

## Achievement Standard

<b>Subject Reference</b>	Processing Technologies 1.62		
<b>Title</b>	Demonstrate understanding of basic concepts used in preservation and packaging techniques for product storage		
<b>Level</b>	1	<b>Credits</b>	4
		<b>Assessment</b>	Internal
<b>Subfield</b>	Technology		
<b>Domain</b>	Processing Technologies		
<b>Status</b>	Registered	<b>Status date</b>	20 January 2011
<b>Planned review date</b>	31 December 2014	<b>Date version published</b>	20 January 2011

This achievement standard requires demonstrating an understanding of basic concepts used in preservation and packaging techniques for product storage.

### Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none"> <li>Demonstrate understanding of basic concepts used in preservation and packaging techniques for product storage.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate in-depth understanding of basic concepts used in preservation and packaging techniques for product storage.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate comprehensive understanding of basic concepts used in preservation and packaging techniques for product storage.</li> </ul>

### Explanatory Notes

- 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; The Health and Safety in Employment Act 1992; and the New Zealand Food Safety Authority website at <http://www.nzfsa.govt.nz>.

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

For resources relating to legal, ethical and moral responsibilities, refer to the Techlink website at <http://www.techlink.org.nz/IP/links.htm>.

2 *Demonstrate understanding of basic concepts used in preservation and packaging techniques for product storage* involves describing:

- types of decay and preservation techniques
- legal requirements for labelling in a local environment
- how a specific product in a local environment could effectively be preserved, packaged and stored to maintain product integrity over time.

*Demonstrate in-depth understanding of basic concepts used in preservation and packaging techniques for product storage* involves explaining:

- the links between types of decay and preservation techniques
- why a particular preservation and packaging technique was chosen for a specific product to be stored in a local environment.

*Demonstrate comprehensive understanding of basic concepts used in preservation and packaging techniques for product storage* involves:

- discussing how to control the storage environment to limit decay of different types of products during storage
- discussing why legal labelling is required in a local environment
- comparing and contrasting preservation and packaging techniques for a product to be stored in a local environment.

3 Types of decay may include but are not limited to – microbial growth, separation, loss of colour, loss or gain of moisture, loss of viability, loss of nutritional content.

4 Local environments may include but are not limited to – the home, school canteen, sports club, school camp or marae. For the purposes of this achievement standard, storage conditions in local environments are limited to – ambient, chilled or frozen.

5 *Preservation techniques* may include but are not limited to – chilling, freezing, heating, dehydration, control of humidity, provision of nutrients, use of chemical additives (eg salt, sugar, food acid such as vinegar or ascorbic acid).

6 *Packaging techniques* may include but are not limited to – cellophane and plastic bags, plastic and cardboard boxes, glass and plastic bottles and jars.

7 Types of products may include but are not limited to – fermented or non-fermented foods and beverages; fresh horticultural products; biologically active products; composts; household chemicals; toiletries; cosmetics; wood composites; dyed fibre/cloth; paper; moulded concrete, resin or fibreglass products.

8 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 AS91083 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