Achievement Standard

Subject Reference	Chemistry 1.2				
Title	Demonstrate understanding of the chemistry in a technological application				
Level	1	**Credits**	2	**Assessment**	Internal
Subfield	Science				
Domain	Chemistry				
Status	Registered	**Status date**	30 November 2010		
Planned review date	31 December 2020	**Date version published**	20 November 2014		

This achievement standard involves demonstrating understanding of the chemistry in a technological application.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
• Demonstrate understanding of the chemistry in a technological application.	• Demonstrate in-depth understanding of the chemistry in a technological application.	• Demonstrate comprehensive understanding of the chemistry in a technological application.

Explanatory Notes

1 This achievement standard is derived from *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007, Level 6. It is aligned with the Communicating in Science achievement objective in the Nature of Science strand and the Chemistry and Society achievement objective in the Material World strand, and is related to the material in the *Teaching and Learning Guide for Chemistry*, 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.

2 *Demonstrate understanding* typically involves providing characteristics of, or an account of, the chemistry related to the use of the chosen application.

3 *Demonstrate in-depth understanding* typically involves explaining how or why the chemistry applies to the use of the chosen application.

4 *Demonstrate comprehensive understanding* typically involves linking the chemistry applicable to the chosen application with its use. The linking may include explaining, elaborating, justifying, relating, evaluating, comparing and contrasting, or analysing.

5 *Technological application* means a use of chemistry to meet the needs of society. Examples include – food and beverage chemistry, acids and bases in the home and/or in industry, sources of energy, cosmetics, detergents, pharmaceuticals. The chosen *technological application* must be based on situations that involve chemical principles.

6 Conditions of Assessment related to this achievement standard can be found at http://ncea.tki.org.nz/Resources-for-Internally-Assessed-Achievement-Standards.

Replacement Information
This achievement standard replaced AS90170.

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