

No Prep!

NGSS
aligned

Environments

For FOSS Science Kits

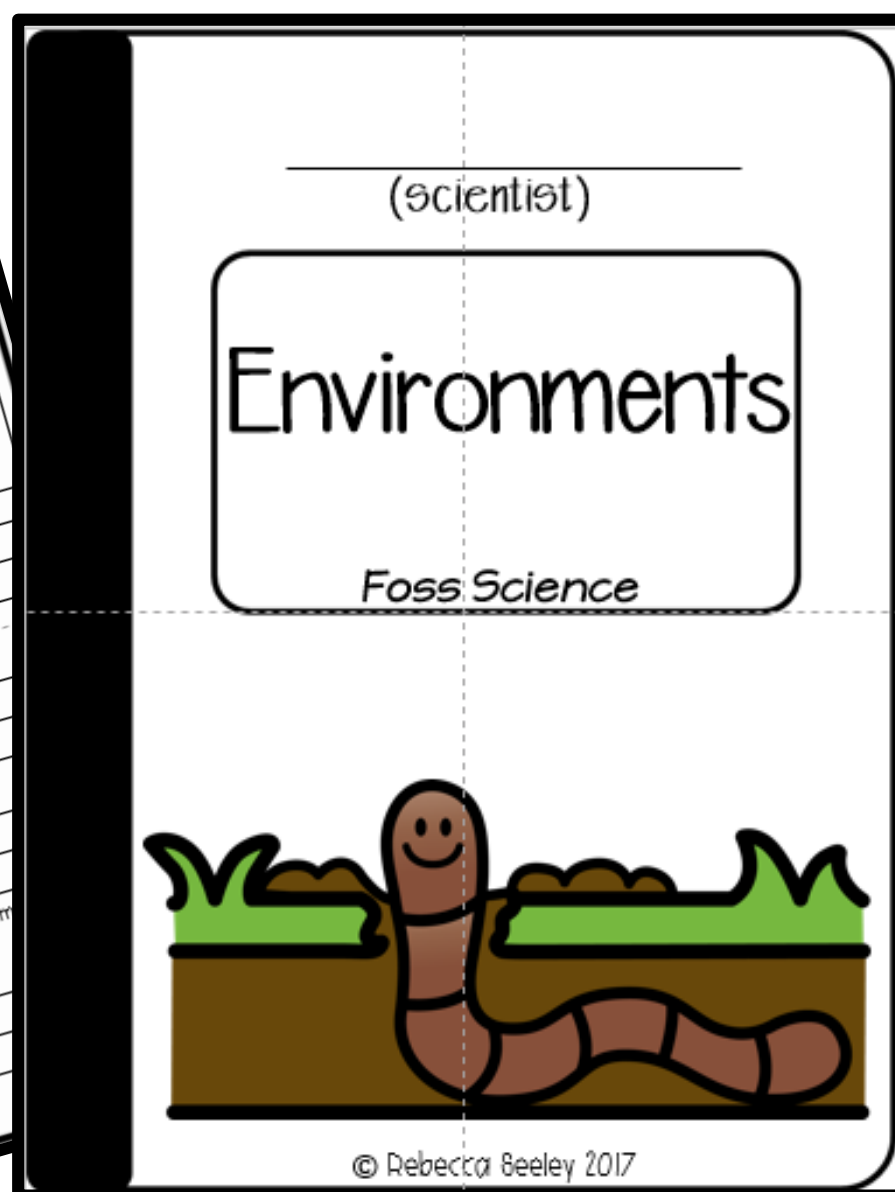
A comprehensive student journal that follows all of the focus questions and investigations for the Environments FOSS kit. Color, picture supported vocabulary cards included!

INVESTIGATION # 1.1
Focus Question: How do mealworm structures and behaviors help them grow and survive?
In today's investigation we observed mealworms and set up an environment for the mealworms to live in. Write your observations below.


date _____

1. Observe a mealworm.
2. Draw and label a mealworm's structures.
3. Describe each structure's function.
4. Observe and describe the mealworm's behavior.
5. What are 2 questions you have about mealworms?
6. What do you need to know about mealworms to keep them healthy in the classroom?


© Rebecca Seeley 2017




environmental factor
one part of the environment
An environmental factor can be nonliving, such as water, light, and temperature. It can be living, such as plants and animals.



function
an action that helps a plant or an animal survive



inference
meaning that you come from your observations



Investigation 1 Words

© Rebecca Seeley 2017

Single License

Just a little note...

Thank you for purchasing this pack. Please take the time to email me (rebecca.seeley81@gmail.com) with any questions you may have, as well as **leave feedback** on your purchase!

This earns you TPT points you can use towards your next TPT purchase!

[You can do this by going into "My Purchases" and clicking on the green "Provide Feedback" link under each purchase.]

This purchase grants you a single license. This means you may use this product in your classroom only. Limited copies (for student use) may be printed. This does not grant you permission to sell or give this product to other teachers. If you wish to share this product with another teacher, please purchase another license through the TPT website, at a discounted rate. These pages **may not** be posted on school websites.

Thanks so much and Happy Teaching!!

© 2017 Rebecca Seeley

All rights reserved. Purchase of this unit entitles to purchaser to reproduce the pages in limited quantities for **classroom use only**. Duplication for an entire school, or an entire school district is not permitted with this purchased license.

Teacher Tip

Thanks for purchasing this pack! I have tried to create an easy and fun way to learn using your FOSS Next Generation edition kit. The science notebook is to be used as you see fit.

Print and use all of the pages, or simply print what you need/what you have time for. (I know science time can be hard to come by these days!!) I have also included some extra pages to enhance your teaching and your students' learning. I have left the page numbers empty so you can use them in any order you'd like.

