

**Internal Assessment Resource**

**Digital Technologies & Hangarau Matihiko Level 1**

**EXPIRED**

This resource supports assessment against Achievement Standard 91880

**Standard title:** Develop a digital media outcome

**Credits:** 4

**Resource title:** 3D Character

**Resource reference:** Digital Technologies & Hangarau Matihiko 1.4C 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. |

**Internal Assessment Resource**

**Achievement standard:** 91880

**Standard title:**  Develop a digital media outcome

**Credits:** 4

**Resource title:** Creating a 3D character for a movie clip sequence

**Resource reference:** Digital Technologies & Hangarau Matihiko 1.4C Version 2

**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**

This activity requires students to develop a refined digital media outcome that will address the need to provide 3D characters for a movie clip sequence.

Students will develop their outcome through the application of appropriate digital media tools, techniques and design elements.

**Project based learning and collaboration**

In this resource the project outcome is only a single character that could eventually be used in an animated movie sequence.

This assessment activity may also be carried out collaboratively by a team of students, with each student contributing a unique digital character that could potentially be incorporated into a larger collaborative outcome.

For example, if the class were working collaboratively; some students could continue to develop characters for which they had developed a design in (91878 Develop a design for a digital outcome) and some could be provided with a conceptual design which they could develop.

In the case of a group project, each student would be required to show evidence of planning, developing and testing their individual contribution to the project. The teacher will need to adapt the student instructions to suit the approach taken.

Assess students on:

* their application of appropriate tools, techniques and design elements in developing their refined digital media outcome
* the extent to which the outcome meets its purpose and the needs of the end users
* how effectively they have applied appropriate data integrity and testing procedures
* their application of an iterative development process to refine their digital media outcome
* how effectively they have described the relevant implications
* the extent to which they have addressed relevant implications in the final digital media outcome.
* how effectively they have applied design elements

Depending upon 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 a range of evidence as they complete the task. This could include annotated photographs, diagrams, short video clips, or code. Give students guidelines as to how much to collect – quantity does not mean quality.

Although this assessment does not assess format or style of the evidence, you may want to give students guidance on appropriate style and format for their evidence portfolio to assist the ease of generating evidence.

**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 standard.

The 4 credits for the achievement standard indicates that approximately 40 hours needs to be allocated for teaching, learning (in and out of the classroom) and assessment in a programme of study. Schedule regular progress checks with the students during this activity.

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**

Students should consider how they will use digital media tools to develop a 3D character for a movie clip sequence.

This consideration should include:

Basic supporting research into software that would be appropriate to develop the outcome, for example, they could consider:

* the software tools which are available in different packages
* what software will they have reliable access to
* what types of testing is required
* will the software selection allow them to carry out appropriate data integrity and testing procedures?

Students who consider these aspects will be more prepared to meet the requirements of the standard...

**Testing**:

Students should provide evidence that they have tested the outcome, and that information from testing has been used to improve the quality and functionality of the outcome.

**Outcome:**

Students may produce an individual 3D modelled character for possible use in a movie clip sequence. Teachers should ensure the rigour of the outcome is appropriate for Level 6 of the NZ Curriculum (e.g. has not been produced through a simple tutorial or basic modification of pre-designed templates/tutorial). The digital media outcome that the student is being assessed on should be an original outcome, which has been developed by the student.

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**Student/Ākonga instructions**

**Introduction/Kupu Arataki**

This assessment activity requires you to develop a 3D modelled character for a movie clip sequence.

You are only required to develop the 3D character. You are not required to animate the character.

You are going to be assessed on how well you develop your refined character through the application of appropriate digital media tools, techniques and design elements.

You may carry out this task by working collaboratively with a team of students. In this case, you must contribute a unique digital media artefact or outcome, for example, a unique 3D character that is to be incorporated into the larger cast of characters.

In the case of a team project, you must show evidence of designing, developing and testing your individual contribution to the project.

**Task/Hei Mahi**

The Greater Hong Kong City State franchise are keen to develop a new advertising campaign in New Zealand for a range of autonomous guard units that they have developed. These units are dog-like machines that act as roving surveillance, security and protection devices.

You are required to design, develop and test a refined 3D modelled character that the Greater Hong Kong City State can use to showcase their new guard unit.

