

# Ecosystems #1

Student Name:

Teacher Name:

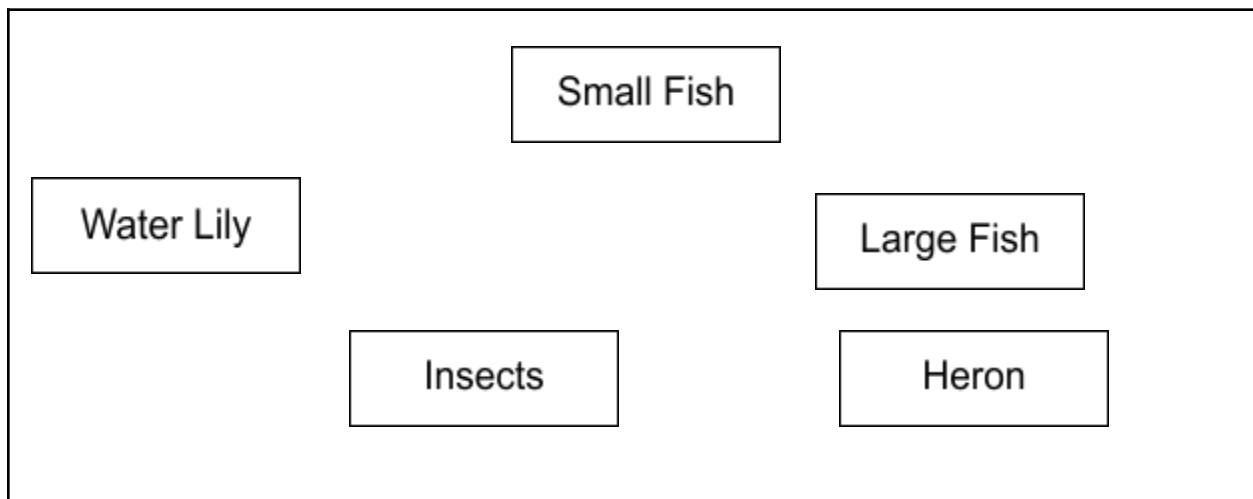
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Use the *Eating Relationships Table* for Question 1.

**Eating Relationships Table**

Organism	What They Eat
Small fish	Water lily
Large fish	Small fish
Heron (bird)	Small fish, large fish, insects

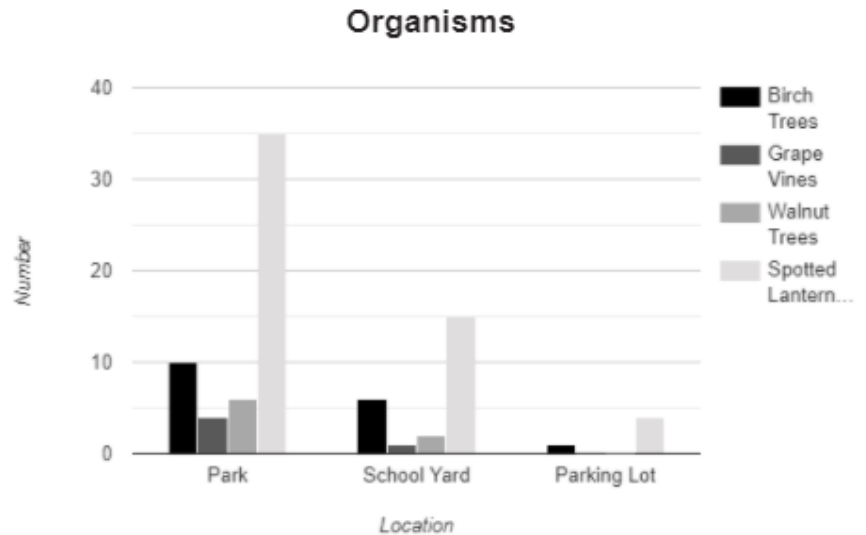
1. Draw arrows to create a food web based on the table above.



Use the information about the Spotted Lanternfly and the *Organisms* table for Question 2.



The spotted lanternfly is an invasive insect that lives in Philadelphia. It eats grapevines, maple trees, walnut trees, and birch trees.

