Programming Practice
Lesson 12 – Expert Coding in Minecraft with Python

1. What are program outputs?

2. Give the 4 types of program outputs and their description.

3. Program output is usually based on what?

In Game Assessment References:

**For Activity Assessments, students will build the code completely on their own. They need to press C at the activity area and create a new project. When complete, they will save their MakeCode file and upload it to the portal for grading.

Activity Assessment 1:

For this activity assessment, you will be instructed to do the following:

Create code that has the agent build a 5x5x5 hollow cube where each row is a different color concrete, pulled from an list named colors with the following colored concrete: Yellow, Blue, Red, Green, Purple.

Use a function named cube and an on chat command named build. Use a variable named level and both a for loop and a while loop. Also have the player say how many levels are left after the agent completes each level with the following sentence: "The agent has ___ levels left." By using a if/else if statement.

Final Assessment: Mini Game:

For the final assessment, you will be given a code to import into MakeCode. This code is for a mini-game. You will be given this information about the game:

This game is intended to break blocks in such a way that you clear the whole area in 20 breaks or less. Every time a block is broken, the variable breaks increases by 1 and the player will say "You have broken *the variable breaks* blocks. If it reaches 20 clicks before the area is cleared a fail function will be called and the area will fill with lava and the player will be teleported to a platform above it. The player will also say "Game over. Reset area to play again." Here are the reactions to the different concrete blocks breaking:

Orange – The fail function will be called.

White, Lime, and Pink – Part of the area will be removed.

Light Blue, Yellow, and Purple – Part of the area will be removed but then random blocks from the list map will be added in another area.

Red – Part of the area will be removed but then random blocks from the list map will be added in 2 other area.

Note – the coordinates in the starter code area all CORRECT. No need to debug the coordinates.