

COMPARING SEEDS



NAME OF FRUIT
NUMBER OF SEEDS
PROPERTIES OF SEEDS
DRAWING OR SAMPLE OF SEEDS

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THE SPROUTING SEED

My seed is called _____

DRAWINGS	OBSERVATIONS OF SPROUTING SEEDS
Date _____	
Date _____	
Date _____	
Date _____	

THE SPROUTING SEED

My seed is called _____

DRAWINGS	OBSERVATIONS OF SPROUTING SEEDS
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RESPONSE SHEET
ORIGIN OF SEEDS

A group of students in a fourth-grade class went on a seed hunt. After they opened several fruits, they made a chart with the names of the fruits and the number of seeds they found inside. Here is their chart.

Tomato	Apple	Peach	Banana
1 seed	0 seeds	120 seeds	6 seeds

When their teacher looked at their chart, she thought the students didn't count accurately.

The students insisted that they counted correctly. What do you think happened?

Can you make a chart that accurately shows the number of seeds in each fruit?

Tomato	Apple	Peach	Banana

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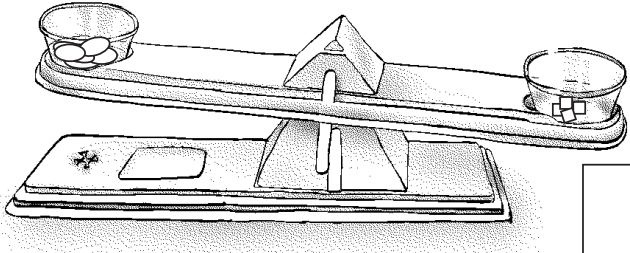
Can you make a chart that accurately shows the number of seeds in each fruit?

Tomato	Apple	Peach	Banana

THE SOAKED SEED

Put five seeds here.

Add mass pieces here.



DAY 1

Mass of five dry seeds _____

Trace one dry seed here.

DAY 2

Mass of five soaked seeds _____

Trace one soaked seed here.

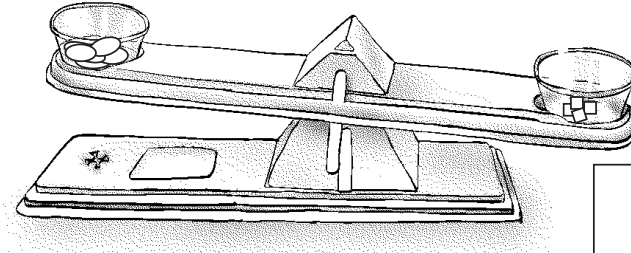
How much water did the seeds soak up? _____

Open a soaked seed. What is inside? Draw the inside of a soaked seed.

THE SOAKED SEED

Put five seeds here.

Add mass pieces here.



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Mass of five dry seeds _____

Trace one dry seed here.

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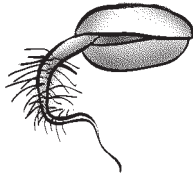
COMPARING GERMINATED SEEDS

Find an example of a seedling that has each property or structure. Place each example in the boxes below.

	SWOLLEN	SEED COAT OFF	ROOT	STEM AND LEAVES
BEAN				
PEA				
SUNFLOWER				
POPCORN				

RESPONSE SHEET
GROWING FURTHER

Look below at the picture and an entry from a student's journal.



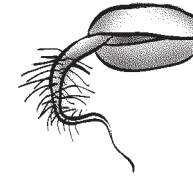
My seed has begun to grow. You can see that the seed coat is almost off. I think the thing coming out of the split seed is the stem. It will begin to grow up toward the sunlight in a few more days. Then the root will begin to grow.

Do you agree with what this student wrote? Explain why you agree or disagree.

How could you find out for sure if this student was right?

