Welcome Back to Science 5th Graders!

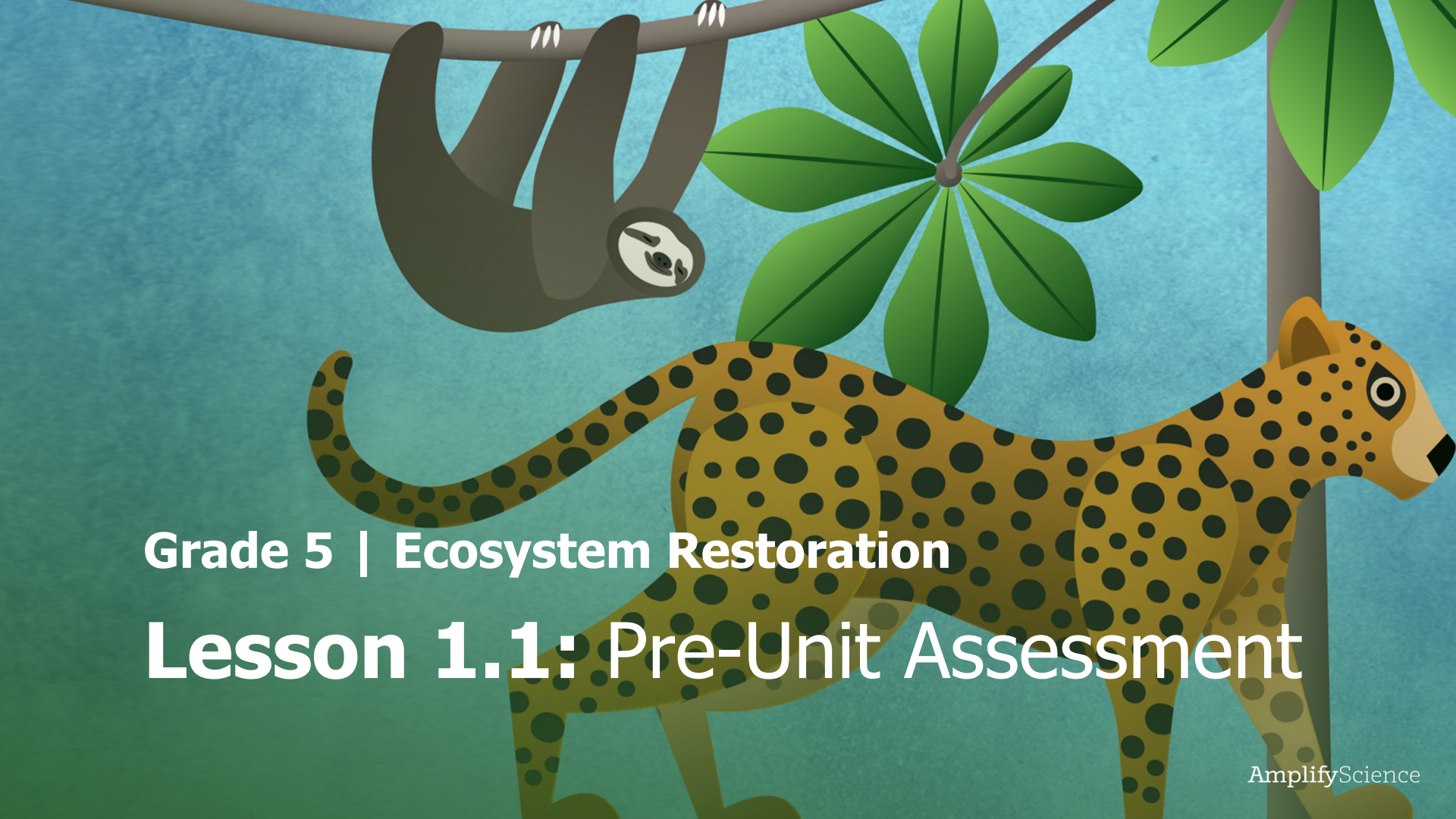
Start Thinking …

When you are outside, what are some of your favorite places to go?

When you are in nature, what types of things do you notice or wonder?

Learning Ta

I can begin to form a theory on why different stars at different times.



