

**Internal Assessment Resource**

**Digital Technologies | Hangarau Matihiko Level 1**

This resource supports assessment against Achievement Standards 91880 and 91884.[[1]](#footnote-1)

**Standard title:** Develop a digital media outcome (4 credits)

Use basic iterative processes to develop a digital outcome (6 credits)

**Credits:** 10

**Resource title:** 100% ‘Pure?’ New Zealand

**Resource reference:** Digital Technologies | Hangarau Matihiko 1.4A\_1.8A 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 2  To support internal assessment from 2020 |
| Authenticity of evidence | Teachers/kaiako must manage authenticity for any assessment from a public source, because students/ākonga 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 standards. 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**

This activity requires students to develop a refined digital media outcome that addresses the need to provide information for the local community about issues pertaining to a local waterway or body of water. In developing their refined digital media outcome, students should demonstrate the use of basic iterative processes to plan, trial, and test their refined digital outcome.

The goal of using an iterative process is to refine the outcome and improve its quality in an ongoing manner. Students develop their outcome through the application of appropriate digital media tools, techniques and design elements, thorough testing, addressing implications and end-user considerations.

***Project based learning and collaboration***

This activity may also be carried out collaboratively by a team of students, with each student contributing a unique digital media outcome that is incorporated into a larger collaborative outcome. For example, if the overall project outcome is a website, one student may create the graphical elements for the website, one student may produce a video or animation to be included in the website and one student may code the HTML/CSS structure for the website. In the case of a group project, each student should show evidence of developing and testing their individual contribution to the project. You will need to adapt the student instructions to suit how you are going to approach this work in the classroom.

Assess students on:

* their application of appropriate tools, techniques and design elements in developing their refined digital media outcome
* their application of an iterative development process to improve and refine their digital media outcome
* the extent to which their digital media outcome has synthesised information from their planning, testing and trialling to ensure the outcome is of high quality
* the extent to which they have described and addressed relevant implications in the final digital media outcome
* how effectively they have applied their design elements

Depending on the focus of your teaching and learning programme, you may wish to include more detail regarding the tools, techniques and design elements that students should demonstrate in their digital media outcome.

Students should collect portfolio evidence as they complete the task. This could include annotated photographs, diagrams, short video clips, or code. Teachers need to give guidance as to how much portfolio evidence is required.

You may want to give students guidance on appropriate style and format for their evidence portfolio. These achievement standards do not assess format or style of the evidence.

**Note:** This assessment task may be modified to integrate the basic iterative processes with another type of digital technology outcome, such as a computer program, digital information, electronics, or infrastructure outcome.

**Conditions/Ngā Tikanga**

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

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 hardware and software necessary to produce and test the digital media outcome.

**Additional information/He Kōrero Atu**

***Teacher Support information***

NB: The teaching and learning of the knowledge, concepts and skills required to prepare students for this assessment, plus the assessment itself, would occupy a major part of the year’s programme. The total of 10 credits for assessment indicates that approximately 100 hours needs to be allocated for teaching/learning (in and out of class) and assessment in a programme of study – about half the year’s programme. Schedule regular progress checks with the students during this activity.

***Planning:***

Students should plan how they will use digital media to present appropriate information. The planning should include research into issues regarding a local waterway or body of water (e.g. pollution, contamination, restrictions on water flow, over-fishing, noxious weeds, water-rights, etc.). Their planning should also include evidence of breaking down the project into components that need to be included in their outcome. For example, if the student is to produce a web outcome, the components may include graphics, fonts and colours for readability, headers, menus, or the HTML/CSS, or jQuery scripts. If this assessment task is completed within the context of developing a computer program, components could include functions, variables, collections and the user interface elements.

Planning should be undertaken in a manner that suits the outcome and could include sketches, wireframes, storyboards, flow-diagrams or mock-ups.

***Trialling:***

Students should trial the components to be included and refine their outcome based on evidence of their trialling. Students should also provide evidence that they have planned out cases to test the outcome, and carried out iterative development and testing to improve and refine their outcome. The final outcome should include evidence that the student has recognised and addressed a range of relevant implications.

***Outcome:***

Students may produce an individual digital media outcome that is appropriate for the teaching and learning programme, such as a website, video, animation (2D or 3D), or infographic. Teachers should ensure the rigour of the outcome is appropriate for Level 6 of the NZ Curriculum (e.g. has not been produced through simple modification of pre-designed templates and/or using templated drag and drop WYSIWYG applications). The digital media outcome on which the student is being assessed should be original media, that has been developed by the student. However, they may also incorporate other open-source or royalty-free media that they have not developed, as appropriate to the outcome. For example, if the student is being assessed on a video for their digital media outcome, they may include an open-source or royalty-free sound track that they have not developed but have the permission (or appropriate license type) to include in the outcome. Students should correctly attribute any media that is not their own.

