

Achievement Standard

Subject Reference Biology 3.6

Title Describe applications of biotechnological techniques

Level 3 **Credits** 3 **Assessment** Internal

Subfield Science

Domain Biology

Status Expiring **Status date** 4 December 2012

This achievement standard is expiring. Assessment against the standard must take place before the expiry date set out below.

Expiry date 31 December 2013 **Date version published** 4 December 2012

This achievement standard involves the description of applications of biotechnological techniques to meet human needs and demands.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none"> Describe applications of biotechnological techniques to meet human needs and demands. 	<ul style="list-style-type: none"> Explain applications of biotechnological techniques to meet human needs and demands. 	<ul style="list-style-type: none"> Discuss applications of biotechnological techniques to meet human needs and demands.

Explanatory Notes

- This achievement standard is derived from *Biology in the New Zealand Curriculum*, Learning Media, Ministry of Education, 1994, p. 28, achievement objective 8.3 (b).
- Techniques* must be relevant to the application and may include: PCR, ligation, use of restriction enzymes, gel electrophoresis, DNA sequencing, DNA chips, tissue culture. Techniques will be considered in the context of a relevant application.
- Applications* will be selected from: gene cloning, transgenesis, DNA profiling, genome analysis, stem cell research, xenotransplantation. Applications are to be considered in the context of meeting human needs or demands.

4 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 justifying, relating, evaluating, comparing and contrasting, and analysing.
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Replacement Information

This achievement standard has been replaced by AS91607.

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

0226