Grade 5 | Ecosystem Restoration

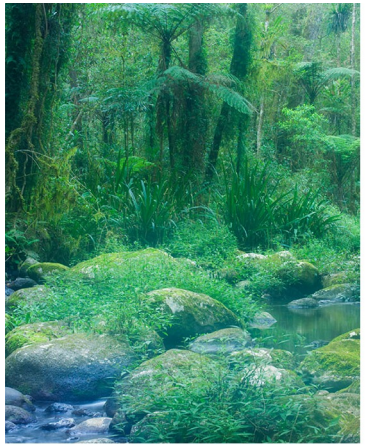
Lesson 1.1: Pre-Unit Assessment

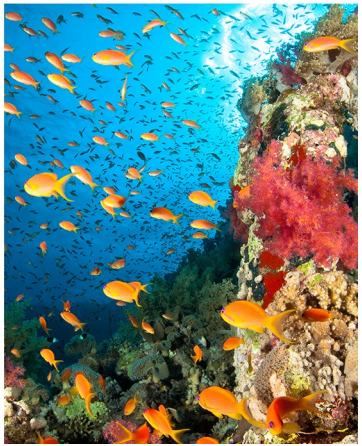
AmplifyScience

10 MIN

Activity 1

Introducing the Unit



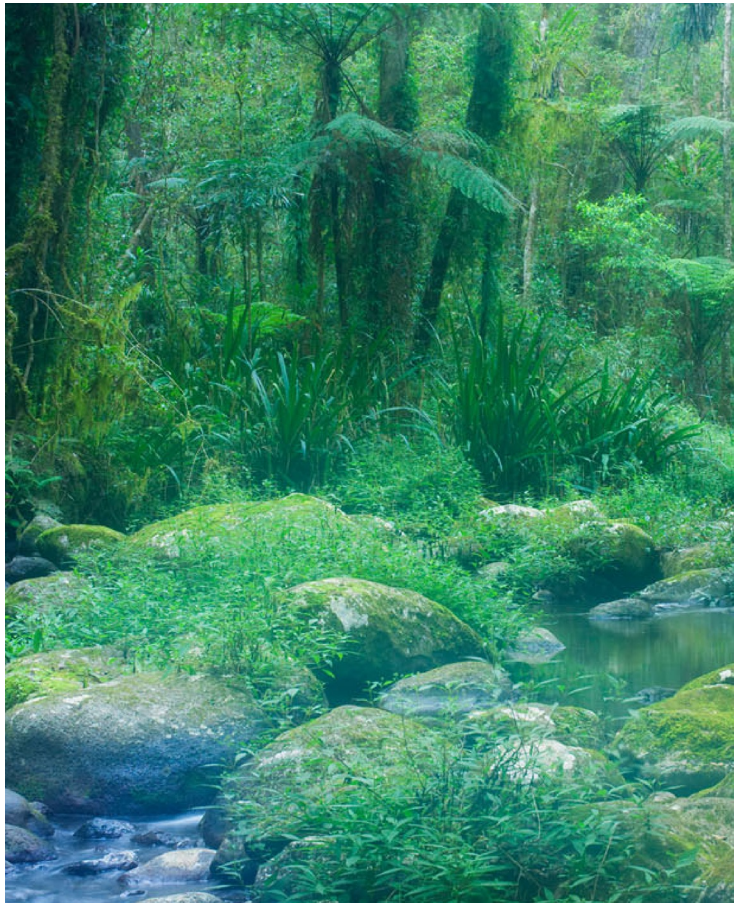


These photos show examples of ecosystems.

What do you know about **ecosystems?**

We can think of ecosystems as places where **animals** and **plants** live together in their **environment.**

There are many different kinds of ecosystems, and different types of living things live in different ecosystems. Let's think about a few examples.



This is a rain forest in Border Ranges National Park in Australia.

What living things do you think we would find in a **rain forest ecosystem?** What might those living things need to grow?

This is a desert in Signal Peak, Arizona, United States.

