The Scientific Method

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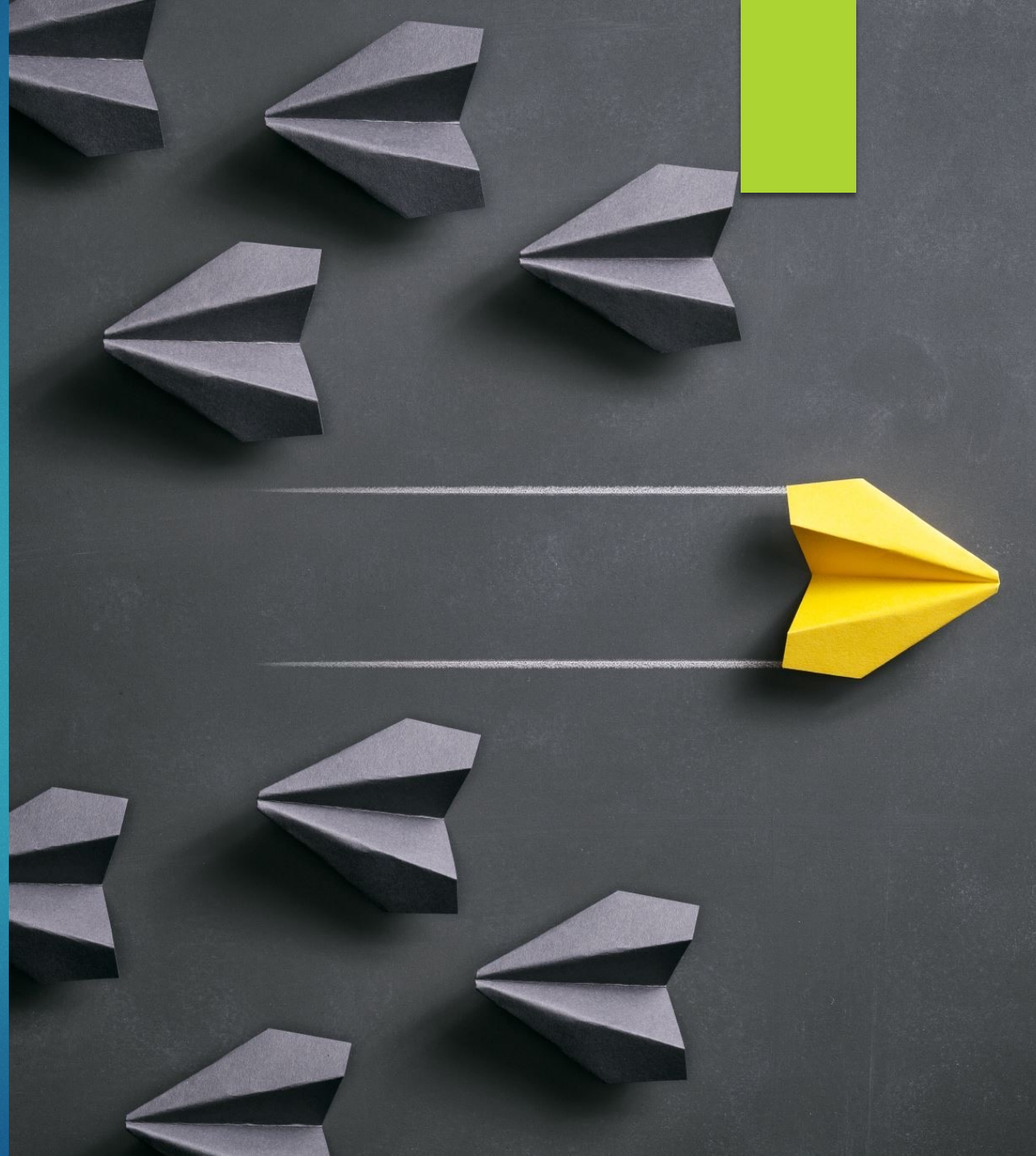
Lesson: Scientific Method

- Middle School 7-8
- Make a paper airplane
- Did you use flaps or no flaps?
- What is a question you an come up with that compares the different types you have created?



Virtual Lab

- Scientific Method
- Walks through parts of the Scientific Method
- Interactive

Science

What strategies are involved in solving a science problem?

Scientists try to understand the world around us by making careful observations. These observations often present problems. In order to solve these problems, scientists sometimes use a scientific method.

A scientific method is an orderly process that usually includes a series of steps similar to these:

1. Determine the problem. State what you want to find out.

2. Make a hypothesis. State the prediction that you want to test.

3. Test the hypothesis. State what steps you will take to design an experiment to test your hypothesis. Make

The Nature of Science

What strategies are involved in solving a science problem?

Procedure:

Use your Journal to record each step of the procedure.

