

**Internal Assessment Resource**

**Digital Technologies | Hangarau Matihiko Level 1**

This resource supports assessment against Achievement Standard 918771

**Standard title:** Develop a proposal for a digital outcome

**Credits:** 3

**Resource title:** Digital imagination factory

**Resource reference:** Digital Technologies | Hangarau Matihiko 1.1A Version 2

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| This resource:* Clarifies the requirements of the achievement standard
* Supports good assessment practice
* Should be subjected to the school’s usual assessment quality assurance process
* Should be modified to make the context relevant to students in their school/kura environment and ensure that submitted evidence is authentic
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| Date version published by Ministry of Education | November 2019 Version 2To support internal assessment from 2020 |
| Authenticity of evidence | Teachers/kaiako must manage authenticity for any assessment from a public source, because students may have access to the assessment schedule or student exemplar material.Using this assessment resource without modification may mean that students’ work is not authentic. The teacher may need to change figures, measurements or data sources or set a different context or topic to be investigated or a different text to read or perform. |

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**Teacher/Kaiako guidelines**

The following guidelines are supplied to enable teachers/kaiako to carry out valid and consistent assessment using this internal assessment resource.

Teachers/kaiako need to be very familiar with the outcome being assessed by the achievement standard. The achievement criteria and the explanatory notes contain information, definitions, and requirements that are crucial when interpreting the standard and assessing students/ākonga against it.

**Context/Te Horopaki**

The activity requires students to develop an effective proposal for a digital outcome.

Students are able to brainstorm and develop their own ideas for a project and then use this proposal to go on and develop a digital outcome. Teachers/kaiako could also use this assessment as part of a larger project that integrates assessment against a number of standards, so that the students could propose, design and develop a range of various digital technologies outcomes.

It is expected that students will undertake this assessment activity after a programme of relevant learning and teaching of the skills required to develop a range of digital technologies outcomes.

Examples of student developed digital technologies outcomes that could come from this proposal are:

● a digital media outcome - web, print or other interactive media

● an electronics outcome - robots, electronics using microprocessors, wearable technology

● a computer system outcome - the design of a computer system to meet a client need

● a programming outcome - a computer program for a specific purpose or a computer game

● a data outcome - a database to structure, query and present information for a specific purpose

● any combination of the above, e.g. a Web App integrating programming, media and data, a robot integrating electronics and programming, or a video game integrating media and programming

**Conditions/Ngā Tikanga**

Where a group approach is used, the teacher/kaiako needs to ensure that there is opportunity for each student to provide evidence for all aspects of the standard.

The 3 credits for the achievement standard indicates that approximately 30 hours needs to be allocated for teaching, learning (in and out of the classroom) and assessment in a programme of study.

It is recommended that students should have at least two identified checkpoints with their teacher as they work through this assessment activity to ensure they have an opportunity to ask questions and gather feedback.

The format of the final proposal is a concise document drawing together all the development, research and refinement of the student’s proposal process. The format is not assessed by this achievement standard.

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

**Resource requirements/Ngā Rauemi**

Students will need access to the web, digital devices and information from a variety of sources, such as: current or historical news articles or stories, and/or notes from textbooks, radio segments, TV Documentaries. Community contacts and relevant industry/businesses could also be used as a reference source.

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**Student/Akonga instructions**

**Introduction/Kupu Arataki**

This assessment activity requires you to develop an effective proposal for a digital outcome.

You are going to be assessed on how effective your proposal is in meeting the project requirements for the digital outcome.

You may work with others to help generate ideas and develop those ideas. However, you will be expected to show your own thinking and evidence of how you discussed and combined ideas together to write and submit your own proposal document.

Teacher note: Insert due dates and timeframes.

**Task/Hei Mahi**

You will develop a proposal that is a critical part of a design process; what do you intend to make and why? Who will benefit from this outcome? What problem or issue is it designed to solve or what purpose does it have?

The proposal process enables you to improve your idea, get valuable feedback, properly “scope” the project and end up with an effective proposal that outlines detailed specifications, requirements and resources needed.

You will present a proposal document that outlines the development of your digital technologies outcome. Below is a framework which contains some of the critical steps that you could take.

**Framework:**

1. Identify potential issues or problems within a suitable context.
2. Choose an issue or problem and make sense of this issue or problem by refining your understanding of what you think possible digital technologies outcomes may be to address this.
3. Develop a proposed digital technologies outcome statement which defines:
* clearly what the problem and/or issue is
* the purpose of the digital technologies outcome (including desired goals and objectives)
* the context in which the digital technologies outcome is to be developed
* end users who will benefit from your proposal
* the scope of the outcome (how the requirements of the project will be able to be delivered in the established timeframe)
1. Develop a set of requirements, specifications and resources that will clearly outline what your outcome should achieve.
* Requirements include all elements and functional attributes the outcome must include to be successful and make it fit for purpose.
* Specifications are all the technical aspects that have been requested by the key end user or project overview. These must be included in the outcome and be measurable.
* Resources include items such as hardware, software, time, materials and expertise.
1. Improve and develop your proposal through relevant research and responding to feedback from others so that it can be communicated clearly. For example you could:
2. Test your ideas by getting feedback from your identified end users and use the feedback as well as relevant research to help you improve your idea further. Your proposal should include evidence of this process.
3. Develop an improved proposal with a set of revised specifications, requirements and resources that clearly outline what your proposed solution should achieve. This proposal needs to show clear links between the requirements, end users and resources required.
4. Justify with evidence how your proposed solution meets the overall project requirements.

