

Achievement Standard

Subject Reference	Generic Technology 2.4				
Title	Undertake effective development to make and trial a prototype				
Level	2	Credits	6	Assessment	Internal
Subfield	Technology				
Domain	Generic Technology				
Status	Registered	Status date	17 November 2011		
Planned review date	31 December 2018	Date version published	20 November 2014		

This achievement standard involves undertaking effective development to make and trial a prototype.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none"> Undertake effective development to make and trial a prototype. 	<ul style="list-style-type: none"> Undertake effective development to make and trial a refined prototype. 	<ul style="list-style-type: none"> Undertake effective development to make and trial a justified prototype.

Explanatory Notes

- 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 in Employment Act 1992.

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 *Undertake effective development to make and trial a prototype* involves:
- evaluating materials and/or components to determine their suitability for use in a prototype
 - trialling practical techniques and processes to determine their suitability for use in making a prototype
 - selecting appropriate materials and/or components, tools and equipment; and applying practical techniques and processes to make the prototype
 - using results from testing and stakeholder feedback to inform the making and trialling of the prototype
 - undertaking prototyping to gain specific evidence of the outcome's fitness for purpose in its intended physical and social environment
 - explaining any decisions to accept and/or modify the prototype.
- Undertake effective development to make and trial a refined prototype* involves:
- evaluating practical techniques and processes to determine their suitability for use in making a prototype
 - using evidence from ongoing testing and stakeholder feedback to inform the making and trialling of the prototype.
- Undertake effective development to make and trial a justified prototype* involves:
- synthesising evidence from ongoing testing and stakeholder feedback to inform the making and trialling of the prototype
 - justifying any decisions to accept and/or modify the prototype.
- 3 The *physical environment* refers to the place where the final outcome will be situated.
- 4 The *social environment* refers to those who will interact with the final outcome.
- 5 A *prototype* is a completed outcome that is yet to be fully implemented. It is developed through technological practice and is reflective of relevant codes of practice. Prototyping is the trialling of the prototype to gain evidence for the evaluation of the outcome's fitness for purpose in its intended physical and social environment.
- 6 Fitness for purpose refers to the outcome's ability to address a brief when situated in its intended location. The brief used for this achievement standard must include a conceptual statement and specifications. The brief may be provided by the teacher or developed by the student.
- 7 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, AS91354 and AS91355 replaced AS90347, AS90348, AS90349, AS90350, AS90351, AS90352, and unit standard 13410.

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