



Name _____ Date _____

SEN Entry 3-2: Setting Up Fairy Shrimp Ecosystems

Fairy Shrimp Ecosystem		
Components	Inputs	Outputs

Investigation 3-2: Fairy Shrimp

Investigation plan for setting up fairy shrimp aquarium		✓
1	Gather supplies for the group: € 1 Aquarium € Natural spring water € Fairy shrimp eggs € 1 Piece of masking tape € 1 Permanent marker	
2	Fill the aquarium with the spring water until it's almost full. The water should be at this level. 	
3	Label the aquarium with the group number and the date using masking tape and a permanent marker. 	
4	Pour the fairy shrimp eggs into the aquarium. 	

Investigation plan for feeding the fairy shrimp		✓
1	Gather supplies for the group: € Fairy shrimp food € 1 Feeding spoon € 1 Plastic pipette € 1 Plastic cup, any size	
2	When the fairy shrimp have hatched, begin feeding them: € Carefully scoop 1 spoonful of the fairy shrimp food using the feeding spoon into the plastic cup. € Use the plastic pipette to remove water from the aquarium and add it to the plastic cup. € Mix the fairy shrimp food with the water in the plastic cup until the mixture is cloudy. € Pour the mixture from the plastic cup into the aquarium. 	
3	Add air to the aquarium: € Hold the empty pipette without squeezing it. € Insert the pipette into the water and squeeze the top part three times to insert air into the water. You should see bubbles.	

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SEN Entry 3-2: Food for Animals

1. What changes have you observed in the system components, inputs, and outputs?

2. Where does food matter go when animals eat?

Investigation 3-2: Fairy Shrimp (Water Properties Table)

Material	Time Point	Properties			
Water		Smell	Color	Clarity (Transparent or Opaque)	
	Time Point 1				
	Time Point 2				
	Time Point 3				

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Investigation 3-2: Bayshore Pool Organism Data

		✓
1	Open a new webpage to: https://sailwebquest.wixsite.com/digitalsen3	
2	Click on the “Bayshore Pool Organisms” tab	
3	Click on “Fairy Shrimp” and record new information in the data table below. Repeat for tiger salamander and garter snake.	

Investigation Table:

Organism Name	Number of Organisms Last Year (Fall)	Number of Organisms This Year (Fall)	The change from last fall to this fall: Decrease or Increase by how many?
Earthworms (Example)	749	742	Decrease 7
Fairy Shrimp			
Tiger Salamander			
Garter Snake			

Investigation 3-2: Bayshore Pool Organism Data (Questions)

1. Describe what patterns you found in the data.

2. Describe what you will share with your Possible Cause group about Possible Cause 2: There was a decrease in the number of prey and Possible Cause 5: There was an increase in the number of predators.

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Handout 3-2: Investigating Possible Causes 2 and 5

Investigating		
Possible Cause 2: There was a decrease in the number of prey and Possible Cause 5: There was an increase in the number of predators		
Our Question	Our Task	Our Evidence
<i>What does the tiger salamander eat? What eats the tiger salamander?</i>	Build food webs	
<i>Where does food matter go when animals eat?</i>	Investigate fairy shrimp	
<i>Have the animal numbers in Bayshore Pool changed from last year to this year?</i>	Look at data about organisms in Bayshore Pool	

Lesson 3-2: SELF AND PEER CHECK! Arguing From Evidence to Eliminate a Cause

Discuss the following questions with your group and come up with an argument for eliminating one of the causes.

1. What is your group's claim? In other words, which cause does your group recommend eliminating?
2. What is your evidence for eliminating this cause?
3. What is your reasoning?

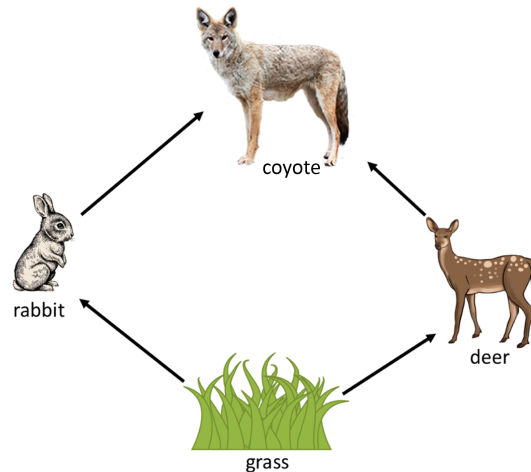
As a group, read each question and answer "Yes" or "No" based on your group's argument for eliminating a cause. Then, if you answered "No" to any question, improve your argument before presenting to the class.

Argument	
Does our argument include a claim, evidence, and reasoning?	☐ Yes ☐ No
Claim	
Does our claim identify which cause we recommend eliminating?	☐ Yes ☐ No
Evidence	
Does our evidence support our claim with data from relevant sources (investigations, models, readings, videos, etc.)?	☐ Yes ☐ No
Reasoning	
Does our reasoning describe why we included these data as evidence in our argument?	☐ Yes ☐ No

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Exit Slip 3-2

Instructions: Answer the questions based on the forest ecosystem food web below.



1. Scientists have observed an increase in the number of rabbits in the forest ecosystem. Which of the following could cause the number of rabbits to increase?

There are **two** possible causes. Circle the two possible causes.

Increase in the number of coyotes

Decrease in the number of coyotes

Increase in the amount of grass

Decrease in the amount of grass

2. Why did you choose those two possible causes? Support your answer with evidence from the food web.
