



PICK UP YOUR RUBBISH!!!

CONSTRUCT 3 EDITION

AN INTRODUCTION
TO VALUE BASED
GAME DESIGN

YEARS 7 - 10
GROUPS OF 1 - 2



OMGTECH.CO.NZ

WHAT STUDENTS WILL LEARN

- How to create a game using an advanced game engine.
- A basic understanding of the Construct 3 engine.
- How to add backgrounds and platforms to a game.
- How behaviours work.
- What is a sprite?
- How to add basic code using the C3 method.
- How to export games to the C3 arcade.
- How to create a value based digital game.
- How to design your own playable character using the C3 graphics editor.
- How to use variables in C3.

Using OMGTech! Worksheets students will learn:

- How to plan out a game using a design canvas.
- Understanding our traditional values and representing these in our media.
- Sharing our stories using mixed media

YOU WILL NEED:

GET THE FOLLOWING THINGS:

- A computer
- Headphones
- Worksheets
- Paper
- Pens

SUGGESTED LESSON ORGANISATION

DESIGN PHASE

Use the Game Canvas work through the following points.

Step 1: Topic

Choose something that you want to base your game on and craft its story. Is it Climate Change? The voyage of your family to Aotearoa NZ? Discouraging Bullying? Games can be powerful tools to change behaviour in a fun engaging way.

Step 2: Values

Using the values worksheet discuss in groups what values you connect with as a person and choose one or two you would like to see your game use. Your game should have mechanisms in it that reflect these values

Step 3: Purpose

Games are made for a reason. What do you want your players to Think / Feel/ Experience or Do as a result of playing your game? How does this connect to your topic?

Optional: Target Audience

Who is your game aimed at and how does it suit them?

Optional: Story and Objectives

What do you do in the game? What is the aim of it? How do you progress or win? How do you go backwards or loose?

Optional: Rules

What rules do players have to follow?

Optional: Levels

How does the game play change as it progresses? How does the game change? How do you reach the next level?

Optional: Look & Feel

Look and Feel: Using the platform planning sheet draw how you think your game should end up. You will use this as a tool to develop your game.

Optional: Character and Asset design

Draw your character and other assets required

SUGGESTED LESSON ORGANISATION

DEVELOPMENT PHASE

Use the Game Canvas work through the following points.

Step 1: Introduction

Ask students go to their computer stations and open a web browser (excluding internet explorer). Explain to students that they will be learning how to use an advance HTML5 game engine called Construct 3. This is a real game engine used by some professional game developers. Tell students that they will be learning how to make a values based game called "Pick up your rubbish!!!" Using a set of pre-made video tutorials created by OMGTech!. Note: Recommended browser is Chrome.

Step 2: Find tutorials

Students go to this link OMGTech.co.nz/gdconstruct3 and follow the intrusions there. Students will find a link to our tutorial videos which will help guide them through the development of our values based game. This game will teach the students a basic foundation in game design using Construct 3.

Step 3: Tutorial videos

Explain to students how a video tutorial works. Often students do not know how to use a video tutorial. The recommended format is to watch a small portion of the video, pause, and copy the video tutorial into your own project. Rinse and repeat until the video is complete. We have broken the entire project down into many smaller pieces to make this process even easier.

Step 4: Start tutorials

Students will now follow each video tutorial one after the other until they complete the game. Encourage students to finish all our videos before remixing their game. This ensures all students master the basics of the C3 engine. Our tutorials have been labeled clearly in chronological order. Our game will serve as a base for their own game in the future. It is recommended that the teacher checks on each student to ensure they are feeling comfortable with the software. Students can get overwhelmed with more advanced software. We have provided a technical document that will allow the teacher to solve the most common issues students find themselves in.

SUGGESTED LESSON ORGANISATION

DEVELOPMENT PHASE

Step 5: Customising the game (If time permits)

Once students have completed the video tutorials allow them time to remix the game. Encourage students to create their own characters, change the platforms, change the background, add their own content, and create more levels for their players to explore. This time is perfect for fostering creativity and gives students an opportunity to really express themselves using this new media. Note: Students can be given this opportunity during another session if there is limited time as all games can be saved to Google drive for later use.

