

Achievement Standard

Subject Reference

Technology 3.2

Title

Develop a one-off solution to address a client issue

Level

3

Credits

8

Assessment

Internal

Subfield

Technology

Domain

Technology – General Education

Registration date

18 January 2006

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This achievement standard involves the use of project management tools to support brief development, and the development, implementation and evaluation of a one-off solution that addresses a client issue.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none"> • Identify key factors and their implications in developing a brief that addresses a client issue. • Use project management tools to guide development work. • Develop a one-off solution that addresses the requirements of the brief. 	<ul style="list-style-type: none"> • Identify and prioritise key factors, explaining their implications and interactions, in developing a brief that addresses a client issue. • Use project management tools to review and revise the development work. • Develop a one-off solution that addresses the requirements of the brief. 	<ul style="list-style-type: none"> • Identify and justify the prioritisation of key factors, explaining their implications and interactions, in developing a brief that addresses a client issue. • Use project management tools to review and revise the development work to pre-empt anticipated problems and/or overcome actual problems and/or maximise opportunities. • Develop a one-off solution that addresses the requirements of the brief.

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none"> Implement the one-off solution to evaluate and demonstrate to the client that it is fit for purpose. 	<ul style="list-style-type: none"> Implement the one-off solution to evaluate and demonstrate to the client, and any other key stakeholders that it is fit for purpose. 	<ul style="list-style-type: none"> Implement the one-off solution to evaluate and demonstrate to the client, and any other key and wider-community stakeholders, that it is fit for purpose, and to explore the viability of the solution.

Explanatory Notes

- This achievement standard is derived from *Technology in the New Zealand Curriculum*, Learning Media, Ministry of Education, 1995, Level 8; and *Hangarau i roto i te Marautanga o Aotearoa*, Te Pou Taki Kōrero, Te Tāhuhu o te Mātauranga, 1999.
- 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 Code of Practice for State Primary, Composite and Secondary Schools*, Learning Media, Ministry of Education, 1993.
- Key factors* are those that contribute both directly and indirectly to a specific technological practice and may include:
 - client and other stakeholder factors such as beliefs, ethics, values, ability to access knowledge and skills, and social position
 - broader factors such as legal, social, cultural, political, environmental and economic including consideration of global and future trends, and culture of technological innovation
 - resource factors such as availability and accessibility of equipment, knowledge and skills.
- Brief development entails:
 - exploration and critical evaluation of a client issue to identify an authentic need or opportunity
 - the development of an initial brief that identifies the constraints and opportunities on the one-off solution and the practice that can be undertaken to develop it. The initial brief should communicate the nature of the one-off solution(s) for the resolution or realisation of the identified need or opportunity
 - identifying and accessing skills and knowledge that will be needed to refine the brief and fully investigate the identified opportunities and constraints with consideration of key and wider community stakeholder perspectives

- ongoing brief refinement and/or modification based on the student's developing understanding of the social and physical environment in which practice is undertaken, and in particular on feedback from key and wider community stakeholders. The student should develop an understanding of the need for the one-off solution to be 'fit for purpose' in its broadest sense, and develop their brief in accordance with this
- development of a final brief that will provide specifications for the student, teacher, and key and wider community stakeholders and which includes a means of evaluating the one-off solution presented as being fit for purpose.

5 *Fit for purpose* is a term used to judge the ability of the one-off solution to serve its purpose to 'do the job' within the intended location, where the 'job to be done' is clearly defined by the brief. Referring to fit for purpose in its broadest sense within technology education extends this usage to include the determination of the 'fitness' of the practices involved in the development of the one-off solution, as well as the fitness of the one-off solution itself, for the identified purpose. Exploration of relevant codes of practice, legal requirements and understandings of ethical and cultural ways of practising, will therefore be important aspects of establishing fit for purpose. In demonstrating fit for purpose the student is expected to incorporate and evaluate feedback from relevant stakeholders.

6 A *client issue* is one that relates to a person or group. The client cannot be the student. However, if the client is representing a group, eg sports team manager, the student may be a non-leading member of this group, eg team member. The issue must generate a range of needs or opportunities for technological practice.

7 *Project management tools* are used to manage the overall technological development. This involves planning and effective communication between the student, client and other stakeholders.

The project management tools used will be dependent on the nature and the stage of the technological practice being undertaken. Tools could include such things as plans of action, Gantt charts, flow charts, block sequence diagrams, reflective journals, visual diaries, communication and management software.

8 A *one-off solution* is a technological outcome that is developed to meet the need or realise the opportunity as defined in the brief. Implementation of a one-off solution should be evaluated in terms of its fitness for purpose in addressing the identified client issue.

9 *The client* is a key stakeholder. Other key stakeholders are those who are directly implicated in the development work, or would be directly impacted by the implementation of the one-off solution. Wider-community stakeholders are those who are or may be indirectly implicated in the development work, or would be impacted by the implementation of the one-off solution.

10 *Viability* refers to such things as the sustainability of the one-off solution for the estimated life cycle in terms of the potential social and environmental impact, likely future demand, and the availability of resources for maintenance and disposal.

Quality Assurance

- 1 Providers and Industry Training Organisations must be accredited by the Qualifications Authority 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

0226