To develop the 3D modelled character, you need to:

* Generate three design ideas or revisit previous design ideas you have generated.

Decide on how you or your team can effectively create the 3D model/s for the Greater Hong Kong City State franchise using digital media.

* + What digital media software will you require to meet this task?
  + What are the important features you will focus on to developing your design?
  + What are the starting points?
  + How will you determine the quality required?
  + How will you test the character components to determine success?

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.

Improve the quality and functionality of your guard character based on information from testing procedures.

Improving the outcome iteratively. This would generally include evidence of improvement through repeated cycles of trialling and testing during the design, development and testing process. For example:

* 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 consistency of layout and styles
* testing functionality.

You are going to be assessed on how well:

* You apply appropriate tools, techniques and design elements in developing your refined digital media outcome
* the outcome meets its purpose and the needs of the end users
* you have applied appropriate data integrity and testing procedures
* you apply an iterative development process to refine their digital media outcome
* you have described the relevant implications
* you have addressed relevant implications in the final digital media outcome.
* you have applied design elements

If you are working as part of a group you must provide individual evidence of your contribution to the digital media outcome. For example you are required to show evidence of designing, developing and testing your individual contribution to the project.

Final Submission:

* Portfolio evidence gathered as you have completed the task that provides evidence of planning and testing your outcome. This could include text, sketches, annotated photographs, screen dumps, diagrams, short video clips, or code, or other evidence agreed prior with your teacher. Agree the number of pages in your portfolio with your teacher.
* The final 3D character.

**Assessment schedule/Mahere Aromatawai: Digital Technologies & Hangarau Matihiko** **91880 – Creating a 3D character for a movie clip sequence**

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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.  The student has:   * used appropriate tools, techniques and design elements for the purpose and end users of the outcome   **For example (partial evidence):**  *The student used appropriate tools from a software package that was selected. They were able to use a range of techniques to develop an outcome. The student was able to select and use appropriate design elements, that when combined met the purpose of the design, and were appropriate for the end users.*  *The student looked at various 3D modelling software platforms and chose the one most appropriate for the project. They have used Blender The student has both shown tool and technique usage through subdividing and joining meshes, the student stitched vertices, and used layers, groups, and hierarchies when organising their scenes. By assigning glossy and reflective materials they were able to use design elements of tone, texture, colour and line etc.*   * applied appropriate data integrity and testing procedures in the development   **For example (partial evidence):**  *The student tested the rendering time and quality of the components and the reflection and flow settings on materials to make sure they looked modern and metallic enough to be appropriate for a guard unit that would rely on an element of intimidation to deter people.*   * describes implications relevant to the outcome   ***For example (partial evidence):***  The student describes what copyright is, The Copyright Act covers such works such as the written word, images, audio, songs and music, and video. These works are automatically covered by copyright and cannot be used with permission from the person who created the work.  They have described what cultural implications are- avoiding stereotyping, and not using images that may offend or make someone for a particular group feel uncomfortable or excluded  *The examples above are indicative samples only* | Develop an informed digital media outcome**.**  The student has:   * used information from testing procedures to improve the quality of the outcome   **For example (partial evidence):**  *The student tested colour modes on the body and legs of the character with various tone and hue pairings and made a selection based upon feedback and testing with a range of users. The student rendered the image and found that it did not display properly, so they researched a solution and updated the model.*   * addressed relevant implications in the outcome   **For example (partial evidence):**  The student has addressed copyright issues by attribution of materials used from creative commons sources.  The character developed has considered cultural and ethical considerations and is unlikely to cause offence.  The student has chosen suitable design elements, so the character is suitable for the potential end users  *The examples above are indicative samples only* | Develop a refined digital media outcome.  The student has:   * demonstrated iterative improvement throughout the design, development and testing process   **For example (partial evidence):**  *The student has repeatedly improved their design after testing to improve the speed of rendering.*  *The student has improved the colours and textures of the guard after several cycles of testing.*   * used design elements effectively   **For example (partial evidence):**  *The student demonstrated effective use of shape with the use of continuous Geometric-sharp edges to make the guard unit look fierce, this was accentuated by the use of graduation in colour where the student moved gradually from a dark colour to a light colour and gradually from shadow to highlight to make the head of the guard unit appear to extend abruptly from the body.*  *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.