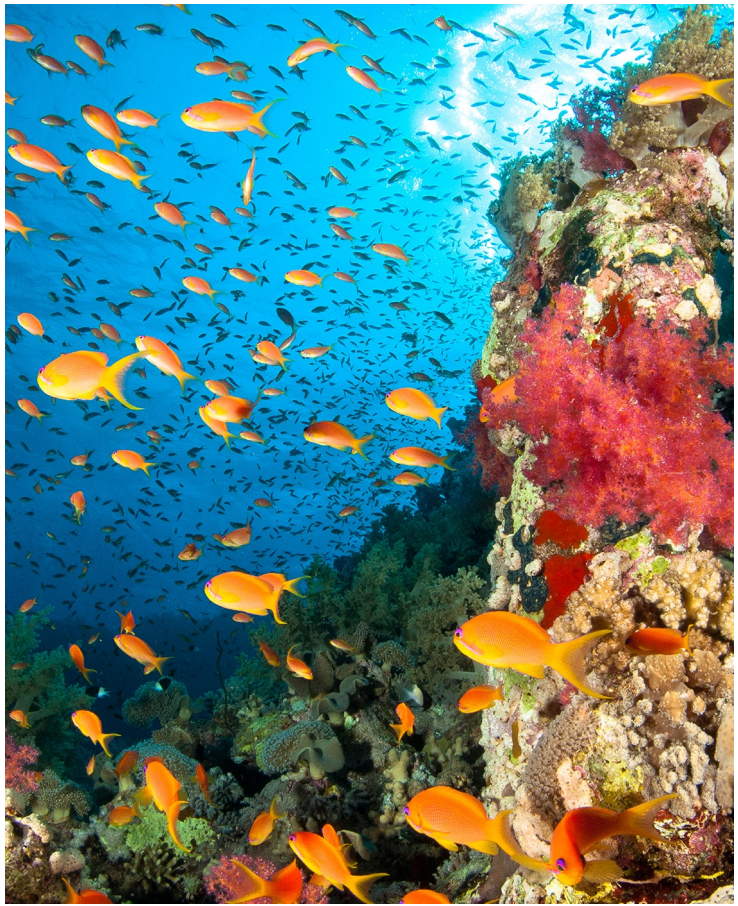
What living things do you think we would find in a **desert ecosystem?** What might those living things need to grow?

This is a tundra near Bransfield Strait, Antarctica.

What living things do you think we would find in a **tundra ecosystem?** What might those living things need to grow?

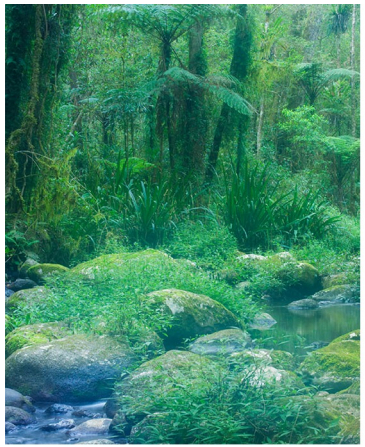
This is the savanna in Serengeti National Park, Tanzania, Africa.

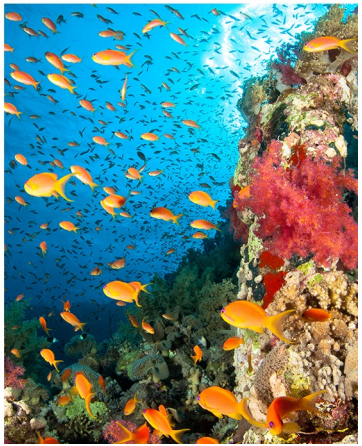
What living things do you think we would find in a **savanna ecosystem?** What might those living things need to grow?



This is a coral reef in the Red Sea near Egypt.

What living things do you think we would find in a **coral reef ecosystem?** What might those living things need to grow?





Now we have talked about several different kinds of ecosystems.

Do you have any new ideas about what an **ecosystem** is? Did you notice anything else you would like to share?

