

## Achievement Standard

|                            |  |                               |                  |
|----------------------------|--|-------------------------------|------------------|
| <b>Subject Reference</b>   | Biology 3.2  |                               |                  |
| <b>Title</b>               | Integrate biological knowledge to develop an informed response to a socio-scientific issue |                               |                  |
| <b>Level</b>               | 3  | <b>Credits</b>                | 3                |
|                            |  | <b>Assessment</b>             | Internal         |
| <b>Subfield</b>            | Science  |                               |                  |
| <b>Domain</b>              | Biology  |                               |                  |
| <b>Status</b>              | Registered   | <b>Status date</b>            | 4 December 2012  |
| <b>Planned review date</b> | 31 December 2019   | <b>Date version published</b> | 17 November 2016 |

This achievement standard involves integrating biological knowledge to develop an informed response to a socio-scientific issue.

### Achievement Criteria

| Achievement   | Achievement with Merit  | Achievement with Excellence  |
|---|---|--|
| <ul style="list-style-type: none"> <li>Integrate biological knowledge to develop an informed response to a socio-scientific issue.</li> </ul> | <ul style="list-style-type: none"> <li>Integrate biological knowledge to develop a reasoned informed response to a socio-scientific issue.</li> </ul> | <ul style="list-style-type: none"> <li>Integrate biological knowledge to develop a comprehensive informed response to a socio-scientific issue.</li> </ul> |

### Explanatory Notes

- This achievement standard is derived from *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007, Level 8 within the Science learning area. It is aligned with the following achievement objective from the Nature of Science strand.
  - Participating and contributing, 'Use relevant information to develop a coherent understanding of socio-scientific issues that concern them, to identify possible responses at both personal and societal levels'.

It is also related to the material in the *Teaching and Learning Guide for Biology*, Ministry of Education, 2010 at <http://seniorsecondary.tki.org.nz>.

This standard is also derived from *Te Marautanga o Aotearoa*. For details of *Te Marautanga o Aotearoa* achievement objectives to which this standard relates, see the [Papa Whakaako](#) for the relevant learning area.

- 2 *Integrate biological knowledge to develop an informed response* involves:
- presenting a personal position, developed using relevant biological knowledge
  - proposing action(s) at a personal and/or societal level.

*Integrate biological knowledge to develop a reasoned informed response* involves:

- explaining why the position and the action(s) have been chosen.

*Integrate biological knowledge to develop a comprehensive informed response* involves:

- justifying the personal position and proposed action(s) by analysing and evaluating the biological knowledge related to the issue. This may include:
  - comparing the significance of implications
  - considering the likely effectiveness of the proposed action(s)
  - commenting on sources and information, considering ideas such as
    - i validity – currency, peer review status, scientific acceptance
    - ii bias – attitudes, values, beliefs.

- 3 *Integrate* refers to selecting and collating relevant biological knowledge to develop an informed response.

- 4 A *socio-scientific issue* has both biological and social implications. The issue is one for which people hold different opinions or viewpoints. Social implications may be economic, ethical, cultural, or environmental.

- 5 *Biological knowledge* includes:
- biological concepts and processes relating to the issue
  - biological and social implications of the issue
  - differing opinions or viewpoints about the issue.

- 6 Conditions of Assessment related to this achievement standard can be found at [www.tki.org.nz/e/community/ncea/conditions-assessment.php](http://www.tki.org.nz/e/community/ncea/conditions-assessment.php).

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### Replacement Information

This achievement standard replaced unit standard 6319 and AS90714.

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### 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