

Achievement Standard

Subject Reference	Generic Technology 2.3		
Title	Develop a conceptual design for an outcome		
Level	2	Credits	6
		Assessment	Internal
Subfield	Technology		
Domain	Generic Technology		
Status	Registered	Status date	17 November 2011
Planned review date	31 December 2014	Date version published	17 November 2011

This achievement standard involves developing a conceptual design for an outcome.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none"> Develop a conceptual design for an outcome. 	<ul style="list-style-type: none"> Develop a refined conceptual design for an outcome. 	<ul style="list-style-type: none"> Develop a justified conceptual design for an outcome.

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, and in the *Technology Curriculum Support*, October 2007 that can be found at <http://www.techlink.org.nz/curriculum-support/papers/practice/outcome-dev/page2.htm> and <http://www.techlink.org.nz/curriculum-support/papers/knowledge/tech-model/index.htm>.

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

2 *Develop a conceptual design for an outcome* involves:

- establishing potential conceptual designs through generating and evaluating design ideas that are informed by research, including the analysis of existing outcomes
- using evidence from research and functional modelling, including feedback from stakeholders, to evaluate conceptual designs
- selecting and communicating the final conceptual design for an outcome
- explaining the outcome's potential fitness for purpose.

Develop a refined conceptual design for an outcome involves:

- ongoing exploration and evaluation of design ideas to determine their suitability for inclusion in conceptual designs
- using evidence from ongoing research and functional modelling, including feedback from stakeholders, to evaluate conceptual designs.

Develop a justified conceptual design for an outcome involves:

- synthesising evidence from ongoing research and functional modelling, including feedback from stakeholders, to evaluate conceptual designs
- substantiating the outcome's potential fitness for purpose.

3 A *conceptual design* clearly communicates a proposed technological outcome that has the potential to address the brief. It is a detailed description of how the outcome would look and function. Conceptual designs can be presented using a variety of techniques which may include but are not limited to: freehand sketches, diagrams, technical drawings, scale models, computer simulations, written descriptions, details of materials, and components and/or assembly instructions.

4 *Potential fitness for purpose* refers to the likelihood of the outcome addressing the brief. The brief used for this achievement standard must allow for a range of outcomes and include the purpose and probable attributes of the outcome. The brief may be provided by the teacher or developed by the student.

5 Functional modelling is used to explore and evaluate developing design ideas and conceptual designs. It is undertaken to gather evidence on all aspects of the outcome, including its likely technical feasibility and social acceptability.

6 Design ideas initiate decision making and act as a catalyst throughout the development of a conceptual design.

7 Conditions of Assessment related to this achievement standard can be found at www.tki.org.nz/e/community/ncea/conditions-assessment.php.

Replacement Information

This achievement standard and AS91358 replaced AS90339, AS90340, AS90341, AS90342, AS90343, AS90344, AS90360, AS90363, 13393, 13395, 13398, 13401, and 13407.

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