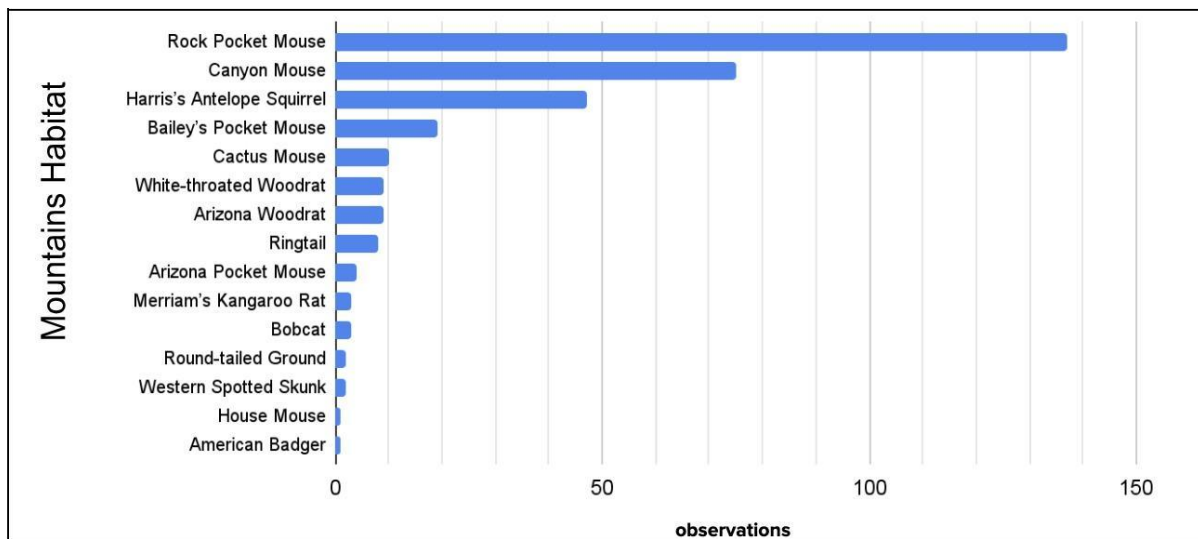


2. Write a Claim-Evidence-Reasoning (CER) argument to answer the scientific question, “*Would placing traps in the park reduce the number of spotted lanternflies?*”

3. The mule deer is also native to the Wasatch Front. The mule deer eats berries and other plants. Therefore, the mule deer is a \_\_\_\_\_.

- a. Producer
- b. Primary consumer
- c. Secondary consumer

The picture and table below show a Mountain Habitat and scientists' observations of populations of organisms in the Mountain Habitat from 2016-2019.



4. What are four living or nonliving things in the Mountain Habitat that the animals listed above need to survive?

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Use the *Organisms Table* to answer Questions 5 and 6.

**Organisms Table**

<b>Animal Name</b>	<b>Zone A</b>	<b>Zone B</b>	<b>Zone C</b>
Redwood Trees	10	3	4
Blue Jays	0	0	3
Robins	3	0	3
Bumble Bees	6	4	8
Daffodils	1	2	2
<b>Abundance</b>	<b>20</b>	<b>9</b>	<b>20</b>