Check out the teacher tips throughout the pack for helpful hints and ideas. 😊

Teacher Tip

Science notebooking is a key component of FOSS science. On the next page you will find some simple guidelines to notebooking. I usually print this page out and laminate it. We go back and refer to it as we are notebooking to make sure we are covering all of the steps.

Science Notebooks

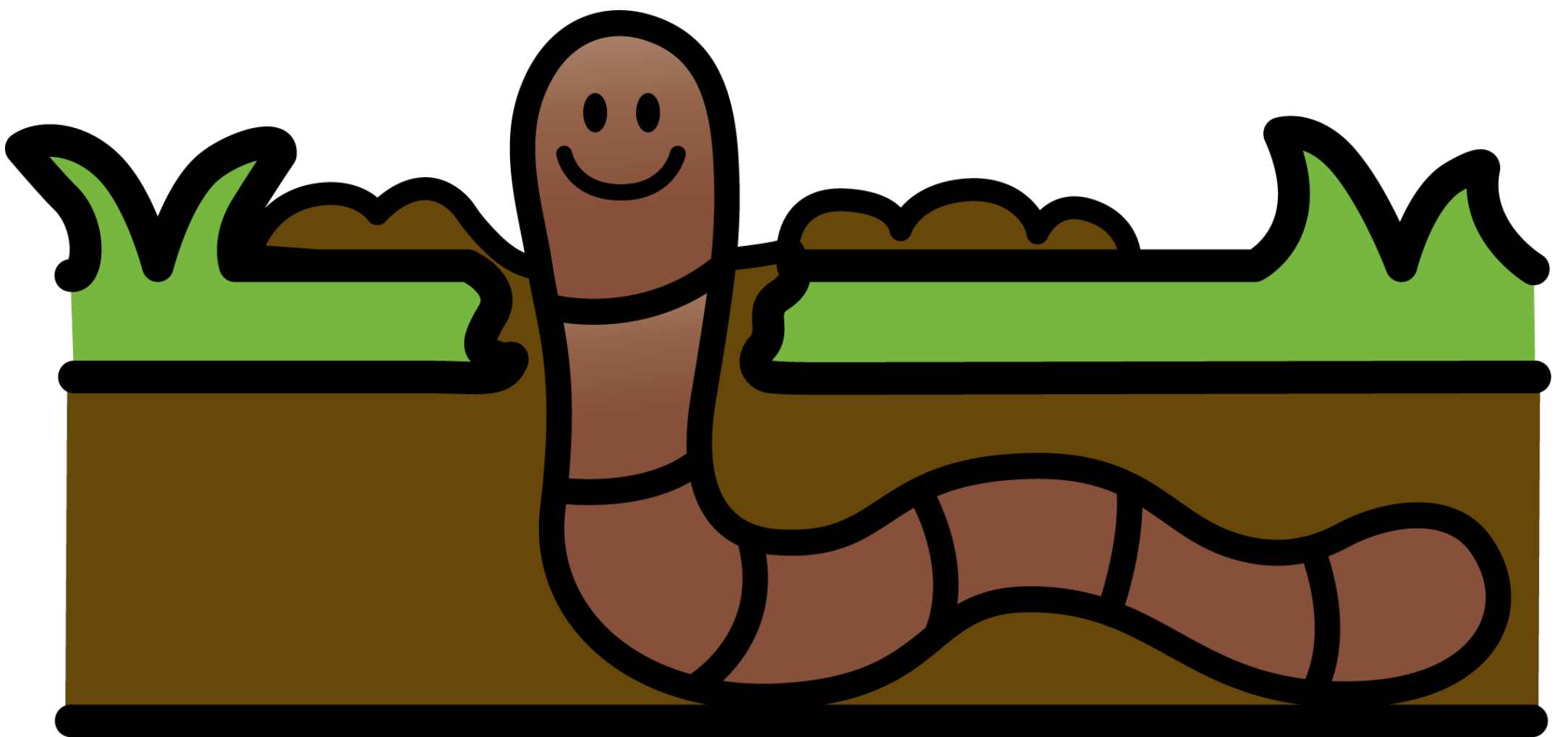
1. Date your entry
2. Think before you write
3. Use nice handwriting
4. Draw detailed pictures
5. Don't forget to label
6. Write in your table of contents
7. Share your findings



(scientist)

Environments

Foss Science



(scientist)

