

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 2014 **Date version published** 20 January 2011

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

- 1 This achievement standard is derived from the Level 6 achievement objectives from 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, 2010 at <http://seniorsecondary.tki.org.nz>.

Appropriate reference information is available in *Safety and Technology Education: A Guidance Manual for New Zealand Schools*, Learning Media, Ministry of Education, 1998; and The Health and Safety in Employment Act 1992.

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

- 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://www.tki.org.nz/e/community/ncea/conditions-assessment.php>.
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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 be accredited by NZQA 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.

Accreditation and Moderation Action Plan (AMAP) reference

0233