Name: _____   **Date: _____**

Answer Key: Debug Your Day: A Kindergarten Guide to Algorithms

Students sequence daily routines and identify logical errors in simple step-by-step patterns during center rotations or group instruction.

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1. Ben wants to plant a flower seed. Which step should he do FIRST?

Answer: B) Dig a small hole in the dirt

> In an algorithm, the first step must prepare the environment. You cannot plant a seed without making a place for it in the soil first.

2. An algorithm is just a fancy word for a list of steps to follow.

Answer: A) True

> True. Algorithms are sequences of instructions used to complete a task or solve a problem.

3. Mia is making a sandwich. Step 1: Get bread. Step 2: Put jam on bread. Step 3: Put bread together. What did Mia ___?

Answer: D) Miss (a bug)

> A 'bug' is an error. Mia missed a step (like adding peanut butter or using a knife), which means her algorithm has an error.

4. If you want to build a tall block tower that doesn't fall, which 'sub-problem' should you solve first?

Answer: B) Making a strong, wide base

> Decomposition means breaking a big job into smaller parts. Building a strong base is the most important sub-problem for stability.

5. Computers need humans to give them very clear, step-by-step instructions.

Answer: A) True

> Computers only do exactly what they are told. If the instructions are messy, the computer won't work right.

6. Look at this cereal algorithm: 1. Get bowl. 2. Pour cereal. 3. Pour milk. 4. Eat. What would happen if we swapped Step 1 and Step 2?

Answer: A) The cereal would be on the table

Order matters in algorithms! If you pour the cereal before getting the bowl, you have a mess instead of breakfast.

7. When you find a mistake in your steps and fix it, you are ___.

Answer: B) Debugging

Debugging is the process of finding and fixing mistakes in an algorithm or program.

8. A Robot is trying to get to the 'End' square. It must go: Forward, Forward, Left. What happens if it goes: Left, Forward, Forward?

Answer: B) It ends up in a different spot

Changing the sequence (the order of steps) changes the outcome of the algorithm.

9. You can use an algorithm to teach a friend how to play a new game.

Answer: A) True

Game rules are a type of algorithm because they are steps that tell players what to do and when.

10. To wash your hands, you need to ___ the big problem into: 1. Wet hands. 2. Use soap. 3. Scrub. 4. Rinse.

Answer: A) Decompose

Decomposition is when we break a big task (Washing Hands) into smaller, easier-to-follow steps.