Environments

Foss Science

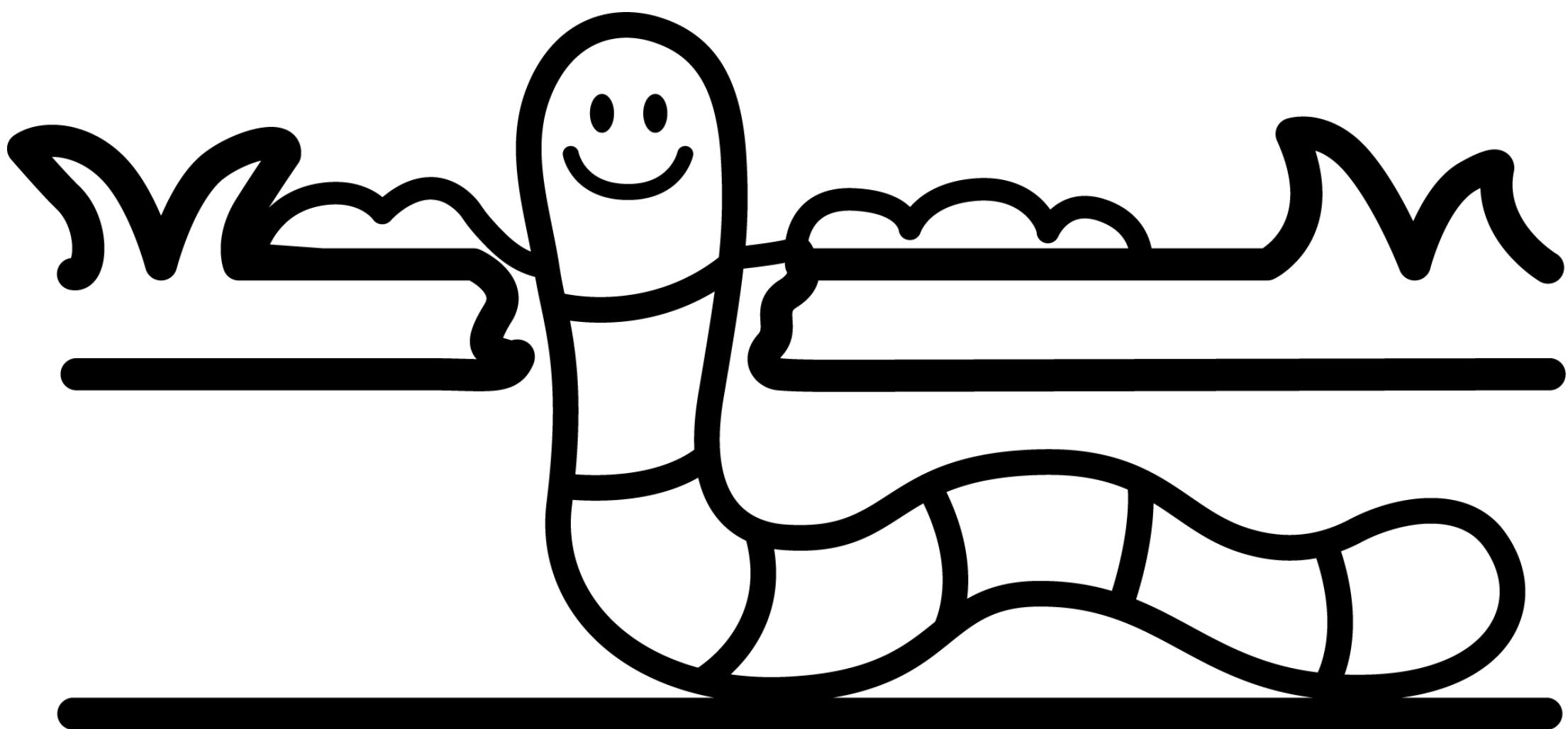


Table of Contents

Title

pg

[illegible]

Scientists

can

have

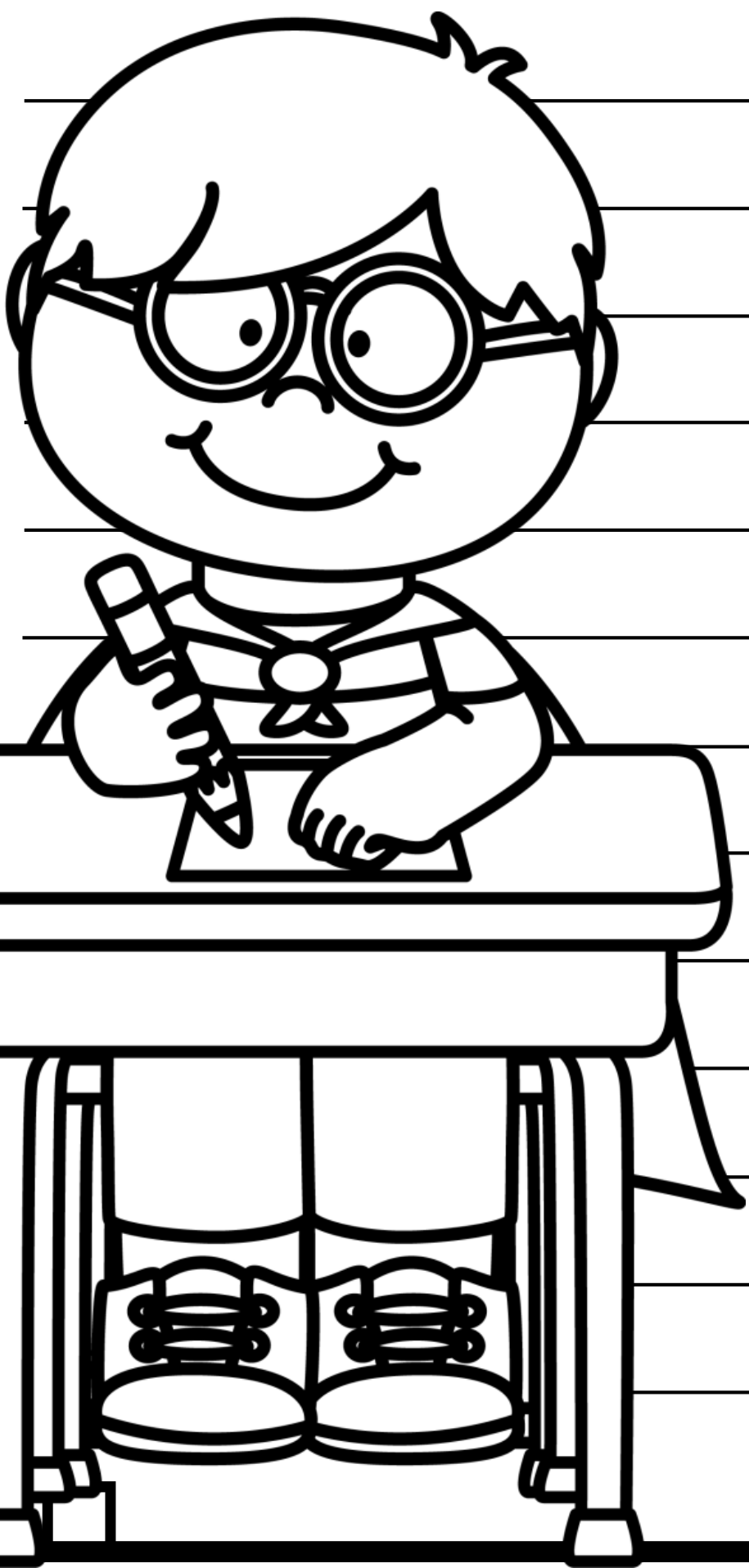
are

Use your can/have/are chart to write 2 good sentences about scientists.

