

MINECRAFT



Assessment Summary

Warm-up: Prompts to write on the board for students to think about as they arrive and get settled before class starts. They are intended to reinforce concepts, encourage students to link prior knowledge to the day's concepts, and/or preview the day's lesson.

Knowledge check: Unit specific discussion questions to quickly assess students' learning after relevant activities during the lesson. They are also included in slides in each unit PowerPoint presentation.

What I learned: Three standard reflection questions to assess students' learning and surface their challenges and questions through student journaling and class discussion during the wrap-up of each lesson. They are also included in each unit student workbook and unit PowerPoint presentation.

Unit 1: The Agency

- A. Code a conversation with your Agent
- B. Code to teleport your Agent
- C. Code your Agent to rotate
- D. Code your Agent to move
- E. Code your Agent to destroy and collect
- F. Explore your Agent's inventory
- G. Code your Agent to build

An introduction to the most basic of common coding features and the Agent, an in-game assistant you'll use throughout the course.

- Describe what coding is.
- Launch and connect Microsoft MakeCode to Minecraft: Education Edition.
- Maneuver their player in Minecraft and use inventory.
- Use on chat commands.
- Code their Agent to move in different directions, use their inventory, and build a bridge in Minecraft.

MINECRAFT



Unit 2: City Planner

- Code a road network
- Code a building
- Code a row of houses

A chance to use what you have learned and some new coding tools to build an entire city, one road, building and line of code at a time.

- Create multiple lines of code with an intended outcome.
- Merge multiple types of coding features to create one outcome.
- Understand how code can be used to create large-scale actions that would manually take longer.
- Use block code and/or JavaScript as a coding language to change their Minecraft world.

Unit 3: Parks and Recreation

- Code a park fence
- Code a water feature
- Plant some flowers

Learn more code and reinforce what you already know to create a small park and fountain in your city.

- Use loops to code more efficiently.
- Describe how loops affect code and in-game actions.
- Merge mathematics with code to create calculated in-game actions.
- Use block code and/or JavaScript as a coding language to change their Minecraft world.

MINECRAFT



Unit 4: A Zoo

- A. Code a zoo entrance
- B. Code zoo paths
- C. Code animal enclosures

Create a zoo for city dwellers to visit using only code, including a gate, signs and animal enclosures.

- Recognize more than one way to achieve the same result through code.
- Focus on the design aspect and merging this with code for a unique outcome, showing that code is commanded by design first.
- Merge multiple coding types to complete large, varied tasks.
- Use block code and/or JavaScript as a coding language to change their Minecraft world.

Unit 5: Wind Power

- A. Code a wind farm
- B. Animate the wind farm
- C. Code a lighting system

Code a wind farm, including animated turbines and an electrical resource to power your city.

- Use code to design a moving system.
- Make multiple moving parts to create an animated feature.
- Apply the code for animation to a practical, subject-based topic
- Use block code and/or JavaScript as a coding language to change their Minecraft world.