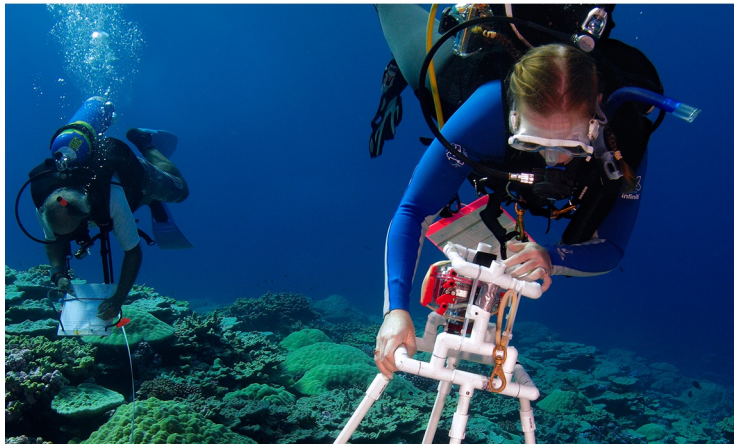
Unit Question

How do organisms in an ecosystem get the matter and energy they need to grow and thrive?

Vocabulary

ecologist

a scientist who studies ecosystems



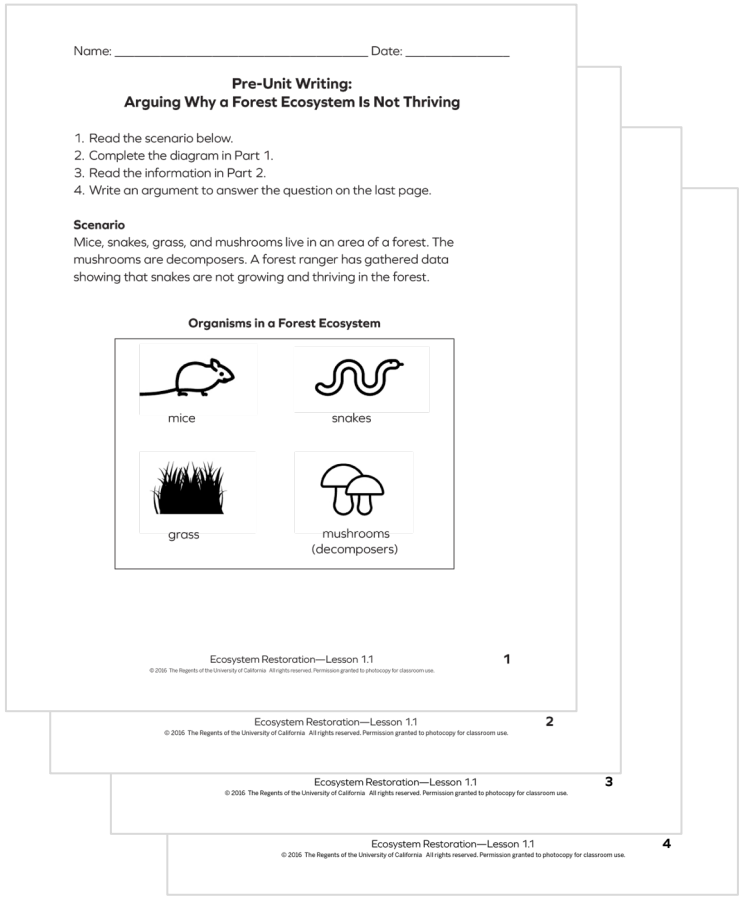
These are **ecologists.** Ecologists observe ecosystems and their parts in order to draw conclusions.

In this unit, we will take on the role of ecologists.

25 MIN

Activity 2

Writing Initial Arguments



Name: _____ Date: _____

Pre-Unit Writing:
Arguing Why a Forest Ecosystem Is Not Thriving

1. Read the scenario below.
2. Complete the diagram in Part 1.
3. Read the information in Part 2.
4. Write an argument to answer the question on the last page.

Scenario
Mice, snakes, grass, and mushrooms live in an area of a forest. The mushrooms are decomposers. A forest ranger has gathered data showing that snakes are not growing and thriving in the forest.