7 Minute

Quick Write

[What I already know about environments.]



QUESTION, QUESTION...

Who has a question?

[Write 3 questions you have about this science unit.]

1

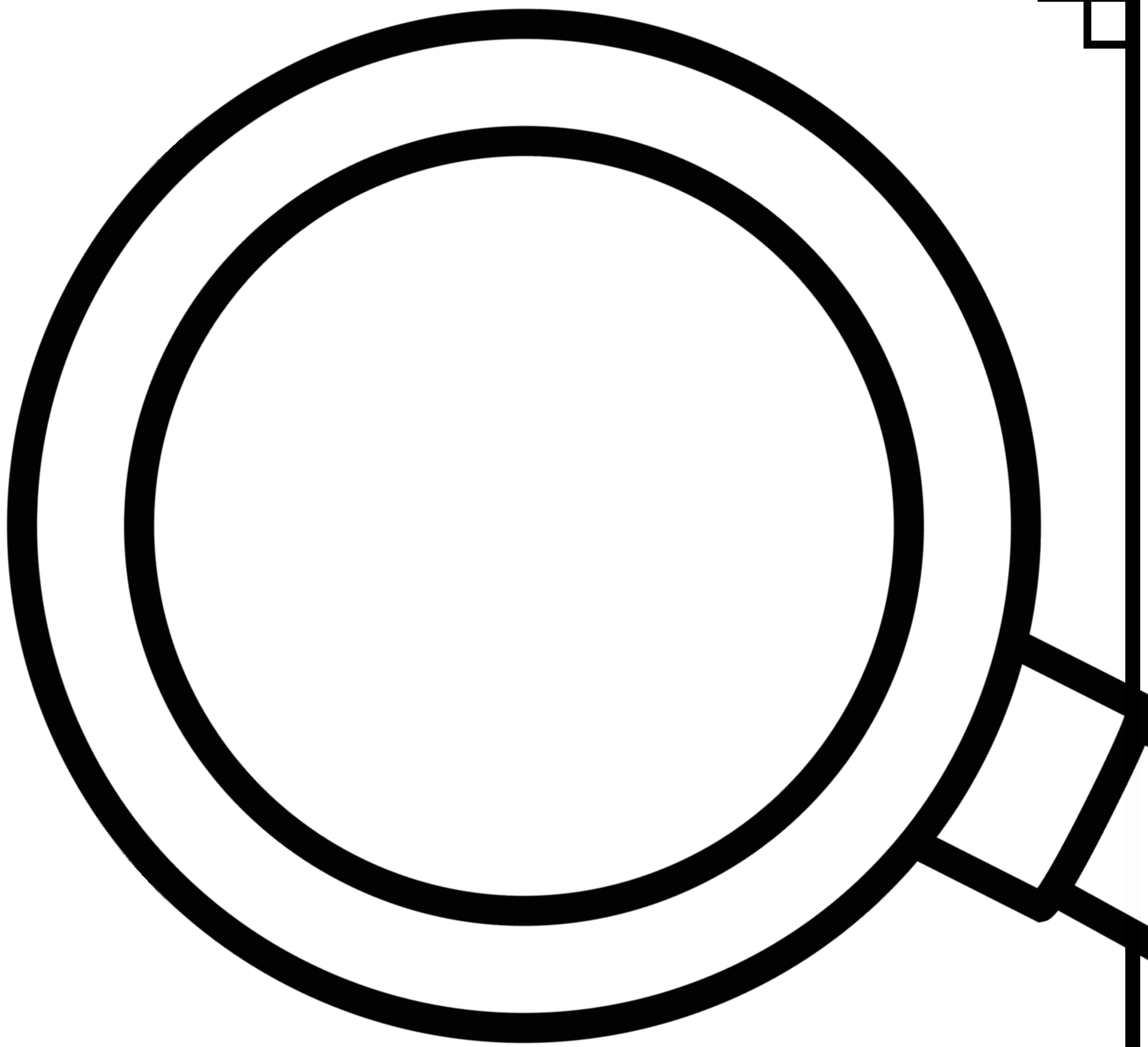
2

3

Teacher Tip

Many teachers have asked for additional room for students to write their thinking/learning. I created this page to place after each investigation page. This provides more room for students to write their thoughts and observations.

What did I learn in
this investigation?



Write, Draw, and Label

INVESTIGATION # 1.1

Focus Question: How do mealworm structures and behaviors help them grow and survive?

In today's investigation we observed mealworms and set up an environment for the mealworms to live in. Write your observations below.

_____ date

1. Observe a mealworm.
2. Draw and label a mealworm's structures.
3. Describe each structure's function.



4. Observe and describe the mealworm's behavior.

5. What are 2 questions you have about mealworms?

6. What do you need to know about mealworms to keep them alive and healthy in the classroom?

INVESTIGATION # 1.1

Life of a Mealworm

Week:	Observation #1	Observation #2
1		
2		
3		
4		

INVESTIGATION # 1.1

Life of a Mealworm

Week:	Observation #1	Observation #2
5		
6		
7		
8		

INVESTIGATION # 1.1

Reading: "Two Terrestrial Environments"

In today's reading we learned about environmental factors. After reading, record your thoughts and ideas about each question in the response column.

date

Question:	Response:
What are the environmental factors that define a tropical rainforest environment?	
What are the environmental factors that define a desert environment?	
What are some of the structures and behaviors that help organisms survive in the desert?	
What is one question you have about environmental factors?	

