

Logic

Lesson 3 – Expert Coding in Minecraft with Python

1. When is a system considered fault tolerant?
2. What is redundancy?
3. What is packet switching?
4. Why is packet switching used?
5. In coding, logic refers to the process of developing a set of _____
or _____ that govern how a computer program should
_____.
6. Why are conditional statements used in coding?

7. If Statements check to see if a condition is _____ or _____

and execute code if the condition is _____.

8. Write the symbol for the logic condition.

Equals: _____

Not Equals: _____

Less than: _____

Less than or equal to: _____

Greater than: _____

Greater than or equal to: _____

9. When would you use and If / Else statement?

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:

In this assessment, students will write a code that has the agent detect if there is a block in front of it and if there is, the agent will destroy the block.

Activity Assessment 2:

Students will create the code that first creates a variable called blocksBroken and have that variable increase each time the player breaks a grass block. Then in a chat command called brokenCount they will create an If / Else statement that checks to see if Less than 5 blocks are broken the player will say "Keep Going" and if it breaks 5 or more, it will say "Good job!"

Final Assessment – 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 do the following:

First, the game will check to see if the player is 12 or older. If they are, the player will say "Hello playerName.You are playerAge so you can play the game!" Otherwise the player will say "Hello playerName.You are playerAge so you cannot play the game!"

Then the game can begin.

Create a variable named tree with the value of 0. Using a chat command named farm, the agent needs to inspect for grass below him. If there is grass, he will till the land and plant the seeds. If he does not, he will destroy the block below him and then place grass. Then he will till and plant dark oak saplings. Every time the agent plants a sapling, the variable tree will increase by 1 and the player should say, "The Variable tree trees were planted here."