Evidence to support the proposal could be collected through a presentation, recorded video, annotated photographs or blog, but you will need to hand in a document that is your final proposal. This document could then support the development of a digital technologies outcome as part of another assessment. It should be no longer than three pages.

**Assessment schedule/Mahere Aromatawai: Digital Technologies | Hangarau Matihiko 91877 – Digital imagination factory**

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| **Evidence/Judgements for Achievement/Paetae** | **Evidence/Judgements for Achievement with Merit/Kaiaka** | **Evidence/Judgements for Achievement with Excellence/Kairangi** |
| The student has developed a proposal for a digital outcomewhich involves:* the proposed outcome statement including problem and/or issue, scope, purpose, context

The student:* outlined the proposed outcome statement (problem/issue, scope, purpose, context).
* has provided an outline on what the proposed digital outcome is, and has a problem/issue statement, the purpose of the digital outcome and where the digital outcome will be used.

**For example (partial evidence):***"The problem that I am addressing is litter within the school."**“I am going to make a website to help promote the idea of “Being a Tidy Kiwi”. This problem has seemed to get worse in our school and I would like to make this website to bring it to the attention of the students…….links could be placed on the main school site to help…..”** the requirements (including specifications)

The student:* outlines the requirements that will make this project successful
* has provided a relevant list of the requirements to make the digital outcome fit for purpose.

**For example (partial evidence):***"a page about composting and the benefits of composting, how to build a compost and where the compost is at the school, I also need a page about the recycling bins at the school – location. The website will need to load quickly and accurately on most browsers."**"Specification: The pages are to be able to be viewed on mobile and desktop devices.**Pages should load within 1 second.**Specification: That google maps is used to show the location of the recycling and compost bins, using different colours to represent the different recycling bins/compost bins"** the end users

The student defines who their end users are and outlines some expectations.**For example (partial evidence):***"An end-user for this would be a new year 9 student to the school, who is interested in the school culture of recycling"**"This website will be made for the students at this school …. most of them access the internet on their mobile phones….. this will be a good way to get information to them..."** the resources required (for example, people, equipment, timeframe estimate)

The student:* outlined and lists the resources required for the digital outcome, outlines what they are, and why they are needed.

**For example (partial evidence):***"I will need access to Notepad++ at home and at school to code my website as it lets me code in HTML and CSS. I am familiar with the software and it is free so I don’t have to buy a copy to use at home.**I will also need to be able to use a web browser, since the school recommends chrome, I will use this to test viewing the webpage. For mobile viewing I will use Safari as the majority of students have a iPhone"*"I will need to talk to the property manager of the school, to find out if the compost bins are being relocated, or how the school might be looking at relocating the recycling bins. Making sure that the project is future proofed""The timeline estimated for this project will be five weeks, 2 weeks for generating ideas and seeking feedback and 3 weeks for creating, testing and publishing the website" *The examples above are indicative samples only* | The student has developed an informed proposal for a digital outcome which involves:* using feedback and research to improve the proposal

The student improves the proposal after feedback and relevant research. They have gone through an improvement process based upon feedback, research and subsequently made relevant changes to their proposal. **For example (partial evidence):***“after talking to the deputy principal….it would be better to promote the website to the year 9 students through…...to be more effective…..as a result I have decided to…...”**"through the research looking at other environmentally friendly websites, I realised that a map of the locations of the compost bins and recycling locations would be needed..."** ensuring the proposal shows clear links between the requirements, end users and resources required

The student:* has shown consideration for the end user's needs, the available resources (i.e. time/expertise etc) and the context in their development of their proposal. Their proposal clearly addresses the problem, issue, purpose or context.

**For example (partial evidence):***“due to my inexperience with HTML and CSS I have decided that my website has to be fairly simple with only 4 pages or less……..**...The year 9’s are not allowed to use Facebook so I can’t use Facebook to promote my website….”**The examples above are indicative samples only* | The student has developed an effective proposal for a digital outcome which involves:* justifying, with evidence, that the proposal meets the overall project requirements

The student has provided justifications with evidence for different aspects of their proposal, they have provided more than their own opinion, refined their proposal based on the feedback of others, and provided justification for the changes. They provide evidence of meeting the overall requirements.**For example (partial evidence):***“...although the deputy principal liked the idea…. several of the groups suggested…..as a result the idea will now include…..this addition will help to really get the message across.**..it should be an effective strategy because…..this approach should be successful because…..”**The examples above are indicative samples only* |

Final grades will be decided using professional judgement based on a holistic examination of the evidence provided against the criteria in the achievement standard