INVESTIGATION # 1.1 (PART 2)

_____ date _____

We have been observing mealworms and watching as they change and grow.

We have learned some new vocabulary words. Write the definition of each word and draw a picture to go with the definition. Then answer the focus question.

molting _____



larva _____



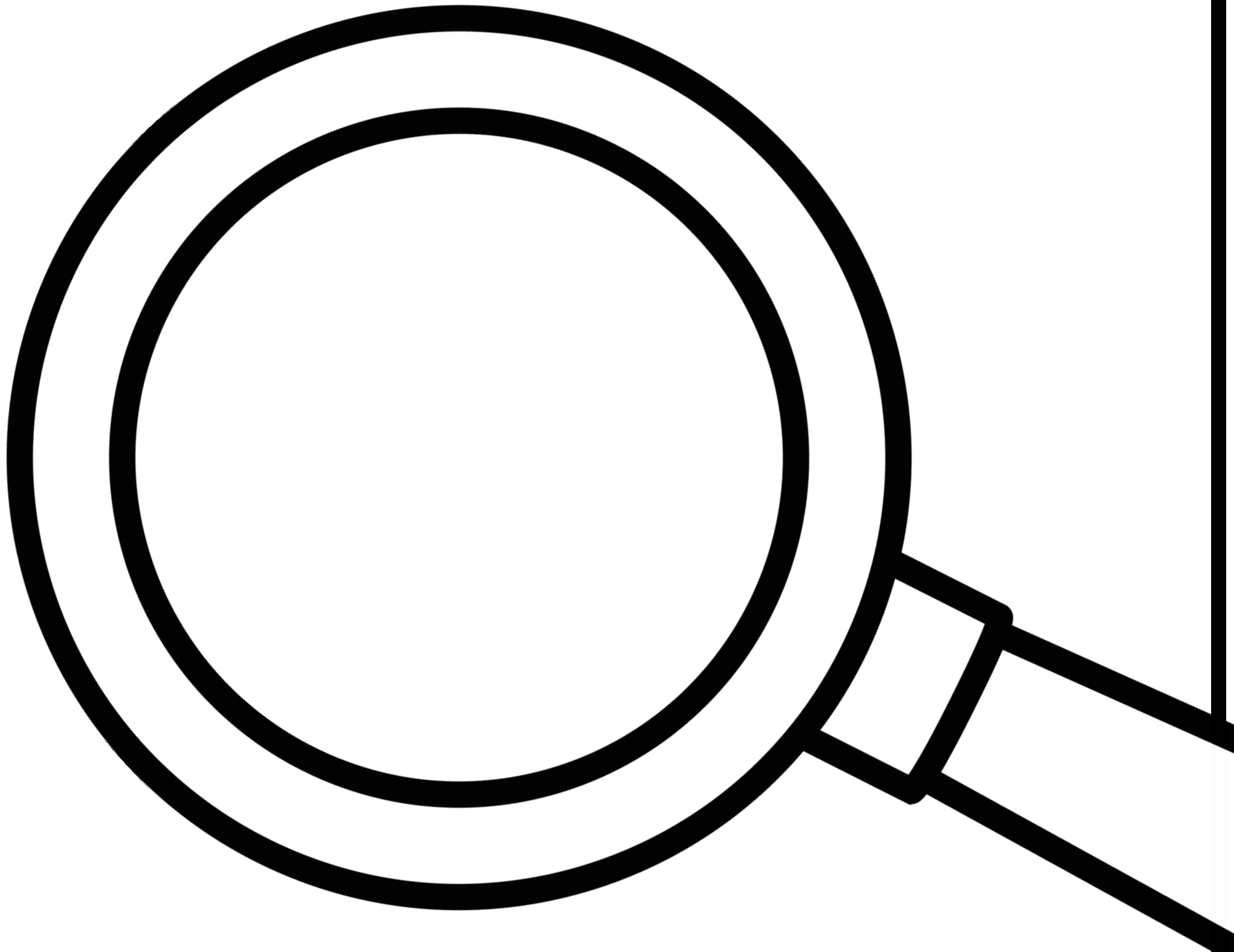
Focus Question: How do mealworm structures and behaviors help them grow and survive?

INVESTIGATION # 1.1

Focus Question: How do mealworm structures and behaviors help them grow and survive?

We have been observing mealworms for a few weeks. We have seen the mealworms transform into the adult stage known as a darkling beetle. Draw and label the structures of a beetle. Write at least 2 facts about beetles below.

date



darkling beetle

INVESTIGATION #1.1

Reading: "Darkling Beetles"

date

Today we read about darkling beetles. Write three things you learned, two ideas you want to remember, and one question that you still have.

3

Things that you learned

2

Ideas you want to remember

1

Question you still have

INVESTIGATION # 1.2

Focus Question: What moisture conditions do isopods prefer?

In today's investigation we observed isopods and set up an environment for them to live in. Write your observations below.

date

1. Observe an isopod.
2. Draw and label an isopod's structures.
3. What differences, if any, did you observe in the structures or behaviors of the isopods?



4. What questions do you have about isopod structure function or behavior?

5. How can you tell the difference between a sow bug and a pill bug?

6. What living and nonliving environmental factors should you consider as you design the environment for isopods?

INVESTIGATION # 1.2

Isopod Investigation

Part 1: Set Up

Number of pill bugs _____ Number of sow bugs _____

Environmental factor tested _____


Describe how you set up the container.

