# Internal Assessment Resource

## Digital Technologies & Hangarau Matihiko Level 3 -

## 2022 update

This resource supports assessment against Achievement Standards 91903, 91906 and 91907

## Philosophy

“Make amazing things and the credits will take care of themselves.”

This assessment task and marking schedule is designed so that students don’t have to talk about what they are doing, or gather information about their planning. The concept is that if we make an amazing game, we will generate the evidence required. Every decision made in designing this task has this philosophy as it’s guiding principle.

At all times students doing amazing things is prioritised over students talking about what they did. The assessment task and marking schedules keep this in the forefront at all times. Collaboration is a key focus of this project.

# Teacher Notes

# Standards:

* 91903 Use complex techniques to develop a digital media outcome (4 credits)
* 91906 Use complex programming techniques to develop a computer program (6 credits)
* 91907 Use complex processes to develop a digital technologies outcome (6 credits)

Credits: 16

# Resource title: Arcade Game Studio

## 

## Context/Te Horopaki

This activity requires a group of students to create a small game development studio, collectively plan, design and manage the development of an arcade game computer program using complex programming, media and design techniques.

The aim of this assessment is for students to collaboratively create an Arcade Game that they are very proud of and that showcases both their game design, character design and level design skills as well as their programming ability. A large collaborative project like this requires active project management and the assignment of different responsibilities within the studio. Students at all times are encouraged to get excited by the product and not to focus on the assessment criteria. Students who develop a refined arcade game, using user feedback and testing to refine it and project management techniques to manage the project will have the evidence required.

All the assessment requirements should fall out of the studio creating an amazing Arcade Game.

The assessment task will be broken up into 10 two week long sprints. The program will be incrementally designed following a minimum viable product and incremental development. This allows the students to test the game and decide on the next things to add or how to refine the game at all stages through the game's development.

The format of the final outcome is an arcade game. Students will be marked as a studio unless there is significant disparity of student contributions. This will be determined from sprint docs, student self assessment and through git blame.

## Resource requirements/Ngā Rauemi

Requirements:

Python 3.8 or later

The Arcade library

A suitable text editor or IDE (Visual Studio Code)

A visual asset creator (Aseprite / adobe suite)

An audio asset creator (Beepbox, garageband, fruityloops / adobe suite)

Tiled Map editor

Git, github or suitable version control software

Trello or other project management software

# Student Task

# Standards:

* 91903 Use complex techniques to develop a digital media outcome (4 credits)
* 91906 Use complex programming techniques to develop a computer program (6 credits)
* 91907 Use complex processes to develop a digital technologies outcome (6 credits)

Credits: 16

# Resource title: Arcade Game Development

## Introduction/Kupu Arataki

Your task is to form a small game development studio that creates an amazing Arcade Game that you are very proud of. This should be of such a quality that you can use it for job interviews and as part of your portfolio of work.

The Studio: In small groups of 3-4 you will be forming a small game development studio that will be collectively designing and developing the game. Each student will have specific responsibilities within the studio, although each students will contribute to each aspect.   
  
The suggested roles are:

**Artistic Director:**

Responsible for the overall look and feel of the game and that the individual contributions cohere visually and the narrative of the game is compelling.

**Scrum Master:**

Responsible for running studio scrum meetings and keeping sprint docs organized, Maintaining the Trello board and supporting the progress of each studio member.

**The Git:**

Maintains the codebase on Github, and makes sure each team member can correctly push \ pull create issues, pull requests, create and resolve issues, and deal with merge conflicts. Keeps new development isolated in branches and merges when complete.

**Quality Assurance**:

Manages the testing and robustness of the project. Works with the other developers in the studio to find, log, and resolve issues.

Each student needs to contribute to each aspect of the project i.e. each student needs to have created visual \ audio assets \ animations \ levels, completed their own components in the codebase and completed their own testing and trailing and sprint docs.

You will be starting with a Game Design Document that outlines the core aspects of the game including the overall narrative, art style, key gameplay components etc. and why your game should be developed.

Development will take place in 2 week sprint cycles. During these sprint cycles, to ensure you create the best game you can you will need to test it and gather feedback from players. At the end of the sprint you will meet as a studio and report back.

## Timeframe

This is a project that runs for most of the year. It will be split into a number of Sprints to help manage the complexity of the project. It is anticipated that there will be 10 Sprints required to develop a high quality outcome.

Teacher note: Students negotiate due dates with their teacher that fall within the school year. This will be earlier if the students are choosing to be assessed against the external.

## Task/Hei Mahi

Arcade Game Development. Arcade games have a rich history and are fun to make and play. Arcade games lead into careers within the rapidly growing game development industry. This year you will be creating a refined Arcade Game, designing all the assets, sounds, blocks and backdrops. You will be crafting and refining the game play, while adding features.

Starting with a Game Design Document, you will incrementally create and develop your game based on the results of user testing and feedback.

It is recommended that your game is an arcade platformer style of game. Other styles may be negotiated with your teacher.

You will be required to complete a Sprint Tracking document at the end of each Sprint. This document will capture your process, and the progress of your studio.

You and your teacher will review each sprint to ensure that you are on track and to capture evidence required for the standards.

You will be required to capture your evolving list of features and ideas. This will change over time and will be captured in the sprint cycles. You will use a KANBAN board to capture this process.

Go and make something amazing!