Organisms in a Forest Ecosystem

mice
snakes
grass
mushrooms (decomposers)

Ecosystem Restoration—Lesson 1.1 1
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Ecosystem Restoration—Lesson 1.1 4
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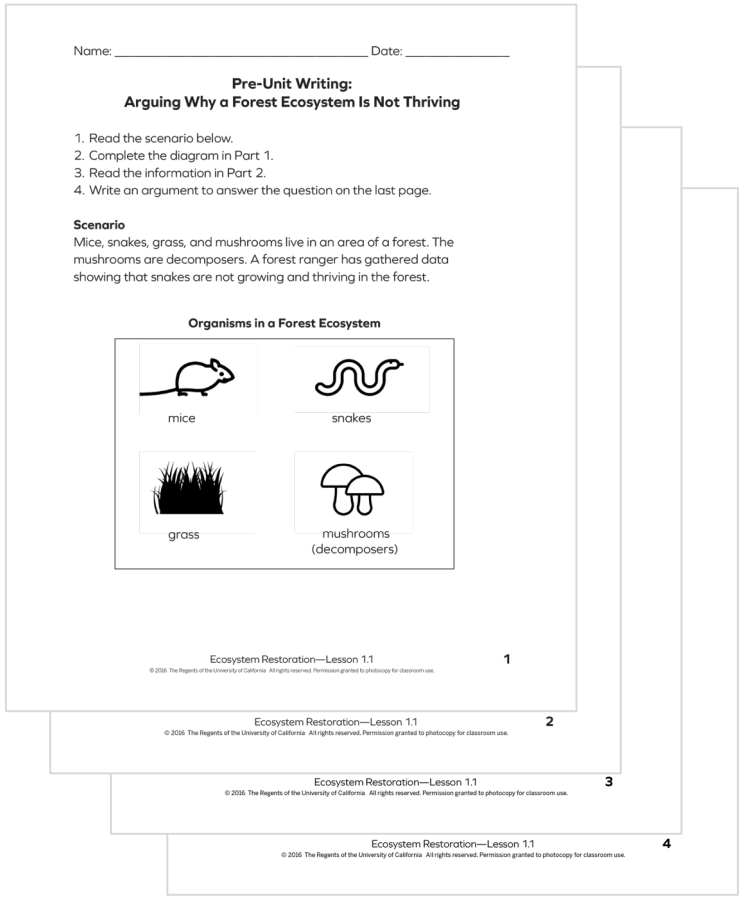
Before we start learning more, you will have an opportunity to **write** your very first ideas about a **problem in an ecosystem** and why it might be happening.



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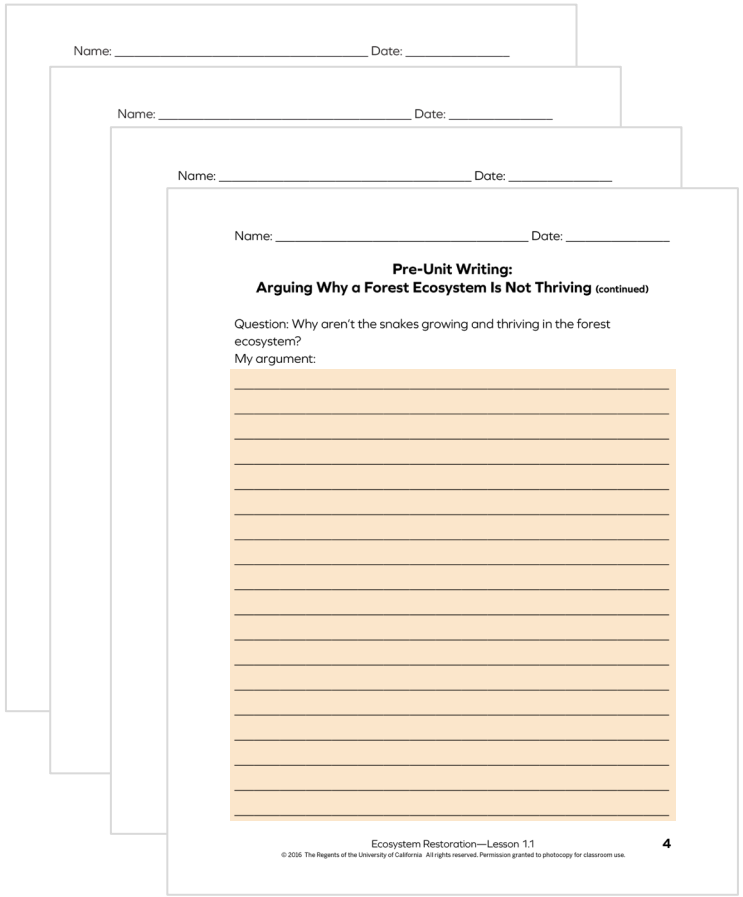
Organisms in a Forest Ecosystem

There are **four pages** for this writing task.