Part 2: Observation

Record where each animal was and what it was doing (on surface, buried, moving).

This is where the animals were after _____ minutes.

short run



This is where the animals were after _____ hours.

long run



INVESTIGATION # 1.2

Isopod Investigation (continued)

Part 3: Interpretation

What can you say about the animals' environmental preferences?

Isopod Environmental Map



Key: ☐ _____ ☐ _____
☐ _____ ☐ _____

1. How much water did you put into your terrarium?

2. Where did you put the water?

3. List the environmental factors.

INVESTIGATION # 1.2

Reading: "Isopods"

In today's reading we learned more about isopods. After reading, record your thoughts and ideas about each question in the response column.

date

Question:	Response:
Are isopods insects? What structures provide evidence for your claim.	
Isopods are crustaceans. What other organisms do you know that are crustaceans?	
What kind of environment do isopods need to survive well? Why?	
What is one question you have about isopods?	

INVESTIGATION # 1.3

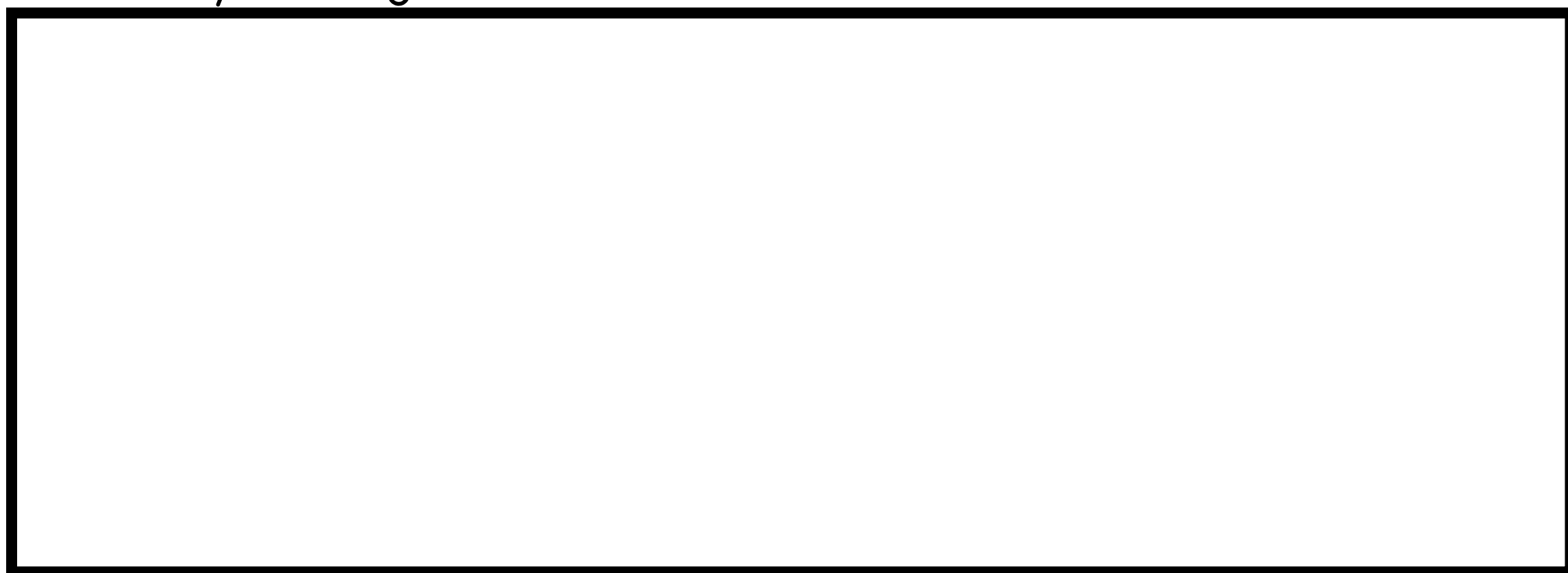
Focus Question: What are the characteristics of animals living in the leaf-litter environment?

In today's investigation we went outside to collect critters. Record your observations below.

date

Critter Record

1. Draw your organism below. Label the structures.



2. Draw a line as long as your organism.

3. Where did you find your organism?

4. How did your organism behave?

INVESTIGATION # 1.3

Reading: "Amazon Rain Forest Journal"