RESPONSE SHEET
GROWING FURTHER

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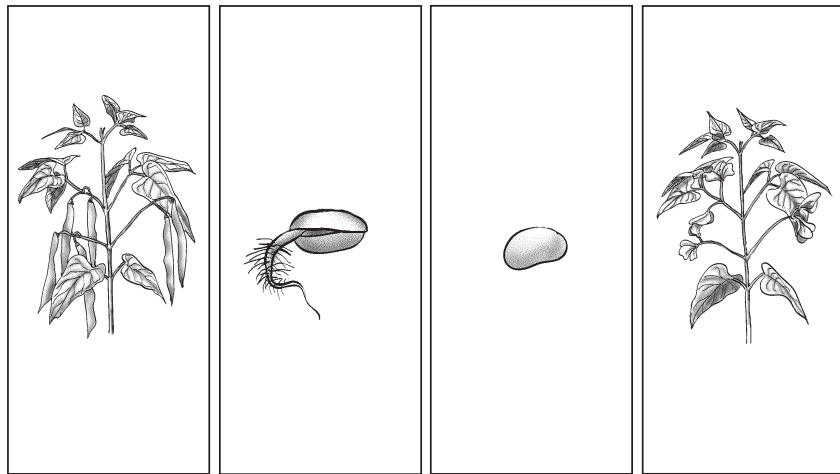
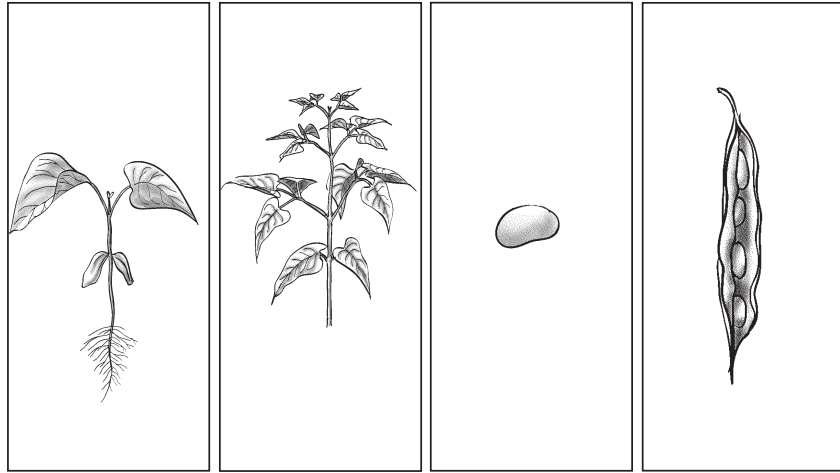
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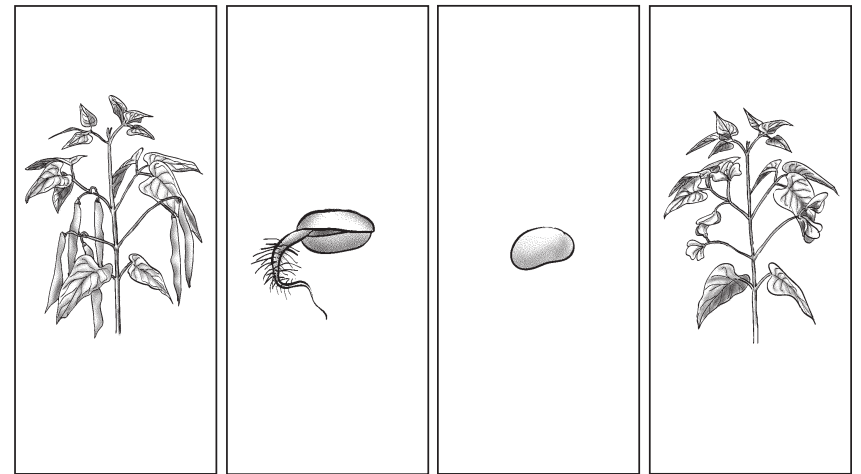
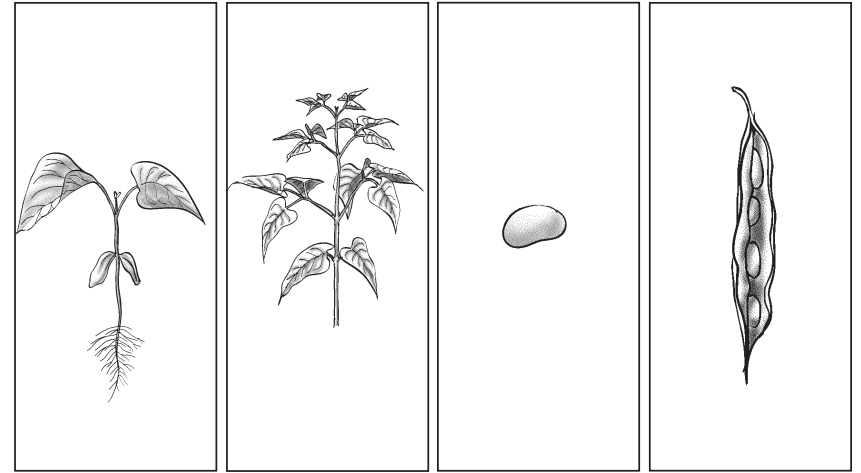
BEAN LIFE CYCLE

