# Achievement Standard

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| **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 2014 | **Date version published** | | 20 January 2011 | |

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 |
|---|---|---|
| • Demonstrate understanding of basic concepts used to make products from resistant materials. | • Demonstrate in-depth understanding of basic concepts used to make products from resistant materials. | • Demonstrate comprehensive understanding of basic concepts used to make products from resistant materials. |

**Explanatory Notes**

1 This 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; and The Health and Safety in Employment Act 1992.

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

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://www.tki.org.nz/e/community/ncea/conditions-assessment.php.

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**Replacement Information**
This achievement standard and AS91057 replaced unit standard 7522 and unit standard 7524.

## 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