1. Determine the problem: Consider the four ingredients necessary to make compost and state a problem about making an efficient compost pile.

2. Make a hypothesis: Make a testable prediction about how the efficiency of a compost pile would be affected by varying the ratio of green to brown material, the amount of water added, and the number of times a compost pile is turned (to supply oxygen).

3. Test your hypothesis: Click and drag the Brown to Green Balance bar, the Water Concentration bar, and the Number of Turns bar to the position you

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Question 1 / 4

Determine the problem. State what you want to do.

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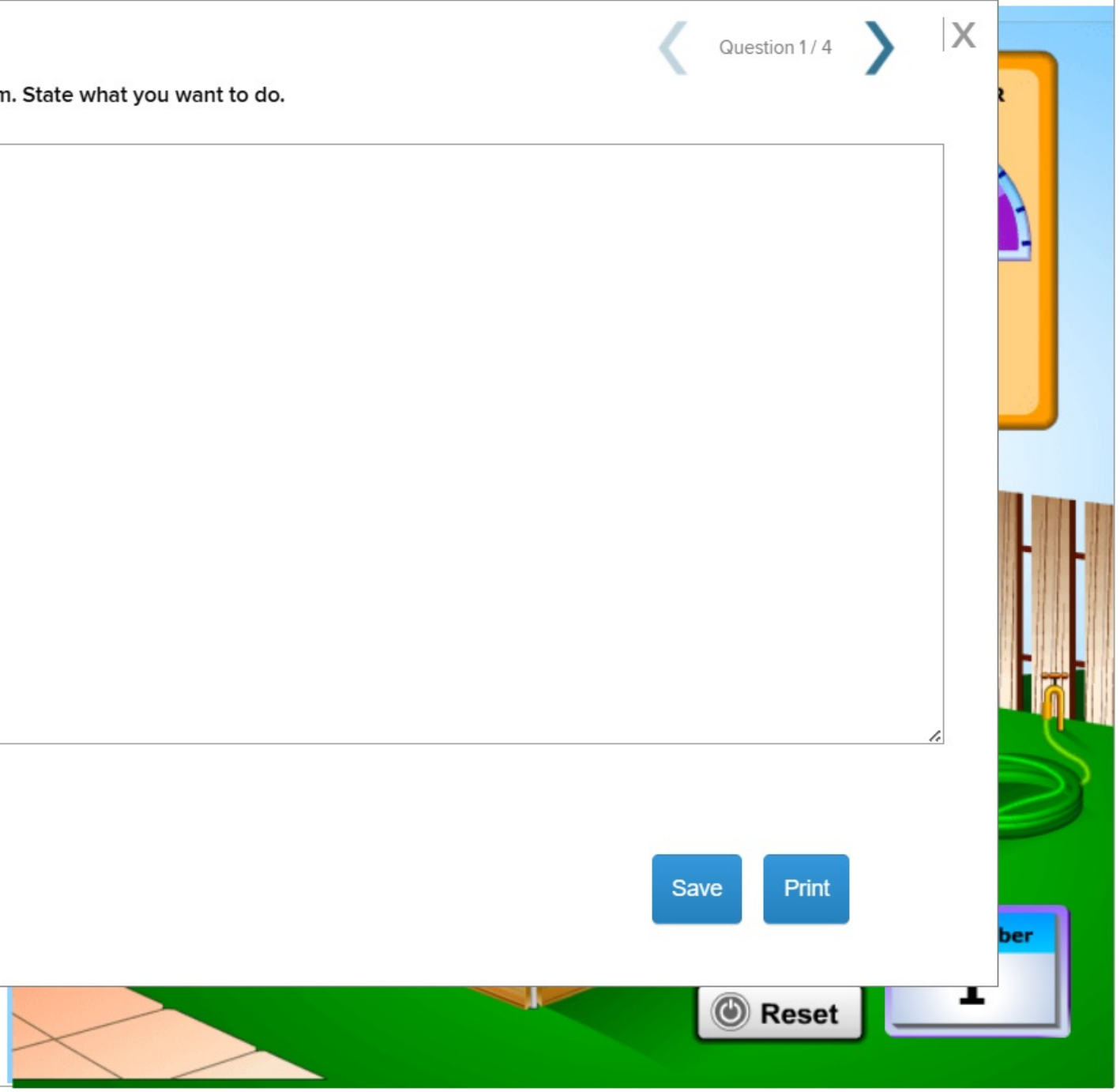

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Question 2 / 4

State a prediction you want to test.

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Question 3 / 4

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Test your hypothesis. How will you use the computer model to test your hypothesis? What steps will you follow? What data will you record? Be specific about which of the variables you will adjust and when.

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Question 4 / 4

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Draw a conclusion. Did the results of your experiment support your hypothesis? Why or why not?

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