

Achievement Standard

Subject Reference Biology 2.3

Title Describe genetic variation and change

Level 2 **Credits** 3 **Assessment** External

Subfield Science

Domain Biology

Registration date 26 November 2004 **Date version published** 26 November 2004

This achievement standard involves describing biological concepts and processes that relate to genetic variation and change.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none">Describe biological concepts and processes that relate to genetic variation and change.	<ul style="list-style-type: none">Explain biological concepts and processes that relate to genetic variation and change.	<ul style="list-style-type: none">Discuss biological concepts and processes that relate to genetic variation and change.

Explanatory Notes

- 1 This achievement standard is derived from *Biology in the New Zealand Curriculum*, Learning Media, Ministry of Education, 1994, pp. 20-26, achievement objective 7.2.
- 2 Biological concepts and processes relating to *genetic variation* will be selected from:
 - genetic biodiversity - allele frequencies, gene pools
 - mutations as a source of variation
 - independent assortment, segregation, and recombination during meiosis
 - dihybrid inheritance.

- 3 Biological concepts and processes relating to *genetic change*, ie where the gene pool is affected, will be selected from:
- natural selection
 - migration
 - mutation
 - genetic drift
 - founder effect
 - bottleneck effect.
- 4 Terms:
- *Describe* requires the student to define, 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 justifying, relating, evaluating, comparing and contrasting, or analysing.
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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.