

Achievement Standard

Subject Reference	Construction and Mechanical Technologies 1.22		
Title	Demonstrate understanding of basic concepts used to make products from resistant materials		
Level	1	Credits	4
		Assessment	Internal
Subfield	Technology		
Domain	Construction and Mechanical Technologies		
Status	Registered	Status date	20 January 2011
Planned review date	31 December 2020	Date version published	17 November 2016

This achievement standard requires the demonstration of understanding of basic concepts used to make products from resistant materials.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none"> Demonstrate understanding of basic concepts used to make products from resistant materials. 	<ul style="list-style-type: none"> Demonstrate in-depth understanding of basic concepts used to make products from resistant materials. 	<ul style="list-style-type: none"> Demonstrate comprehensive understanding of basic concepts used to make products from resistant materials.

Explanatory Notes

- 1 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 to make products from resistant materials involves:*
- describing characteristics of resistant materials
 - explaining safe techniques to be used with resistant materials
 - describing which combinations of techniques and resistant materials would be suitable for use in a situation.

Demonstrate in-depth understanding of basic concepts used to make products from resistant materials involves:

- explaining how the characteristics of resistant materials influence safe technique selection
- explaining which combinations of techniques and resistant materials would be suitable for use in a situation.

Demonstrate comprehensive understanding of basic concepts to make products from resistant materials involves:

- discussing why resistant materials require particular techniques for their safe handling and use
- discussing why techniques and resistant materials are combined in different ways across two or more situations.

- 3 Techniques include:

- one or more of measuring or marking out
- one or more of sizing, shaping, or forming
- one or more of joining or assembly
- one or more of finishing, detailing, or tuning.

- 4 Resistant materials in this achievement standard may include but are not limited to – wood, composites, metal, alloys, ceramics, plastics.

- 5 Characteristics of resistant materials may include but are not limited to – profile, hardness, malleability, ductility, elasticity, grain.

- 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 and AS91057 replaced unit standard 7522 and unit standard 7524.

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