.....



BEAN LIFE CYCLE

.....



CRAYFISH STRUCTURES

.....

Do crayfish have eyes? _____ How many? _____

Do crayfish have ears? _____ How many? _____

Do crayfish have walking legs? _____ How many? _____

Do crayfish have antennae? _____ How many? _____

Do crayfish have tail flaps? _____ How many parts? _____

Do crayfish have pincers? _____ How many? _____

Do crayfish legs have joints? _____ How many? _____

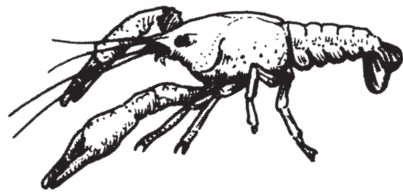
Do crayfish have mouth parts? _____ How many? _____

Do crayfish tails bend? _____ How many places? _____

Do crayfish have bristles? _____ Where? _____

Does the crayfish have bumps? _____ Where? _____

What other crayfish structures did you observe? _____



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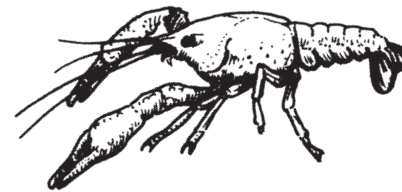
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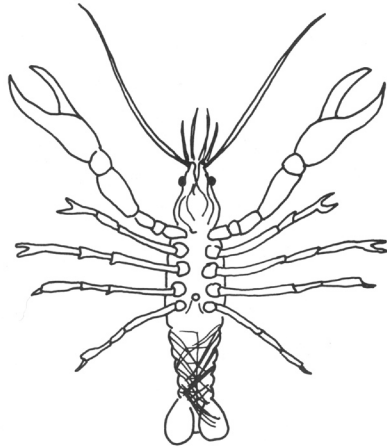
Does the crayfish have bumps? _____ Where? _____

What other crayfish structures did you observe? _____



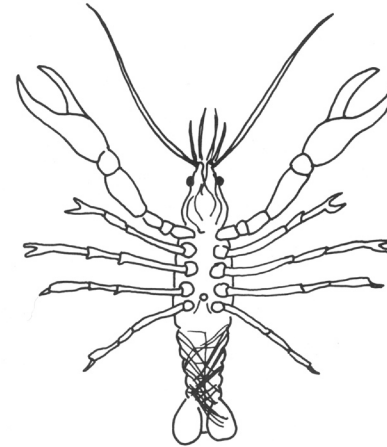
CRAYFISH DIAGRAMS

.....



CRAYFISH DIAGRAMS

.....



CRAYFISH BEHAVIOR

What did your crayfish do when you

Left it alone in the basin?

