

Achievement Standard

Subject Reference	Processing Technologies 1.61		
Title	Demonstrate understanding of basic concepts used in processing		
Level	1	Credits	4
		Assessment	Internal
Subfield	Technology		
Domain	Processing Technologies		
Status	Registered	Status date	20 January 2011
Planned review date	31 December 2019	Date version published	17 November 2016

This achievement standard requires demonstrating an understanding of basic concepts used in processing.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none"> Demonstrate understanding of basic concepts used in processing. 	<ul style="list-style-type: none"> Demonstrate in-depth understanding of basic concepts used in processing. 	<ul style="list-style-type: none"> Demonstrate comprehensive understanding of basic concepts used in processing.

Explanatory Notes

- This achievement standard is derived from Level 6 of the Technology learning area in *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007; and is related to the material in the *Teaching and Learning Guide for Technology*, Ministry of Education at <http://seniorsecondary.tki.org.nz>.

Further information can be found at <http://www.technology.tki.org.nz/>.

Appropriate reference information is available in *Safety and Technology Education: A Guidance Manual for New Zealand Schools*, Ministry of Education at <http://technology.tki.org.nz/Curriculum-support/Safety-and-Technology-Education>, and the Health and Safety at Work Act 2015.

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 *Demonstrate understanding of basic concepts used in processing* involves describing:
- processing operations and identifying the resulting outcomes
 - the role of tests in processing operations
 - safe practices in processing
 - how processing operations and tests can be combined in a processing sequence.
- Demonstrate in-depth understanding of basic concepts used in processing* involves explaining:
- processing operations and how these achieve required outcomes
 - the importance of tests in processing operations
 - why operations and tests are combined in a processing sequence.
- Demonstrate comprehensive understanding of basic concepts used in processing* involves:
- comparing and contrasting processing operations and tests and their suitability for different materials and/or purposes
 - discussing the relationship/s between processing operations, tests, and outcomes required.
- 3 Materials may include but are not limited to – food ingredients, plant extracts, micro-organisms, concrete, fibreglass, woodchips, recycled materials, resins, wool, dyes, cotton.
- 4 *Processing* refers to the combining of materials to make a product. Processing operations for this standard will include:
- one or more of – measuring, shaping, or finishing
eg weighing, counting, grinding, slicing, moulding, laminating.
 - one or more of – containment, contamination prevention, or disposal
eg hygienic handling of materials, sanitising, working aseptically, safe disposal of biologically active materials.
 - one or more of – mixing, extracting, separating, or growing
eg liquid mixing, blending, mechanical peeling, sieving, washing, juicing, crushing, culturing by plating.
 - one or more of – heating, cooling, or reacting
eg liquid heating, heating a solid, maintaining temperature for growth, steam setting, acidifying, controlling of enzymes.
- 5 A processing sequence is a combination of processing operations and tests in the correct order to undertake a safe process.
- 6 Tests may include but are not limited to – testing for pH, temperature, colour, size and shape, ripeness, and whether the product is cooked, set or matured.
- 7 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, AS91082, and AS91084 replaced unit standard 13392 and unit standard 13397.

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