WORKSHEET 10: Paper Algorithm

PAPER ALGORITHM

[Ages 6-12 | 20 minutes] - Algorithmic Logic (A)

MATERIALS:
Paper, pens, and optionally: a simple object like a pencil sharpener or a paper airplane.

PURPOSE:
To help children "think like a computer" by writing precise, step-by-step instructions. This builds algorithmic thinking and helps children understand that computers follow exact instructions—and get confused when instructions are vague.

INSTRUCTIONS:

Step 1: Choose a simple task: "How to make a peanut butter sandwich" or "How to draw a house."

Step 2: Ask your child to write down step-by-step instructions for the task.

Step 3: Pretend you are a robot. Follow the instructions EXACTLY as written—even if it results in silly mistakes (e.g., "Take two slices of bread" → robot takes them out of the wrapper, wrapper and all).

Step 4: When the robot gets confused, ask: "Where did I go wrong? What was unclear?"

Step 5: Discuss: "AI follows instructions like this. It doesn't understand context. We must be precise and think about what the computer needs to know."

Step 6: Record your findings below.

Task: _____

Step 1: _____

Step 2: _____

Step 3: _____

Step 4: _____

Where did the robot get confused? _____

How did you fix it? _____
