

Creating Algorithms: Illustrate a Phenomenon

An algorithm is a repeatable process that delivers an expected result. In this assignment, you are going to create an algorithm to illustrate a scientific phenomenon. There are many predictable events that occur in the natural world, such as life cycles, chemical reactions, or Earth's processes. One way to illustrate these phenomena is by programming an algorithm. If your algorithm represents a mathematical relationship between parts of system, it may be a computational model. If there are no input/outputs or defined mathematical relationships, you are likely simply illustrating a scientific phenomenon. See resources for Creating Computational Models to learn more about how your illustration could be modified to become a computational model.

1 Part 1: Describe the Phenomenon

Sketch and label the phenomenon you will illustrate here:

Think about the **parts** of the phenomenon you will illustrate, the **purpose** of each part, and if the part will perform an action in your program..

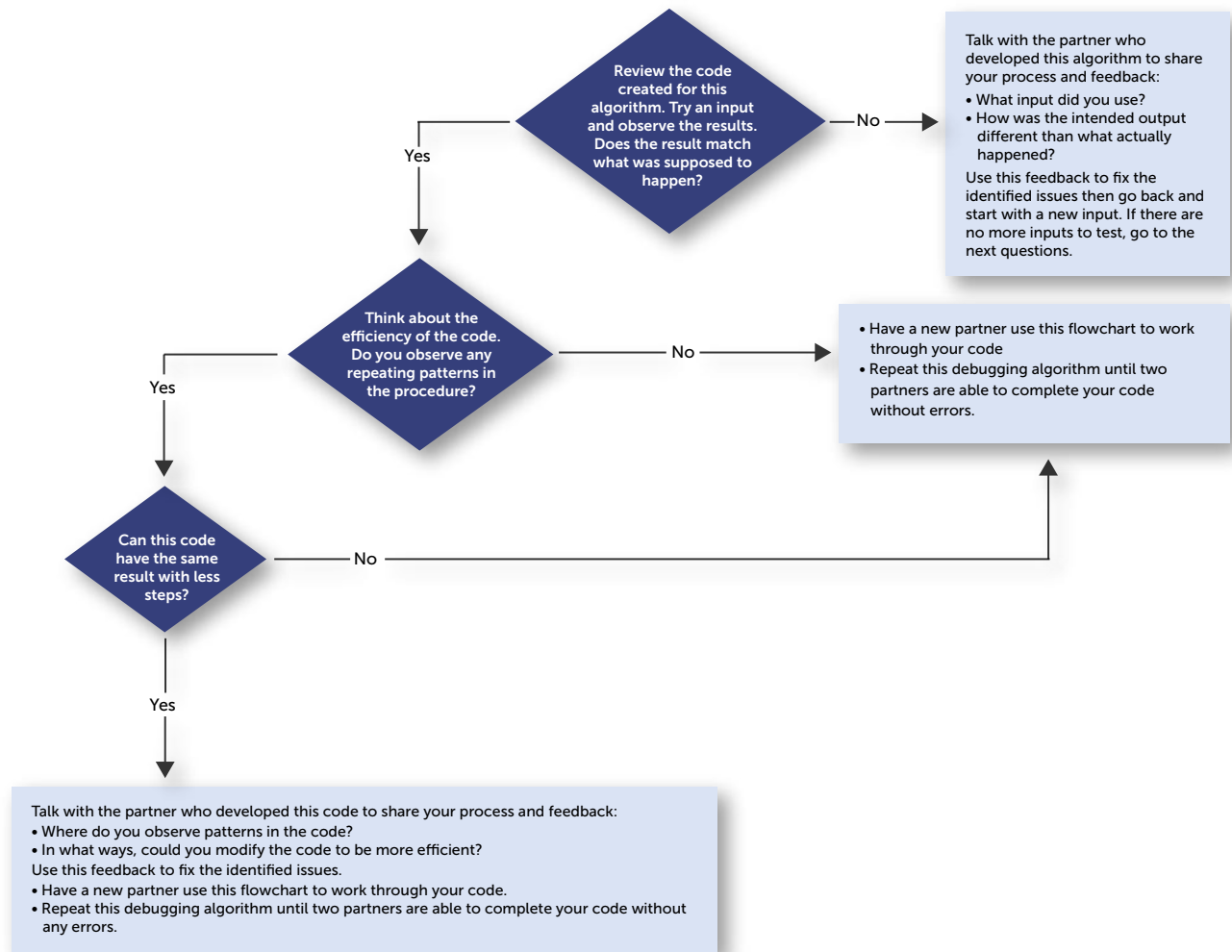
Part	Purpose	Action (yes/no). If yes, describe.

2 Part 2: Create Your Program

Now you will use a computational tool to create your algorithm. There are many tools available to program algorithms, such as coding platforms (e.g., Scratch, Snap, MakeCode) or computational making kits (e.g., Hummingbird Robots, Micro:bit, LegoWedo, Arduino, Raspberry Pi). Your teacher will tell you which tool(s) you may use for this assignment.

3 Part 3: Pair Debugging Algorithm

While completing your program, work with a partner to debug -- which is to find and fix errors -- and improve it:



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