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**Student/Ākonga instructions**

**Introduction/Kupu Arataki**

This assessment activity requires you to develop a refined digital media outcome that addresses the need to provide information for the local community about issues relating to a local waterway or body of water (e.g. pollution, contamination, restrictions on water flow, over-fishing, noxious weeds, water-rights).

You will be assessed on how well you develop your digital media outcome through the application of appropriate digital media tools, techniques and design elements.

In developing your refined digital media outcome, you must demonstrate evidence of basic iterative processes to trial and test the components of your outcome.

Your final digital outcome must demonstrate evidence of testing to improve its quality and address any implications and end-user considerations.

You will have approximately 6-8 weeks to iteratively develop, trial and test your digital media outcome.

You may carry out this task by working collaboratively with a team of students. In this case, you must contribute a unique digital media outcome that is to be incorporated into the larger team digital media outcome. In the case of a team project, you must show evidence of developing and testing your individual contribution to the project.

**Task/Hei Mahi**

New Zealand has a clean, green, “100% Pure” global image. In fact, “100% Pure” is the slogan for the New Zealand Tourism campaign. However, this “100% Pure” image is threatened by issues affecting our waterways.

You are going to develop a refined digital media outcome that uses basic iterative processes to plan, trial, and test your outcome to improve its quality.

To develop your media outcome, you need to:

* Research issues regarding a local waterway or body of water (e.g. pollution, contamination, restrictions on water flow, over-fishing, noxious weeds, water-rights, etc.). Some suggested websites for starting your research are provided in the resources section.
* Decide on how you or your team can effectively present this information to the local community using digital media. For example, will your final digital media outcome be in the form of a website, video, animation (2D or 3D), or infographic.
* Break down your outcome into the components that need to be included and add those into your planning

For example:

- If you are developing a web outcome, the components may include graphics, or HTML/CSS or jQuery scripts.

- If you are working as a member of a collaborative team, plan out who will be responsible for each component and how the components will work together in the final outcome.

* Sketches, wireframes, storyboards, or mock-ups.

Trial the components, tools and techniques to be included and refine your outcome based on evidence of your trialling.

Improving the outcome iteratively. This would generally include evidence of improvement through some (not all) of the following:

* trialling and improving font and colour combinations
* trialling and improving various layouts for text and images
* trialling and improving image/video effects
* trial draft prints and calibration of colour
* testing that assets are linked correctly
* testing for and improving consistency of layout and styles
* testing and improving functionality
* repeated cycles of trialling and testing during the design, development and testing process.

You must show evidence that you have applied appropriate testing procedures to ensure accuracy of data and that your outcome functions as intended.

You should identify the implication, say what it means and what this might mean for your outcome. For example, you could:

* Describe what ethics is. Describe the ethical issues that relate to your outcome. What might you need to include in your outcome to ensure this is addressed?
* Describe what aesthetics is. Describe the aesthetic elements that relate to your outcome. What might you need to include in your outcome to ensure this is addressed?
* Describe what usability and functionality are. What does this mean in relation to your outcome? What might you need to include in your outcome to ensure this is addressed.
* You will need to consider addressing these implications during the design, development and testing of your outcome.

You are going to be assessed on how well:

* you apply appropriate tools, techniques and design elements in developing your digital media outcome
* you apply an iterative development process to improve and refine your digital media outcome. This includes trialling of the components of the outcome and improvement throughout the design, development and testing process.
* you have applied information from your planning, testing, and trialling of components to improve the quality of the outcome in the development of your outcome
* you have described and addressed relevant implications in your final digital media outcome.

**Final Submission:**

* Portfolio evidence gathered as you have completed the task that provides evidence of trialling and testing your outcome. This could include planning documents, sketches, annotated photographs, diagrams, short video clips, or code.
* Check with your teacher how much information is required in your portfolio evidence. Quality is more important than quantity.
* The final digital media outcome.

**Resources/Ngā Rauemi**

<http://www.newzealand.com/int/>

<http://www.doc.govt.nz/nature/habitats/freshwater/>

<http://www.doc.govt.nz/parks-and-recreation/know-before-you-go/care-codes/nz-water-care-code/>

