

Name: _____ **Date:** _____

Debug the Maze: Master Programming Logic for 4th Grade

Go beyond simple typing to understand how loops and if-then logic control a digital pet's life and robot movements.

1. Imagine you are building a digital aquarium. If you want to store the number of fish in the tank so you can add more later, what would you use?

- A. A Loop
- B. A Variable
- C. A Function
- D. A Comment

2. A 'Conditional' is a piece of code that allows a computer to make a choice, like deciding to show an umbrella icon only if it is raining.

- A. True
- B. False

3. When a robot needs to brush its teeth, it moves the brush up and down ten times. This repeating action is called a ____.

- A. Variable
- B. Input
- C. Loop
- D. Bug

4. You create a block of code called 'DanceMove' that makes a character jump and spin. Every time you want the character to dance, you just use that one name. This is an example of a:

- A. Variable
- B. Function
- C. Loop
- D. Condition

5. In programming, a variable can only hold numbers and cannot hold words like a player's name.

- A. True
- B. False

6. Complete this logic: 'IF the player touches a lava block, THEN the game is ____.'

- A. A Loop
- B. An Event
- C. Over
- D. A Variable

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7. Which of these is the best example of a 'Loop' in real life?

- A. Writing your name once on a paper.
- B. Checking if the lights are off before leaving.
- C. Running around a track four times.
- D. Storing your lunch in a locker.

8. If you want a program to do something a specific number of times, you should use a 'For Loop'.

- A. True
- B. False

9. If you are coding a game and want the player to jump only when they press the spacebar, you are using a ____.

- A. Variable
- B. Conditional
- C. Loop
- D. Constant

10. What happens to the value inside a variable when you 'update' it, like adding 1 point to a score?

- A. The old value is kept and the new value is ignored.
- B. The computer creates a whole new program.
- C. The old value is replaced by the new total.
- D. Variables cannot be changed once they are made.