

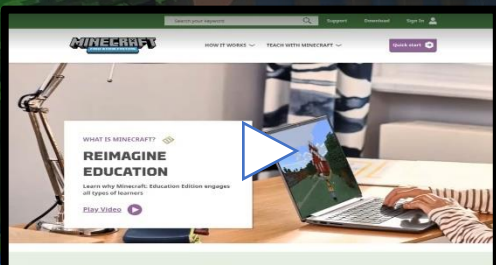
MINECRAFT

EDUCATION EDITION

1. Getting Started – Why use Minecraft Education Edition?



Heard about Minecraft Education Edition and wondered if this could be something for you and your ākonga? This short video from Microsoft will give you the overview you need.




Minecraft Education Edition and the Educator Resource site.

Looking for a lesson or an idea to adapt for a topic or theme?



[A collection of ideas to get you started.](#)

A few shorter one-offs and some longer learning tied to units of work. These learning activities will work both in class and at home.



An Introduction to Minecraft for... Kaiaako

What is Minecraft: Education Edition?

Minecraft: Education Edition is a new version of the game that promotes creativity, collaboration, and problem-solving in an immersive digital environment.

Why use it in class?

- Intro to gamification
- Engage with own culture
- Powerful learning tool
- Can be used in all curriculum areas
- Great for creativity, collaboration & critical thinking
- Tuihana Teina

How do you get it?

- It is free for all kura & schools in NZ
- Your school IT talks to datacom who sort the licenses
- Works on iPads, Windows 10 & Macbook devices

Support...

- Super useful website
- Some easy challenges to get you started
- Find a lesson
- Download Ngā Motu
- A training course

Nga Motu...

Nga Motu is an island designed to introduce students to Maori language and culture. You can ride in waka, explore a pā, have tea, reo lessons, learn about traditional farming & more

1. Click Play

Change your title by clicking the coat hanger

2. Choose a World

a. Create a new world (see below right)
b. Choose a world you have already saved
c. Join someone else's world with a code

3. Click 'Library' for options

Great way to get started with Minecraft in the classroom

New to Minecraft... start with 'How to Play'

Biomes & Worlds

Biomes are regions distinguished by unique geographical features, plants or animals

Featured Worlds have been submitted by other teachers for you to use

Create a new world - beginner settings

Game Mode: Creative Mode - all items are readily available

Difficulty: Peaceful - Nothing will try to kill you

World Type: This is good for beginners, they won't get lost

Cheats: Activate cheats, Create Rollover & Always Day - all on

Controls

To view the reminders for moving... esc, settings, mouse & keyboard, then click this icon and follow the...

Palette

You need to have something in your palette in order to place a brick. Press **Q** for inventory. This gives you the blocks to choose from. Click the item once & then click your palette. Number indicates how many you have, but it is endless in Creative. You swap the items in your hand by clicking numbers eg '1' is highlighted above on the palette

Useful Palette Items

Board - a display board that you can add info to

Camera - take photos of your work. Right click to take a pic

Portfolio - this is where your photos go

Book & Quill - drag it down to write notes in it

Hosting a World

Click **Esc** from your game

Click this tab, then click this... then...

Click **Host** to start a new world

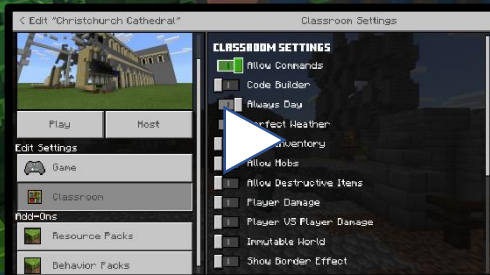
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2. Mechanics – Setting up and things to know as a teacher.



Our ākonga are adept at navigating Minecraft, so here are a few handy things for us to know, when supporting our students with game-based learning.



Basic settings and a few handy hints. This video describes the settings and where to find the things you need. Some handy tips for managing Minecraft Education worlds.

Getting Minecraft Education Edition into your Kura. Nothing technical, just who to talk to and what to ask. This is best done by your school IT support provider.