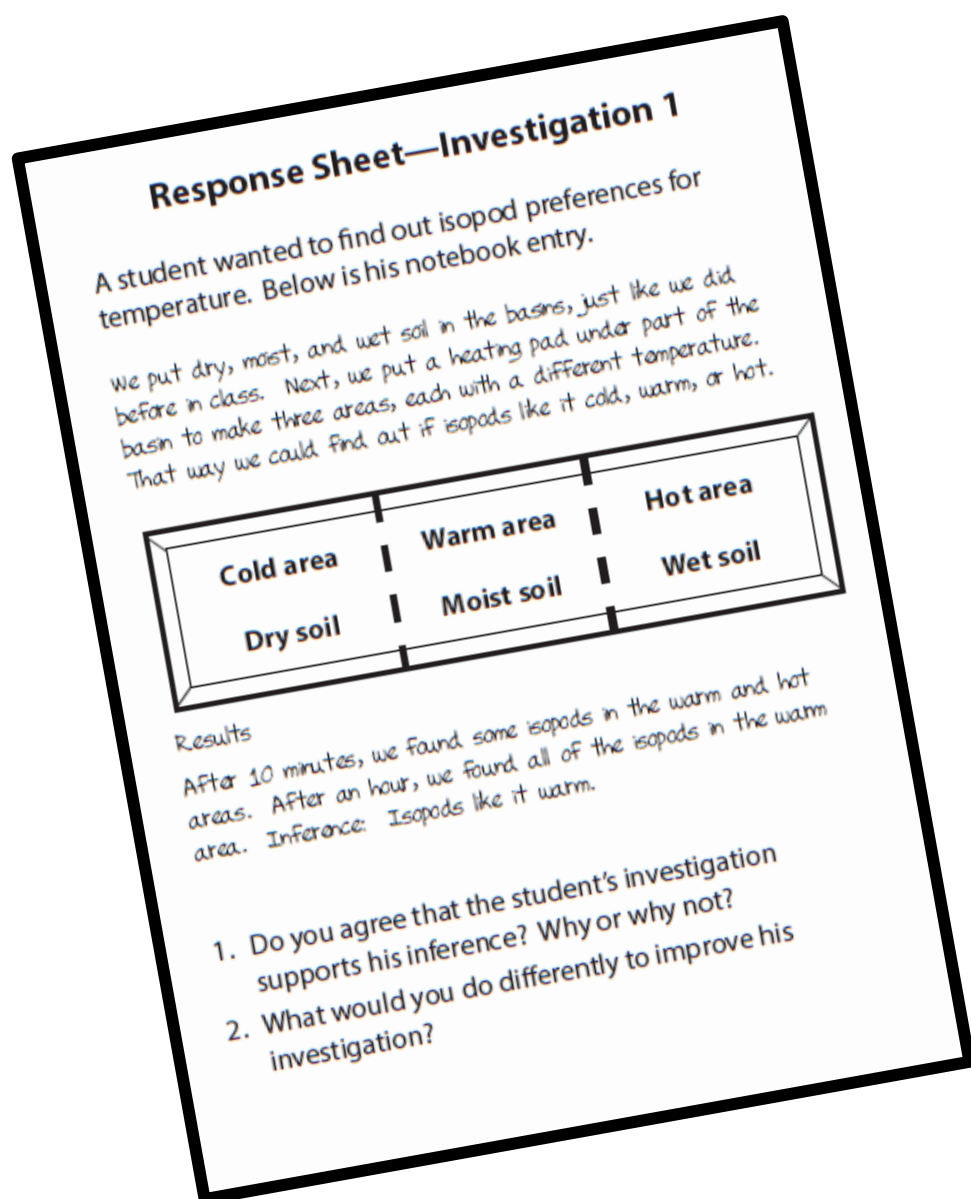
In today's reading we learned about the Amazon Rain Forest. After reading, record your thoughts and ideas about each question in the response column.

date

Question:	Response:
What did Lee learn about ants on the rain forest adventure?	
How do ants communicate with each other about navigating through the forest?	
In what ways do animals depend on plants in the rain forest environment? How do plants depend on the animals in the rain forest environment?	
What environmental factor changes as you go from the rain forest canopy to the rain forest floor?	

Teacher Tip

There are a few response sheets (found on FossWeb) that go with some investigations. These response sheets are for students to read through and look for things they agree and disagree with. The response sheets are “written” by a student (see example). I have created a few sheets that can be used with these sheets. One page is almost all blank- this is so you can print the half sheets and have your students glue or tape them into their journal. The other is more guided. You may want to put multiple copies in your journal, or simply have them as extras, whatever works best for your class.



RESPONSE SHEET Thoughts

date

Response Sheet #

RESPONSE SHEET Thoughts

date

Response Sheet #

After reading the response sheet carefully, think about what you agree with and what you disagree with. Record your thoughts in the table below.

I agree with...	I disagree with...

INVESTIGATION # 2.1

Reading: "Freshwater Environments"

In today's reading we learned about freshwater environments. After reading, compare and contrast lake and river environments. Then record your thoughts and ideas about each question in the response column.

date

lakes

rivers

Question:

Response:

What living and
nonliving factors define
a lake's shallow-water
zone?

What role do
phytoplankton play in a
freshwater
environment?

INVESTIGATION # 2.2

Focus Question: What are the roles of organisms in a food chain?

In today's investigation we used organism cards to learn more about food chains, producers, decomposers, and consumers. Record your observations below.