Let's review the directions together.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Name: _____ Date: _____

Name: _____ Date: _____

Pre-Unit Writing:
Arguing Why a Forest Ecosystem Is Not Thriving (continued)

Question: Why aren't the snakes growing and thriving in the forest ecosystem?
My argument:

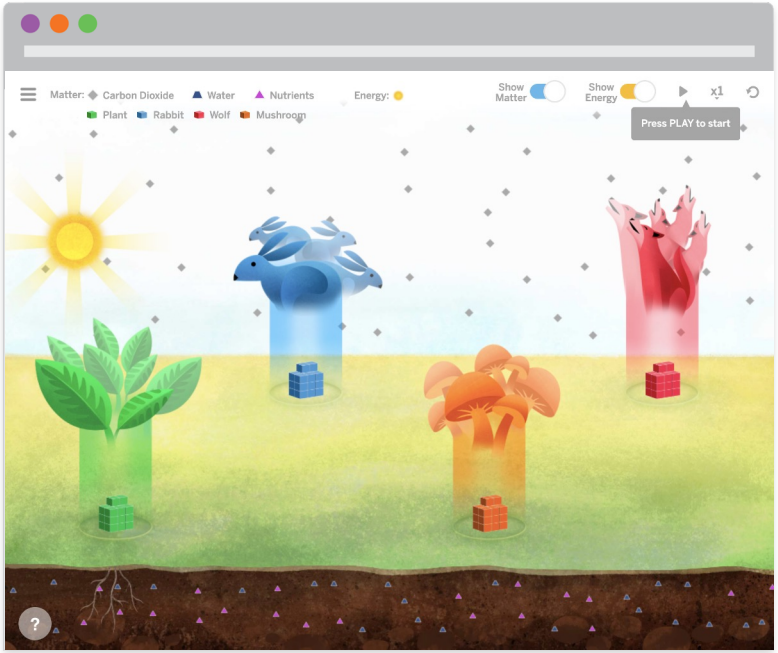
Ecosystem Restoration—Lesson 1.1 4

Complete the diagram and **write** about why you think the snakes are not growing and thriving in the forest ecosystem.

20 MIN

Activity 3

Exploring the Simulation

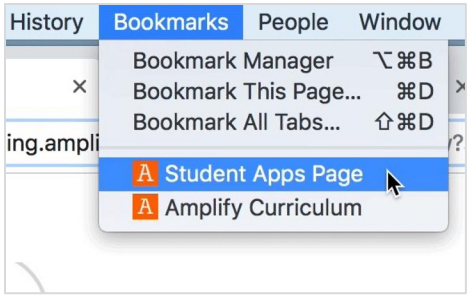


Throughout the unit, we will be using a **Sim** to help us figure out what an ecosystem is and what it needs in order to thrive.

Guidelines for Using Apps

- Only one person "drives" at a time.
- Anyone can make suggestions about how to use the app.
- Talk about what you observe.
- Rotate the role of "driver."

Open the Simulation



Step 1

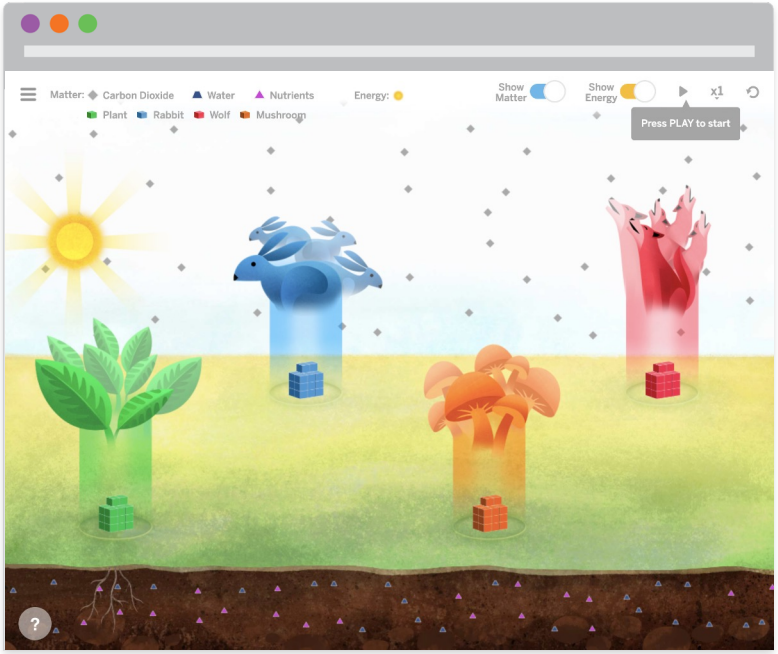
Click on the **Student Apps Page** in your bookmarks.

