

Kit's Robot Logic: Designing an Algorithm

Learning objective: To understand that an algorithm is a precise, step-by-step set of instructions used to solve a problem or complete a task.

Follow the steps below to design a visual representation of a 'Robot Breakfast Algorithm'. Use the word bank to label your diagram correctly.

Draw: Draw a flowchart on the page that shows Kit the Fox teaching a robot how to make toast. Use boxes for each action (Step 1: Get bread, Step 2: Put in toaster, Step 3: Press lever, etc.). Use arrows to connect the boxes to show the sequence. Draw Kit standing to the side with a clipboard, looking happy. The style should be clean, clear, and use geometric shapes for the flowchart boxes.



Label words: Input · Algorithm · Process · Output · Sequence · Bug

Steps:

1. Explain why the order of instructions in an algorithm is important. What would happen if you swapped the 'toast bread' step with the 'butter toast' step?
2. If a robot tries to butter the bread before it is toasted, and it makes a mess, what do we call this error in computing?
3. Draw an arrow to show the direction of the flow in your algorithm. Why must algorithms always flow in a

specific direction?

4. List the 'Input' required for your robot to make a slice of toast.
5. Describe the 'Output' of your completed algorithm.