Minecraft: Education Edition:
Introduction to game-based
learning

By: Minecraft | COURSE • BEGINNER

START COURSE

GAMIFICATION VS GAME-BASED LEARNING



Gamification and game-based learning have become buzzwords in education. There are significant differences between the two when it comes to how they're used and how they affect students. But where does one stop and the other start? This handy infographic will help you out.

GAMIFICATION

Gamification is adding game elements to a non-game scenario. You reward certain behaviors with benefits or by "unlocking" new features or services.

Adding game-like elements (badges, experience points, etc.) to a lesson

Motivation: Likely **extrinsically** rewarding, i.e. the reward is tied to grades.

Assessment is **not within** the "game."

Game-like aspects are adjusted to fit the lesson content.

GAME-BASED LEARNING

Game-based learning (GBL) flips gamification on its head. Rather than implement game-like tropes into lessons, GBL uses actual games to teach.

Using games (such as Minecraft) to teach specific learning objectives

Motivation: Games are designed to be **intrinsically** rewarding. May also be extrinsically rewarding.

Assessment is **in-game**.

Lesson content is adjusted to fit the game.

Signing up

There are two ways for New Zealand teachers and students to sign up to Office 365. In most cases, signing up the whole school provides greater functionality, particularly around collaboration.

1. Signing up as a school

Your school's technical support administrator signs up the school and creates an account for all users that require one. This process can be automated by using Azure AD Connect to connect the directory of users running on the school's current server with Microsoft's cloud-based Azure directory.

If you already have Office 365 set up as a school, visit the Office site and click on the People icon to view members of your school.

If your school has not already been set up, get support from Datacom to carry out the initial licensing process:

Datacom
• 0800 225 5426
• nzschools@datacom.co.nz

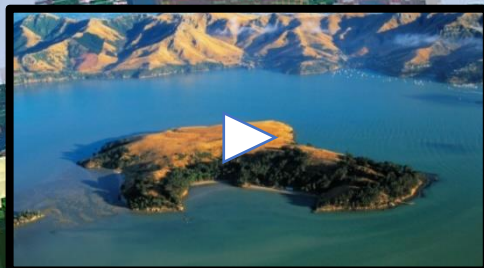
2. Signing up as an individual teacher or student

Any administrator, teacher, or student with a valid New Zealand school email account can sign up for Office 365 by visiting Office 365 Education. You can download and install the Office software on up to five devices and access the browser-based Office apps. It will not provide an email account or other access to school-based shared resources.

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3. Minecraft and Digital Technologies – DDDO.



Example 1: A group of ākonga take on roles to research and learn about Ōtamahua. They develop a resource to teach others of its history.



Example 2: A group of rangatahi follow a design brief to redevelop a building of historical significance considering social, ethical and end-user considerations.



Example 3: A look at a lesson from the Minecraft Educator website. A group of ākonga learn about refugee relocation camps. They learn about managing resources and working cooperatively.

Designing & Developing Digital Outcomes (DDDO)

Progress Outcomes

Always:

- Take account of the end-users
- Be used in an authentic context



Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8

Key Elements	Terminology
Progress Outcome 1 (PO1) <ul style="list-style-type: none"> Teacher led Develop, manipulate, store, retrieve & share digital content <p>Digital Device Knowledge:</p> <ul style="list-style-type: none"> What is a digital device? What is its purpose Know that humans make them Use some applications Identify inputs & outputs Know that they can store data & retrieve later 	<p>End user: who will use or see this?</p> <p>Input: how you put data into a device</p> <p>Output: what the end-user will see or use e.g. Seesaw post</p> <p>Applications: software programs that runs on your computer e.g. web browsers, e-mail programs, word processors & games are all applications</p> <p>Digital device: an electronic device that can receive, store, process or send digital information</p>
Progress Outcome 2 (PO2) <ul style="list-style-type: none"> Students make decisions Creating, manipulate, store, retrieve, share & test digital content Parameters, tools and techniques given Identify the role of components in an input-process-output system Humans control the system <p>Digital device Knowledge:</p> <ul style="list-style-type: none"> Impact on humans & society These devices & impacts change over time Choose from a range of applications/file types to meet the purpose 	<p>Components: are all the parts that make up a computer</p> <p>Software & Hardware: Components include software and hardware. The software tells the hardware what to do and the hardware executes the commands.</p> <p>Input-process-output system: (IPO) Putting information into the system, doing something with the information and then displaying the results.</p> <p>File types: A name given to a specific kind of file e.g. Microsoft Word document and an Adobe Photoshop document are two different file types</p>
Progress Outcome (PO3) <ul style="list-style-type: none"> Students follow a defined process design, develop, store, test, and evaluate digital content (for purpose) social, ethical & end user considerations <p>Digital device Knowledge:</p> <ul style="list-style-type: none"> Identify features of software choose the most appropriate software and file types to develop and combine digital content. Understand operating systems to manage devices, security & application software Apply file management conventions Security & privacy key for storing data 	<p>Defined Process: a series of actions or steps taken in order to achieve a particular end e.g. Inquiry Process or Design Process</p> <p>Operating systems (OS): The program that, after being initially loaded into the computer, manages all of the other application programs in a computer e.g. android, Windows 10, IOS</p>