Step 2

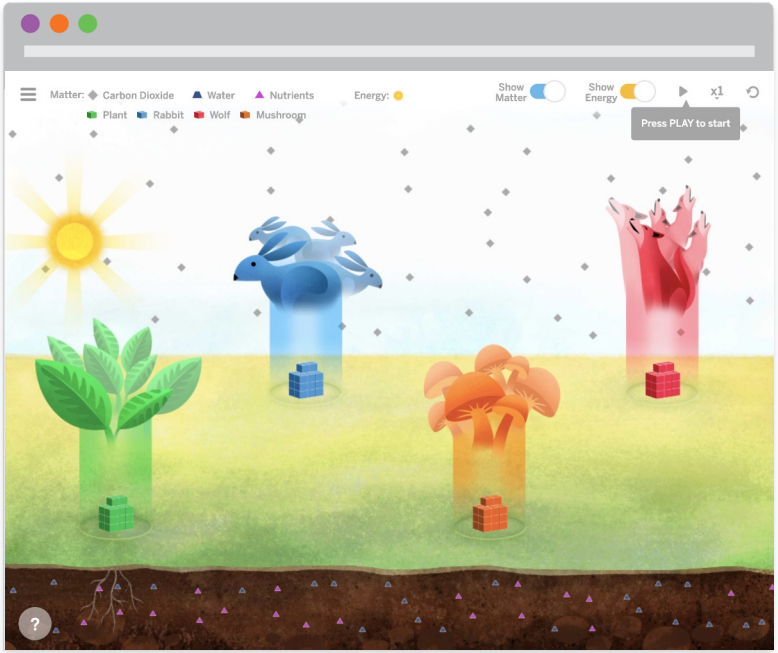
Scroll down and click on the ***Ecosystem Restoration*** **unit.**

Step 3

Click on the **orange box with a 1** to access the Sim.



