Examples include takahe, weta, pingao, short-tailed bat, pohutukawa, tuatara, kaka, southern rata.

3 *Factors* involved in the evolution of New Zealand's plants and animals are:
- geological and could include: plate tectonics and the resulting effects such as the break-up of Gondwanaland, changing sea levels in the Tertiary period, volcanism, mountain uplift, and climatic changes
- biological and could include: predation, competition, range of pollinator species.

4 *Processes* involved in the evolution of New Zealand's plants and animals are those that affect the gene pool and could include: mutations, genetic variation, genetic isolation, founder effect, genetic drift, differential selection pressures, bottleneck effect.

5 Terms:
- *Describe* requires the student to give characteristics of, or an account of.
- *Explain* requires the student to provide reasons for how or why.
- *Discuss* requires the student to link scientific ideas to justify, relate, evaluate, compare and contrast, or analyse.

Replacement Information
This achievement standard replaced AS90314.

Quality Assurance

1 Providers and Industry Training Organisations must be accredited by the Qualifications Authority 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