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4. Minecraft and Digital Technologies – CT.



A look at the Computational Thinking and Computer Science resources available in Minecraft Education Edition. An overview of lessons and Code Builder using MakeCode.



Example 1: A Computational Thinking project based on the United Nations Sustainable Development Goals. An example of Minecraft being used as a tool to demonstrate a process.



Example 2: A unit to introduce Computational Thinking, providing opportunities for Decomposition, Abstraction, Repetition and Algorithmic Thinking.

Computational Thinking (CT) Progress Outcomes

- Always:
- Take account of the end-users
 - Be used in an authentic context



Key Elements	Terminology
Progress Outcome 1 (PO1) <ul style="list-style-type: none"> • Non-computerised • Break down tasks into step-by-step instructions • Give instructions, identify errors, make corrections (debug) 	End-users: who will use or see this? Sudoku post: Program: a series of instructions to put into a computer Algorithmic thinking: Step-by-step instructions Debug: find & remove errors
Progress Outcome 2 (PO2) <ul style="list-style-type: none"> • Non-computerised & computerised • Give, follow & debug simple algorithms • Use algorithms to create simple programs with outputs & sequencing 	Outputs: what the end-user will see or use e.g. Sudoku post Program: a series of instructions to put into a computer Sequencing: In a sequence structure, an action, or event, leads to the next ordered action in a predetermined order
Progress Outcome 3 (PO3) <ul style="list-style-type: none"> • Decompose problems into step-by-step instructions to create algorithms • There can be more than one algorithm for each problem • Develop and debug simple programs • Use inputs, outputs, sequence & iteration • Data is stored in 2 states shown by binary digits 	Inputs: how you put data into a device Iteration: Repeating part of an algorithm with a loop Binary: a number system that only uses two digits: 1 and 0 Bits: Binary digits
Progress Outcome 4 (PO4) <ul style="list-style-type: none"> • Decompose problems to create simple algorithms • Program: using sequence, selection & iteration • Use algorithms to create programs that use inputs, outputs, sequence, comparative operators & iteration • Debug, fix and explain errors in algorithms & programs • Evaluate the efficiency of algorithms & user interfaces 	Selection: In a selection structure, a question is asked, and depending on the answer, the program takes one of two courses of action. Comparative operators: used in conditional statements, especially in loops, where the result of the comparison decides whether execution should proceed
Digital Devices Knowledge: <ul style="list-style-type: none"> • Represent data with binary digits • Have ways to find errors in storage & transmission 	
Progress Outcome 5 (PO5) <ul style="list-style-type: none"> • Independently decompose problems into algorithms • Use algorithms to create programs with inputs, outputs, sequence, selection using comparative & logical operators, different data types & iteration • Determine when to use different control structures • Document, test & debug programs • Understand how computers store complex data types • Develop programs that consider human-computer interaction (HCI) heuristics 	Logical operators: used to determine the logic between variables or values. Control structures: a block of programming that analyses variables and chooses a direction in which to go based on given parameters. Heuristics: A heuristic is a mental shortcut that allows people to solve problems and make judgments quickly and efficiently.