<http://www.doc.govt.nz/our-work/living-water/>

<https://www.livingwater.net.nz/#home>

**Assessment schedule/Mahere Aromatawai: Digital Technologies | Hangarau Matihiko** **91880 – 100% ‘Pure?’ New Zealand**

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| **Evidence/Judgements for Achievement/Paetae** | **Evidence/Judgements for Achievement with Merit/Kaiaka** | **Evidence/Judgements for Achievement with Excellence/Kairangi** |
| Develop a digital media outcome which involves:   * Using appropriate tools, techniques and design elements for the purpose and end users   **For example (partial evidence):**  The student looked at various website design tools and chose the one most appropriate for the project. They have used HTML coding and CSS styling to develop their website. They have added both text and graphical elements.   * Applying appropriate data integrity and testing procedures in the development   **For example (partial evidence):**  The student proofread all text and ensured it all displayed on the web page. They have tested the website to ensure that all the links work and that the graphics display correctly on the school’s computers or their own device.   * Describing relevant implications   **For example (partial evidence):**   1. The student describes what copyright is, and why they are not permitted to use copyrighted graphics in their outcome. 2. They have described what usability is, and how colour contrast will affect the usability of their website.   Use basic iterative processes to develop a digital outcome which involves:   * Planning a digital outcome to address a problem, need, opportunity or interest   **For example (partial evidence):**   1. student researches issues relating to a local waterway, plans how they are going to display the information in a digital media outcome through creating sketches and interactive wireframes. 2. student has used an online tool to help with the development of the outcome. 3. Developing the digital outcome by decomposing the problem into smaller components   **For example (partial evidence):**   1. student decomposes their digital media outcome into the components that need to be developed and tested such as graphics, HTML/CSS. Or JQuery scripts. 2. Trialling components of the outcome in an iterative manner   **For example (partial evidence):**  The student iteratively trials the basic HTML/CSS layout for one page of the website.  They iteratively trial the navigation.  They iteratively trial font styles and colour combinations for readability and aesthetics  They test that the digital media outcome functions as intended  **For example (partial evidence):**   1. student tests the functionality of a website outcome with the browsers, operating systems and screen sizes available within the school’s computer suite. 2. test that all navigation works and media is visible. 3. carry out the tests with peers to ensure the website works. 4. Describing relevant implications   **For example (partial evidence):**  The student describes what copyright is, and why they are not permitted to use copyrighted graphics in their outcome.  They have described what usability is, and how colour contrast will affect the usability of their website.  *The examples above are indicative samples only* | Develop an informed digital media outcome which involves:   * Using information from testing procedures to improve the quality of the outcome   **For example (partial evidence):**   1. student tested readability and legibility of the text on the web pages with various font and colour pairings and made a selection based upon feedback and testing with a range of users. 2. student tested the website on a range of browsers and found that it did not display properly in one of the browsers, so they researched a solution and updated their CSS. 3. Addressing relevant implications   **For example (partial evidence):**   1. The student has addressed social implications by speaking to some local community members to determine how they used the local water way and has included this in the website. 2. They have further addressed cultural issues by ensuring that all local place names are spelled correctly and they have used the correct HTML codes to display macrons correctly. 3. They have addressed usability by ensuring that the website will display properly on different browsers and devices.   Use basic iterative processes to develop an informed digital outcome which involves:   * Using information from testing and trialling to improve the outcome   **For example (partial evidence):**   1. student provides screen shots with a brief annotation that shows the improvements in readability that were made after changing the font face, colour and size. 2. also provide a short video to demonstrate improved functionality after correcting a broken link in their website navigation. 3. Trialling multiple components and/or techniques and selecting the most suitable   **For example (partial evidence):**   1. student trials two different navigation options for their website and selects the choice that does not cause functionality issues on touch screen devices. 2. student exports their graphics into two different file formats and resolutions and selects the one that improves scalability and loading time. 3. Addressing the relevant implications   **For example (partial evidence):**  The student has addressed social implications by speaking to some local community members to determine how they used the local water way and has included this in the website.  The student addresses that fact that it is unethical to use copyrighted graphics by taking their own photos for the outcome. They mark these as copyright to ensure users know who owns the IP.  They have addressed usability and aesthetic considerations through testing their font choice, colour and size with a range of end users.  *The examples above are indicative samples only* | Develop a refined digital media outcome which involves:   * Demonstrating iterative improvement throughout the design, development and testing process   **For example (partial evidence):**  The student has iteratively improved through cyclic improvement their planned navigation menu after testing with users and across a range of devices.  They also improved elements of the layout and information after final testing and feedback from the local community.   * Applying design elements effectively   **For example (partial evidence):**  The student has used suitable and consistent colour schemes, fonts and layouts and as a result the website has good usability features. It is easy to navigate and the images load quickly.  Use basic iterative processes to develop a refined digital outcome which involves:   * applying information from the planning, testing and trialling of components to develop a high-quality outcome   **For example (partial evidence):**   1. outcome functions as intended and has no obvious errors in functionality or presentation of the information. 2. gained from trialling and thorough and organised testing has been integrated into the outcome in an on-going manner to ensure the outcome is of high quality, including aesthetics, functionality and usability.   *The examples above are indicative samples only* |

1. These achievement standards are derived from both *The New Zealand Curriculum* and *Te* *Marautanga o Aotearoa.* [↑](#footnote-ref-1)