

## 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 2019	<b>Date version published</b>	17 November 2016

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 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 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 (e.g. 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://ncea.tki.org.nz/Resources-for-Internally-Assessed-Achievement-Standards>.

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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 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