

Achievement Standard

Subject Reference	Construction and Mechanical Technologies 2.22		
Title	Demonstrate understanding of advanced concepts used to make products		
Level	2	Credits	4
		Assessment	Internal
Subfield	Technology		
Domain	Construction and Mechanical Technologies		
Status	Registered	Status date	17 November 2011
Planned review date	31 December 2014	Date version published	17 November 2011

This achievement standard requires demonstrating understanding of advanced concepts used to make products.

Achievement Criteria

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

Explanatory Notes

- This achievement standard is derived from the Level 7 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 advanced concepts to make products* involves:
- describing accepted conventions used in constructing products
 - explaining how accepted conventions support constructing products in a specific context
 - explaining how accepted conventions are achieved through use of tools, techniques and materials in a specific context
 - explaining strategies used to manage safety in school workshops.

Demonstrate in-depth understanding of advanced concepts used to make products involves:

- discussing how accepted conventions guide constructing products in similar contexts
- explaining the differences between safe practice in classroom and industrial environments.

Demonstrate comprehensive understanding of advanced concepts used to make products involves:

- discussing how accepted conventions guide constructing products in diverse contexts.

- 3 *Advanced concepts* are the accepted conventions used in established practice when constructing products, and may relate to such things as: drape, flush, parallel, perpendicular, offset, symmetry, array, tolerance, ease, press fit, clearances, taper, level, and plumb.
- 4 Products can be made from a range of materials. These materials may include but are not limited to: wood, composites, metal, alloys, ceramics, plastics, glass, natural and synthetic fibres, yarns, fabrics, leather, and vinyl.
- 5 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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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