5. Which Zone has the highest species richness?

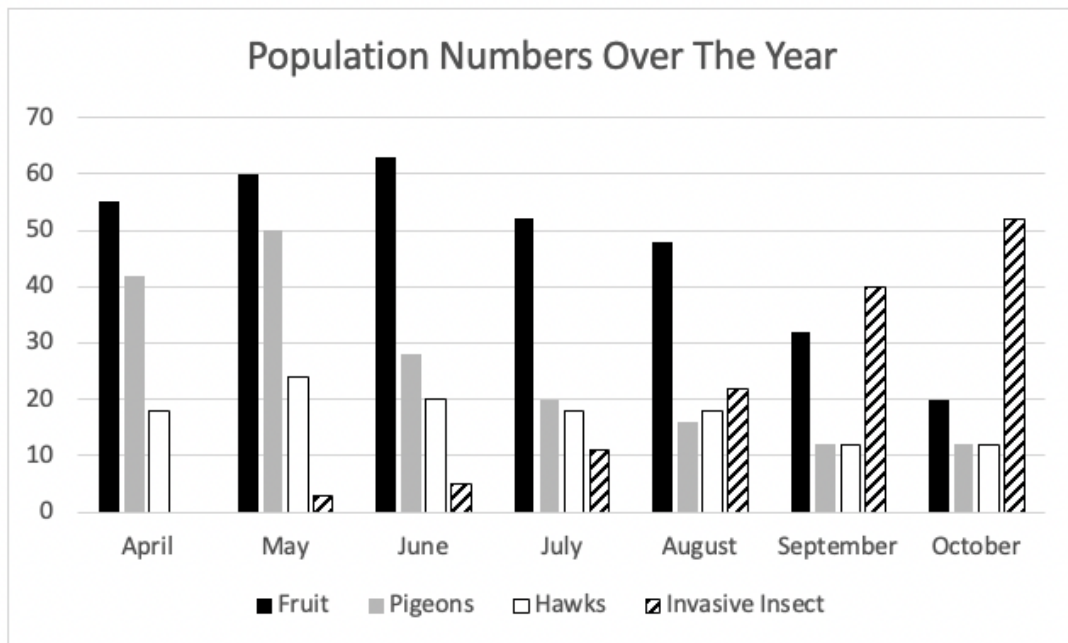
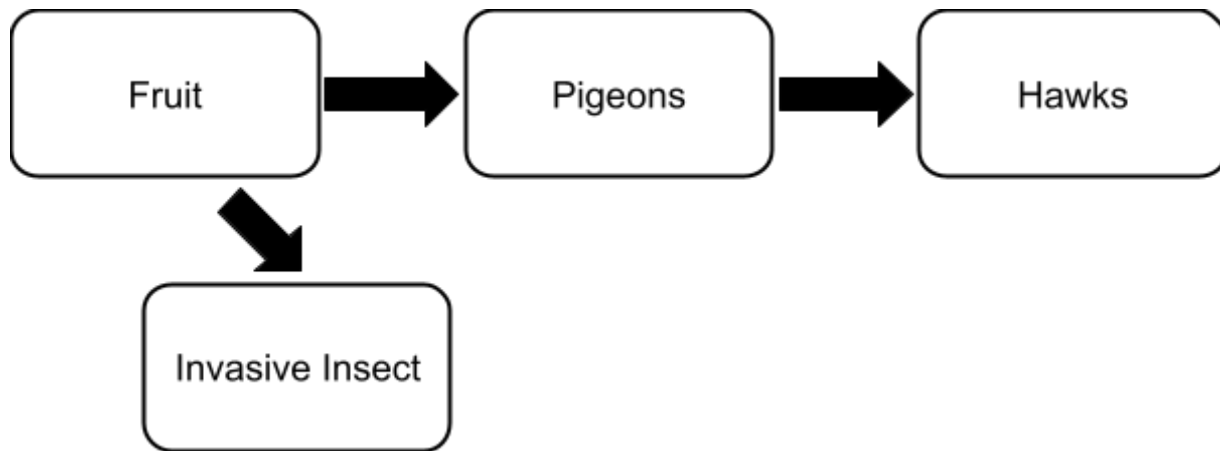
- a. Zone A
- b. Zone B
- c. Zone C
- d. All zones have the same species richness.

6. Write a Claim-Evidence-Reasoning (CER) argument to answer the scientific question, “Which Zone has the highest biodiversity?”

<b>Scientific Question: Which Zone has the highest biodiversity?</b>	
<b>Claim</b> A complete sentence that answers the scientific question	
<b>Evidence</b> Evidence is observations, data, or information that helps you answer the scientific question.	1.  2.
<b>Reasoning</b> Reasoning tells why your evidence supports your claim. You can use scientific definitions or ideas to explain why you chose the evidence you did.	

An invasive insect that eats fruit moved into a city park.

Use the energy food web and the *Population Numbers* chart to answer Questions 6, 7, and 8.



7. From the energy food web above, list one predator \_\_\_\_\_ and its prey \_\_\_\_\_.

8. Does the invasive insect have a predator? \_\_\_\_\_

9. The red fox is a species native to the Wasatch Front in Utah. The red fox eats small animals, insects, and fruit. Therefore, the red fox is a(n) \_\_\_\_\_.

- a. Herbivore
- b. Carnivore
- c. Omnivore

10. Write a Claim-Evidence-Reasoning (CER) argument to answer the scientific question, “*After the invasive insect arrives in May, what will happen to the pigeon population in the next few months?*”

***After the invasive insect arrives in May, what will happen to the pigeon population in the next few months?***

11. Rowan and Lily built the trap below to catch an invasive insect in Utah. They are going to place the trap on a mountain trail to catch insect eggs in February.

What are three suggestions you have to improve Rowan and Lily’s trap?

- 1.
- 2.
- 3.