Reached toward it?

Touched its back?

Touched its tail?

Touched its antennae?

Put it on the table?

First put a house in the basin?

Left it for 5 minutes with the house?

First put another crayfish with it?

Describe the different ways crayfish can move.

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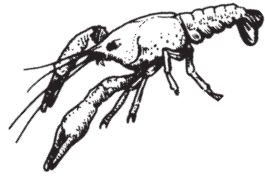
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RESPONSE SHEET
MEET THE CRAYFISH

Look at the picture of the crayfish



On the lines under each animal pictured below, write one way that animal is like a crayfish and one way it is different.



1. _____



4. _____



2. _____



5. _____



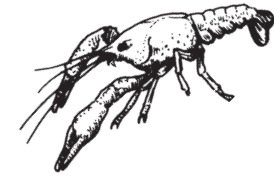
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6. _____

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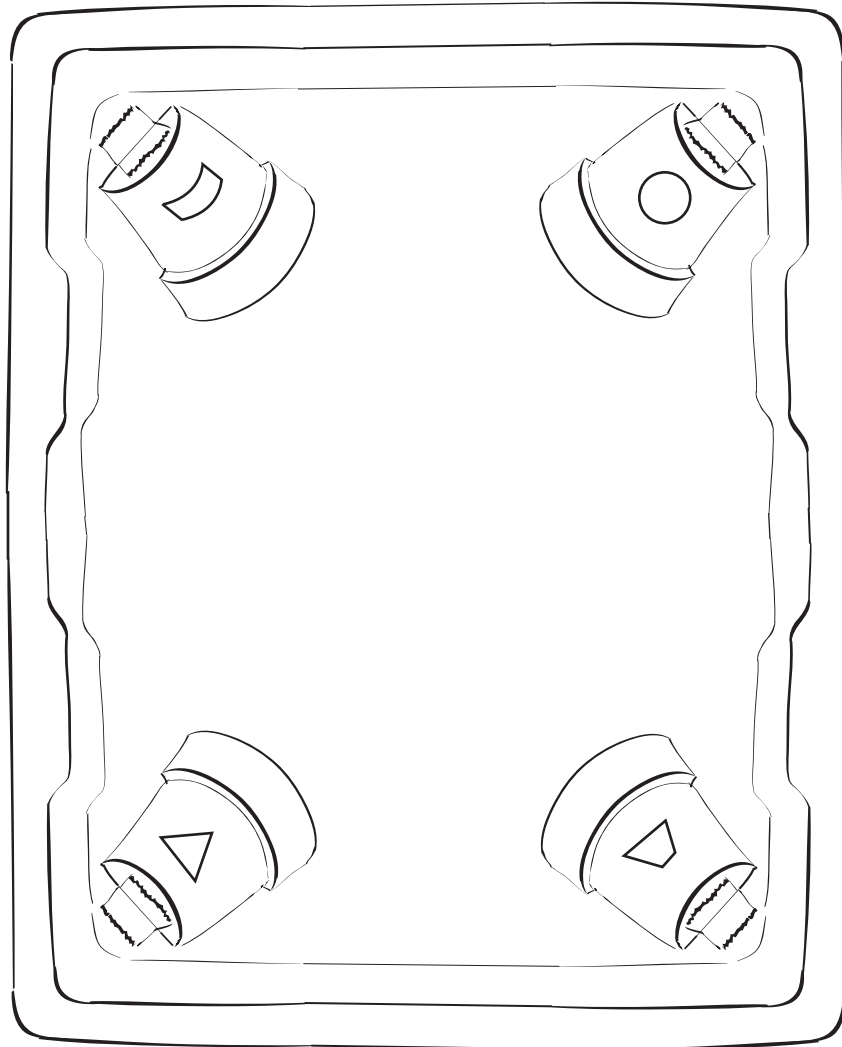
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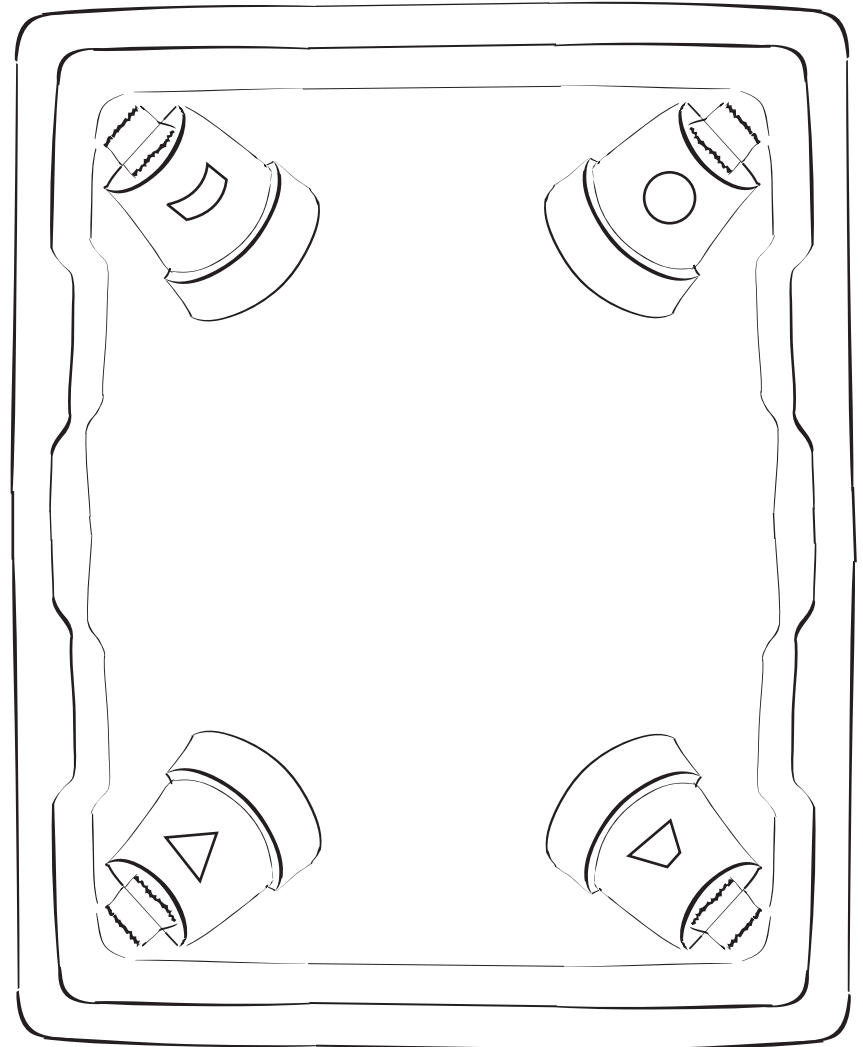
CRAYFISH HABITAT

