Achievement Standard

Subject Reference	Digital Technologies 2.8				
Title	Use advanced iterative processes to plan and develop a digital outcome				
Level	2	**Credits**	6	**Assessment**	Internal
Subfield	Technology				
Domain	Digital Technologies				
Status	XX	**Status date**	XX		
Planned review date	XX	**Date version published**	XX		

This achievement standard involves using advanced iterative processes to plan and develop a digital outcome.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
Use advanced iterative processes to plan and develop a digital outcome.	Use advanced iterative processes to plan and develop an informed digital outcome.	Use advanced iterative processes to plan and develop a refined digital outcome.

Explanatory Notes

1 This achievement standard is derived 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 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/Technology-in-the-NZC/Safety-in-Technology-Education-revised-2017and 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* outcomes to which this standard relates, see the Papa Whakaako for the relevant learning area.

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2 *Use advanced iterative processes to plan and develop a digital outcome* involves:
- using a recognised and appropriate planning methodology to plan the development of a digital outcome
- decomposing the outcome into smaller components and trialling these components iteratively
- using relevant project management and version control tools and/or techniques to manage iterations
- testing that the digital outcome functions as intended
- explaining relevant implications.

Use advanced iterative processes to plan and develop an informed digital outcome involves:
- trialling multiple components and/or techniques and selecting those which are most suitable
- effectively using information from testing and trialling to improve the outcome
- effectively using project management and version control tools and techniques by accurately adjusting key actions and tasks where appropriate
- addressing relevant implications.

Use advanced iterative processes to plan and develop a refined digital outcome involves:
- justifying the selection of multiple components and/or techniques
- synthesising and applying information from the planning, testing and trialling of all components to develop a high quality outcome.

3 Planning may be undertaken in different ways and at different points in the development process for various parts of the outcome. Examples of planning include:
- using natural language descriptions
- pseudocode to show algorithmic structure
- sketches, schematics, wireframes, or mockups of the outcome.

4 *The outcome* that is developed by a student, class, or group of students may be a complete outcome for a particular purpose, or a functioning component of a larger solution.

5 Examples of project management and version control tools and techniques include:
- saving backup copies with a logical file naming system
- using simple version control software applications
- using digital or offline tools or systems to plan tasks and milestones.

6 Examples of relevant implications include:
- social
- cultural
- legal
- ethical
- intellectual property
- privacy
- accessibility

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- usability
- functionality
- aesthetics
- sustainability and future proofing
- end-user considerations
- health and safety.

7 Conditions of Assessment related to this achievement standard can be found at http://ncea.tki.org.nz/Resources-for-Internally-Assessed-Achievement-Standards.

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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