Step 6: Saving the game

Now is a perfect time to have students save their games. We recommend saving to the cloud using Google Drive as most schools are have Google schools. C3 allows the use of cloud saving which allows students to access their game files on any other computer that has a internet browser. Students will find a "How to save" video in their tutorial list. Note: See technical guide for instruction and troubleshooting.

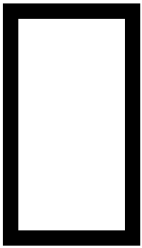
Step 7: Exporting the game

Once students have completed their games and have saved them to the cloud they can now export them. Students will find a "How to export" video in their tutorial list. It is recommended that the teacher has watched this video to provide support throughout this process. Teachers will need to create a school account to upload student games (See "Creating a C3 account" guide for support)

Step 8: Wrap up

Explain to students that they can continue to work on their games at home or at later date if they have saved their game to the cloud. Students can use the free version of C3 which is perfect for small educational games.

INSTRUCTIONS: ACCOUNT CREATION



To upload student games to the Scirra arcade you must first create a school or teacher account. These accounts use the standard user accounts, when we say school or teacher account, we mean you use your name (the teacher) or the schools name as the user name for this account. This account will be used as a tag for us and students to find their games online. They do this by searching for the school or teacher account. Scirra is the parent company for C3 and is also the site where we can upload our games for hosting.

- Head to this address: <https://www.scirra.com>
- Select the Register button on the far right-hand side of the screen.
- Create an account using the school's name or a name to designate your classroom.
- Follow all on screen instructions.
- Congratulations! You have successfully created a Scirra arcade. To learn how to upload and exported game find the "How to upload" tutorial video here: [Need to add link here](#)

THE EDUCATIONAL BIT

Playing and building games as part of your curriculum can really bring unexpected benefits in terms of skill and knowledge. They are a great way to develop creativity and a sense of being entrepreneurial. But they also develop logic skills very well - most games are based on rules and those rules need to hang together logically.

While designing the games, they will touch on many aspects of the new Digital technologies curriculum as well!

English Curriculum

Depending on what level of text you encourage your students to include in their games and game design canvas, this activity could cover the objectives for up to Level 4 (Writing), specifically when considering the audience of their Game, they can use either the instructional documentation, or the text within the game to show how they understand how to shape their text for different purposes and audiences.

You could include examples of how instructional writing is different from narrative writing, and how the choice of certain language is more appropriate in different situations

Arts Curriculum

As they are designing and publishing the Game and all of its assets, this can be used to cover objectives for up to Level 3 (Visual Arts).

A Game is a specific context where the practical knowledge of how to create different assets in a digital format can help them to describe their own ideas and communicate what they need to.

Social Sciences Curriculum

Through this activity the students explore Identity, Culture, and Organisation through looking at the Values systems of those people from Aotearoa NZ; and our Pacific Neighbors. We specifically explore Maori; and other Indigenous Peoples; and exploring how you can use this to influence people

We also explore Place and Environment through focusing on important global topics

THE EDUCATIONAL BIT

Digital Technologies Curriculum - Designing And Developing Digital Outcomes

Through this activity students will start to explore the digital outcomes strand of the curriculum exploring the specific concepts of

How to add backgrounds and platforms to a game.

What is a sprite?

How to export games to the C3 arcade.

How to create a value based digital game.

How to design your own playable character using the C3 graphics editor.

They are working on elements across Progression Outcomes 2 and 3. Students develop knowledge and skills in using different technologies to create digital content for the web, interactive digital platforms and print. They construct digital media outcomes that integrate media types and incorporate original content.

Digital Technologies Curriculum - Computational Thinking

Through this activity students will start to explore the computational thinking strand of the curriculum exploring the specific concepts of

How to create a game using an advanced game engine.

A basic understanding of the Construct 3 engine.

How behaviours work.

How to add basic code using the C3 method.

How to use variables in C3.

They are working on elements across Progression Outcomes 3, and 4 In authentic contexts and taking account of end-users, students decompose problems into step-by-step instructions to create algorithms for computer programs. They use logical thinking to predict the behaviour of the programs, and they understand that there can be more than one algorithm for the same problem. They develop and debug simple programs that use inputs, outputs, sequence and iteration (repeating part of the algorithm with a loop). Using the three building blocks of programming: sequence, selection, and iteration