DAY # _____



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LAND SNAIL OBSERVATIONS

PART 1: STRUCTURES

Do land snails have eyes? _____ How many? _____

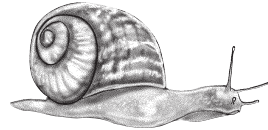
Do land snails have walking legs? _____ How many? _____

Are their legs jointed? _____ How many joints? _____

Do land snails have antennae? _____ How many? _____

Do land snails have a mouth? _____ Where? _____

What other land snail structures do you observe? _____



PART 2: BEHAVIORS

What did the land snail do when you

Left it alone in the cup? _____

Turned it upside down? _____

Touched its antennae? _____

Put it near another land snail? _____

Put a cup near it? _____

PART 3: FUNCTIONS

Describe how a structure or a behavior of the land snail helps it survive.

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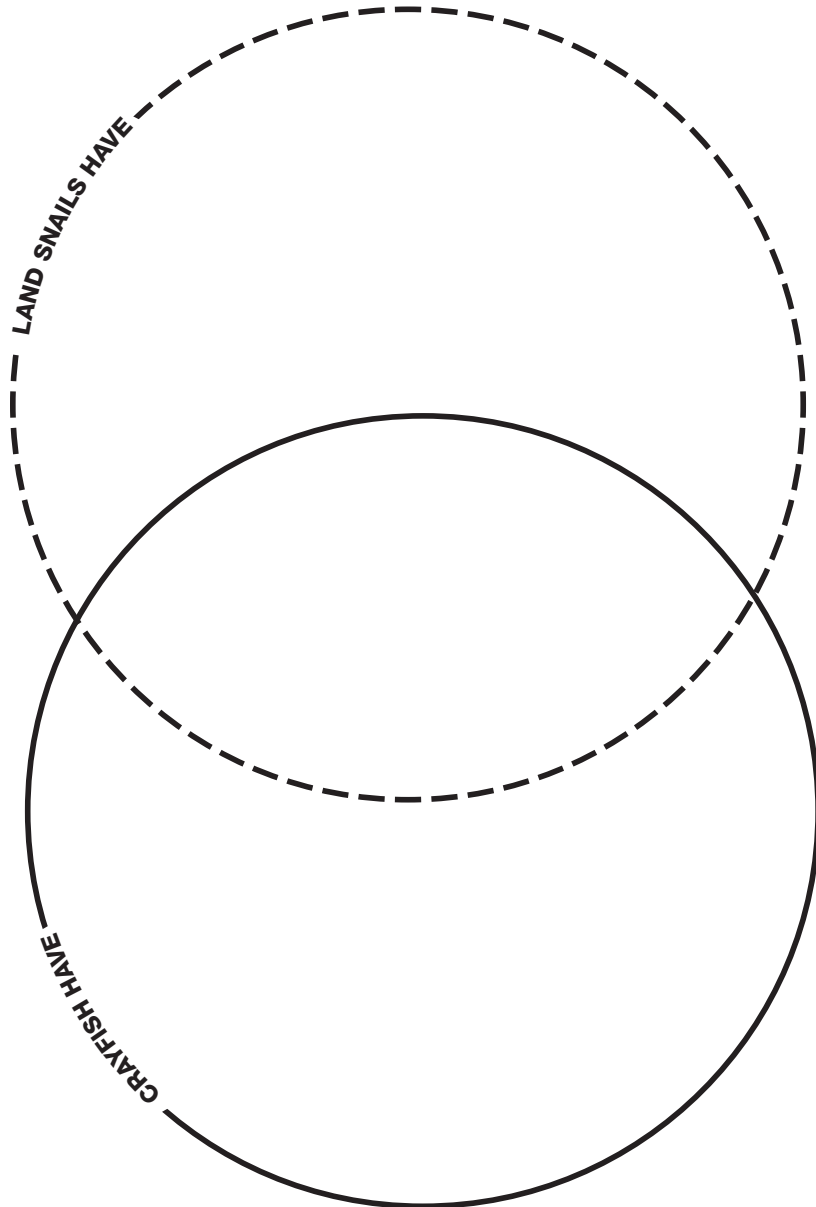
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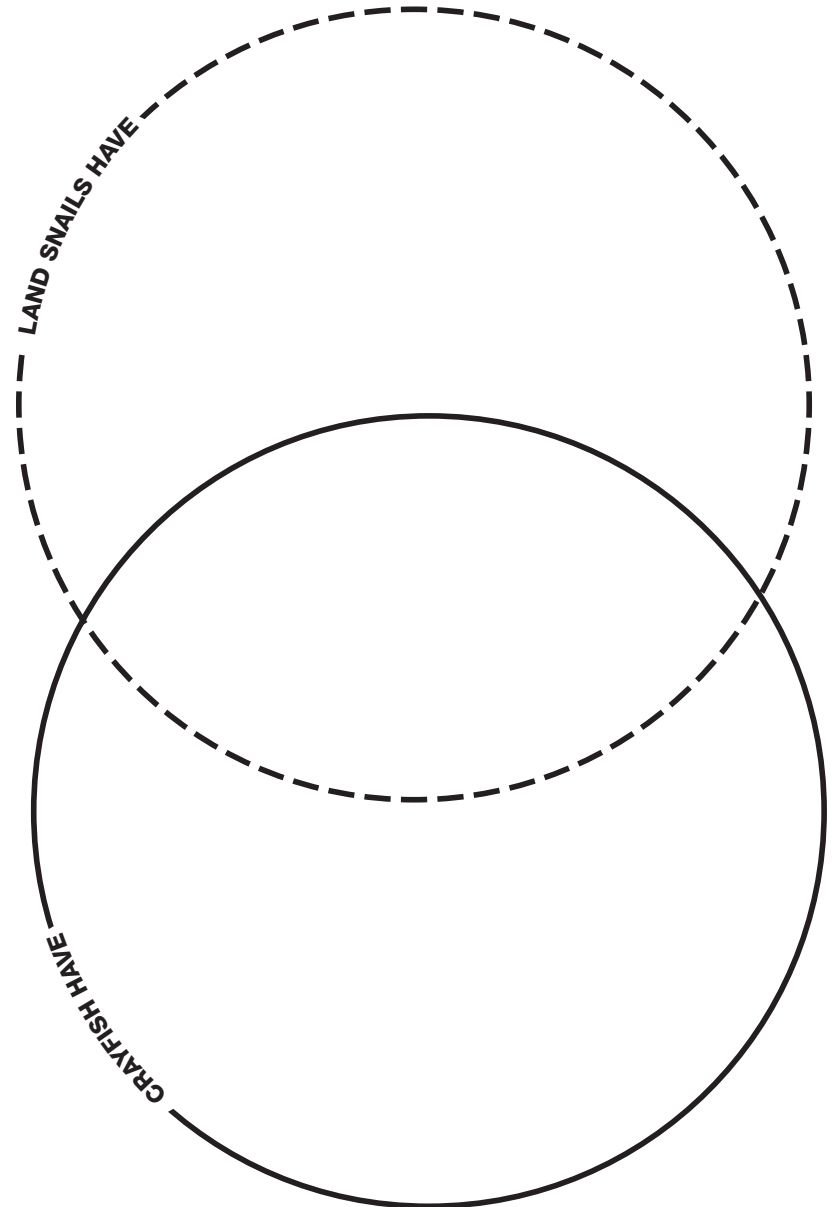
PART 3: FUNCTIONS

Describe how a structure or a behavior of the land snail helps it survive.

COMPARING STRUCTURES



COMPARING STRUCTURES



RESPONSE SHEET

MEET THE LAND SNAIL

Below are several entries from a class journal describing conditions in a snail habitat.

Day	Habitat conditions	Snail behavior
Thursday	Paper towel and sides of terrarium are moist; a large lettuce leaf added.	Snails are moving around the terrarium; some are eating lettuce.
Friday	Paper towel drying, so sprayed towel and sides of terrarium with water; half piece of lettuce still available.	Snails are moving around; some are eating. Snails are spread equally around the terrarium.
Monday	Paper towel is dry; no moisture on the walls; no food left.	Snails are motionless; most are stuck near the top of the terrarium.
Tuesday	Cleaned terrarium—paper towel in bottom is moist; walls are wet; full leaf of lettuce is available.	Snails are all over the terrarium; most are moving toward the lettuce.

Looking at the class journal above, what do you think the students learned about caring for the snails? Be sure to explain why you think they learned what they did.

How does the structure of the snail help it survive?

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FOSS STRUCTURES OF LIFE MODULE
PROJECT PROPOSAL

1. What is the question or the project that you are proposing?
2. What materials or references will you need to complete the project?
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