# Achievement Standard

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| **Subject Reference** | Construction and Mechanical Technologies 2.22 |
| **Title** | Demonstrate understanding of advanced concepts used to make products |

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| **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 2020 | **Date version published** | 17 November 2016 | | |

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

**Achievement Criteria**

| Achievement | Achievement with Merit | Achievement with Excellence |
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| • Demonstrate understanding of advanced concepts used to make products. | • Demonstrate in-depth understanding of advanced concepts used to make products. | • Demonstrate comprehensive understanding of advanced concepts used to make products. |

**Explanatory Notes**

1 This achievement standard is derived from Level 7 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.

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2 *Demonstrate understanding of advanced concepts used 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://ncea.tki.org.nz/Resources-for-Internally-Assessed-Achievement-Standards.

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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

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