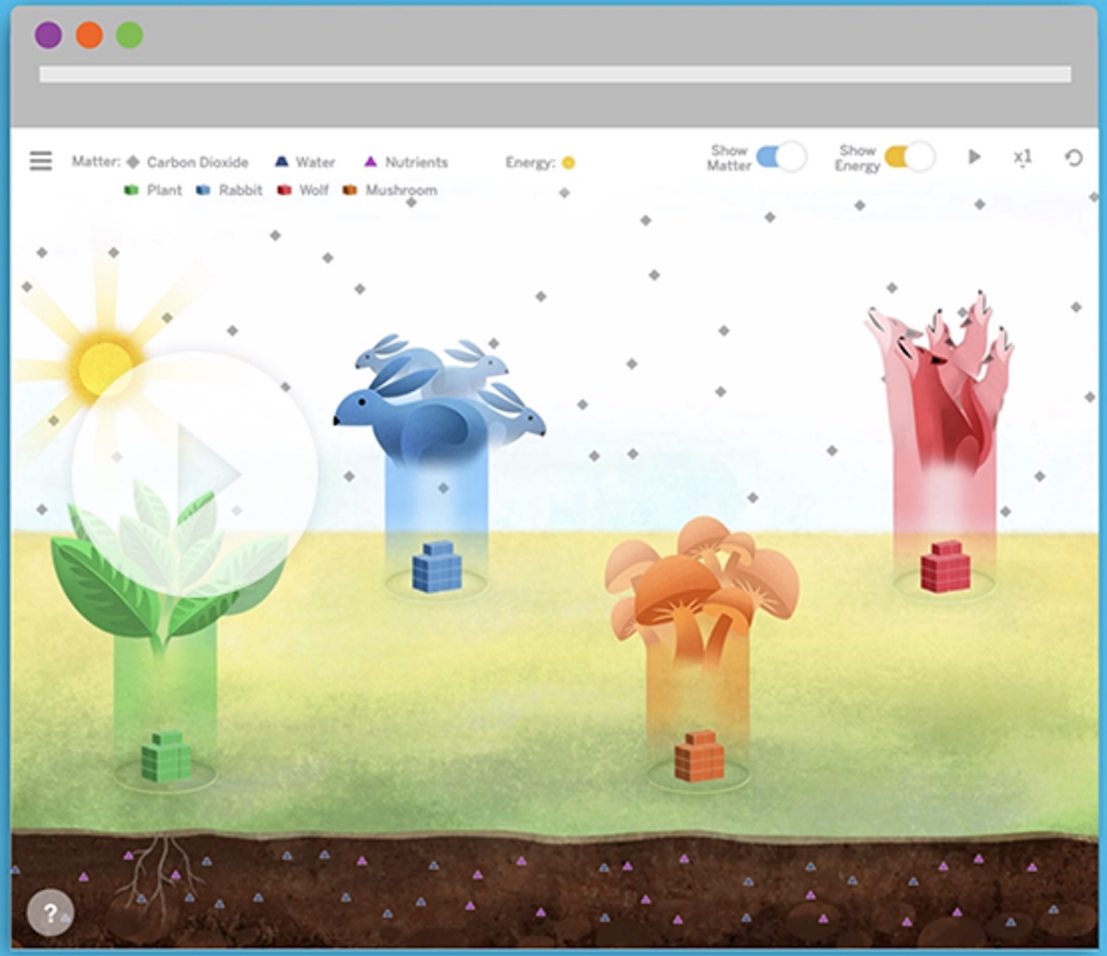
Explore the Sim and try to figure out how it works.

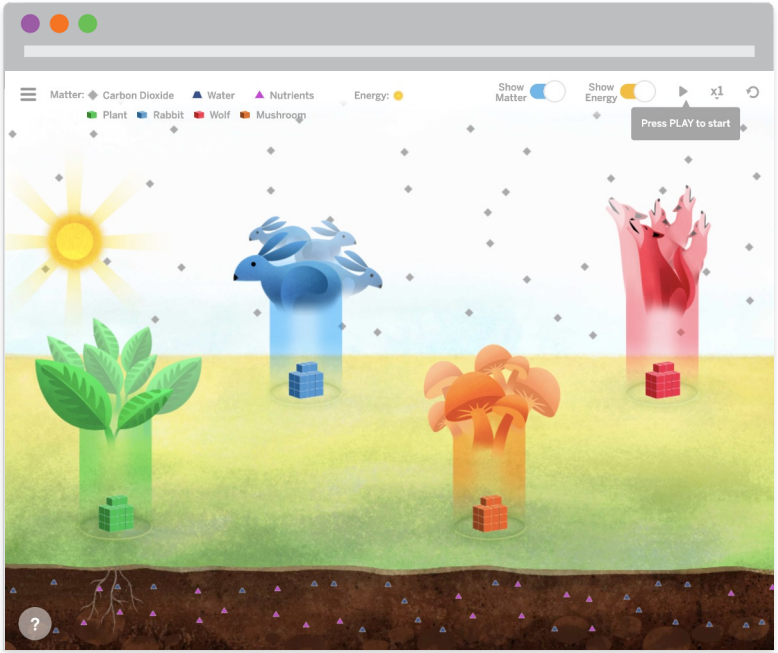


What did you **observe** while exploring the Sim?

What did you figure out about how the Sim works?

This is the *Ecosystem Restoration* Sim.
This Sim will help us to **investigate ideas** about **ecosystems.**





What did the Sim exploration make you wonder about?

5 MIN

Activity 4

Introducing the Investigation Notebook

AmplifyScience

Ecosystem Restoration:
Matter and Energy in a Rain Forest

Investigation Notebook

As ecologists, we will use **Investigation Notebooks** to keep track of what we observe and our ideas and understandings about ecosystems.

End of Lesson

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