date

1. Draw and label one example of a **food chain**.



2. Define food chain.

3. Draw and label a **producer**.



4. Define producer.

5. Draw and label a **consumer**.



6. Define consumer.

INVESTIGATION # 2.2

7. Draw and label one example of a **decomposer**



8. Define decomposer.

9. Draw and label one example of a **food web**.



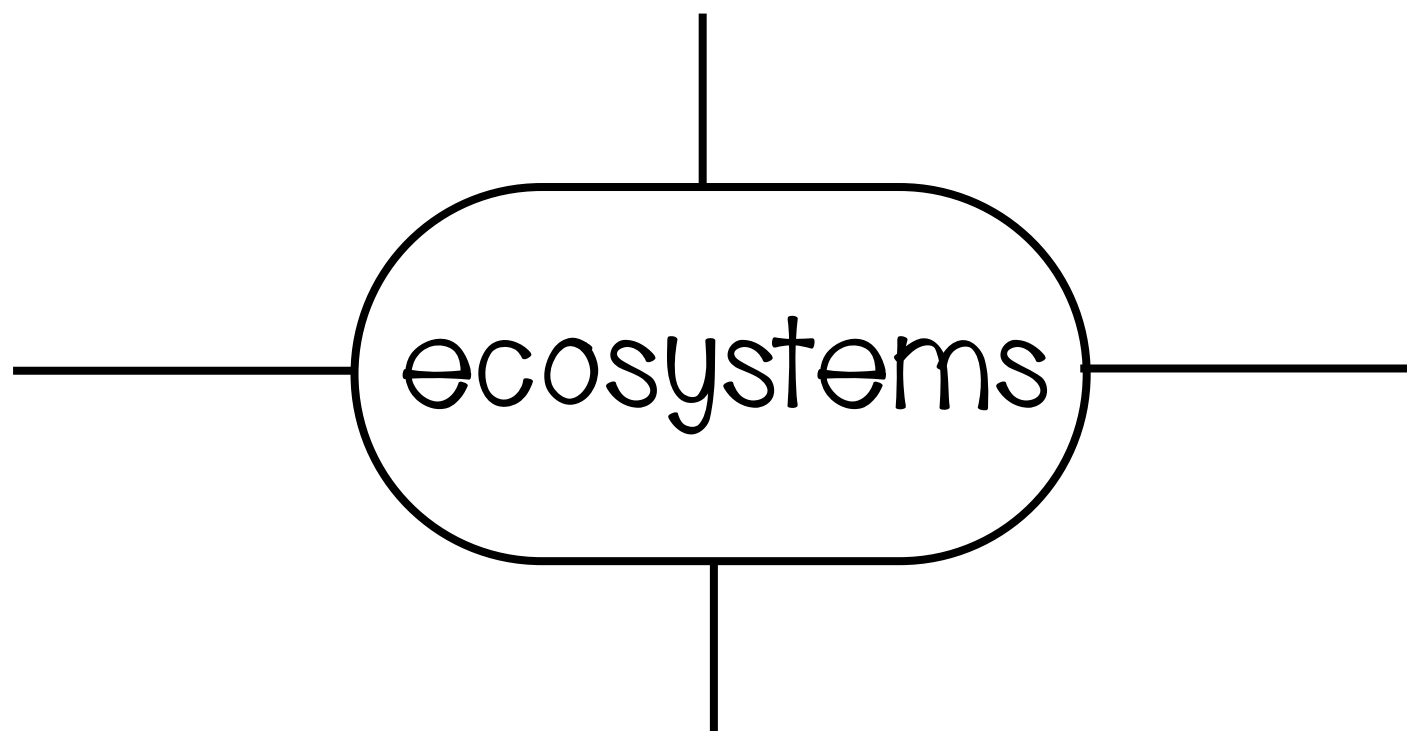
Focus Question: What are the roles of organisms in a food chain?

INVESTIGATION # 2.2

Reading: "What is an Ecosystem"

In today's reading we learned about ecosystems. Below fill in the word web about ecosystems. Then answer the questions to show what you learned from the reading.

date



1. How do plants and animals get the food they need to survive?

2. Explain how energy from the sun helps animals survive.

INVESTIGATION # 2.2

Reading: "Food Chains and Food Webs"

In today's reading we learned more about food chains and webs. After reading, record your thoughts and ideas about each question in the response column.

_____ date

Question:	Response:
Do all plants need food? Why/why not?	
Look at the food web for a freshwater river. Give 3 examples of animals that compete for a food source.	
What is the role of the producer in an ecosystem?	
What is the role of the decomposer in an ecosystem?	
How might a forest fire affect the food web in a forest?	

INVESTIGATION # 2.3

Focus Question: How does food affect a population in its home range?

In today's investigation we took part in a simulation activity that involves producers and consumers. We learned about the food supply in a food chain.

Record your observations below.

_____ date

Population Simulation Results

Year	# of deer at the start	# of deer at the end	Survival Predictions
1			
2			
3			
4			
5			

In year 2, we started with _____ deer and ended with _____ deer.

The number of deer _____ because _____

In year 5, we started with _____ deer and ended with _____ deer.

The number of deer _____ because _____

In year 6, we started with _____ deer and ended with _____ deer.

The number of deer _____ because _____

INVESTIGATION # 2.3

date

Think about it...

After doing the deer simulation and analyzing your results, answer the focus question.

How does food affect a population in its home range?

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

INVESTIGATION # 2.3

Reading: "Human Activities and Aquatic Ecosystems"

In today's reading we learned about human activities and the aquatic ecosystem.. After reading, record your thoughts and ideas about each question in the response column.

date

Question:	Response:
What organism causes most of the pollution in Lake Erie? Give 2 examples to why you think so.	
What is the effect of climate change on large freshwater lakes?	
What is the effect of water pollution on an aquatic ecosystem like Lake Erie?	

INVESTIGATION # 2.3

Reading: "Comparing Aquatic and Terrestrial Ecosystems"

In today's reading we learned about aquatic and terrestrial ecosystems.
After reading, record your thoughts and ideas about each question in
the response column.

date

Question:	Response:
What are some of the ways all ecosystems are the same?	
Where do terrestrial and aquatic ecosystems get their energy?	
How do organisms in an ecosystem get the matter and energy they need to survive?	

INVESTIGATION #2.4

Focus Question: How do animals use their sense of hearing?

date

In today's investigation we went outside to experience how animals use their sense of hearing. We also watched a short video about animal language and communication. Write, draw, and label your thoughts and observations below. Use the questions to guide your thinking.

Ideas to guide your thinking:

1. What was it like to have restricted vision and to depend on your sense of hearing to find a partner? Did you have any challenges?
2. How did the outdoor simulation help you understand how animals use their hearing?
3. What other animals did you learn about from the video? How did their communication help or hurt them?

INVESTIGATION # 2.4

Reading: "Animal Sensory System"

_____ date

Today we read about animal sensory systems. Write three things you learned, two ideas you want to remember, and one question that you still have.

3

Things that you learned

2

Ideas you want to remember

1

Question you still have

INVESTIGATION # 3.1

Focus Question: How can we find out if salinity affects brine shrimp hatching?

_____ date

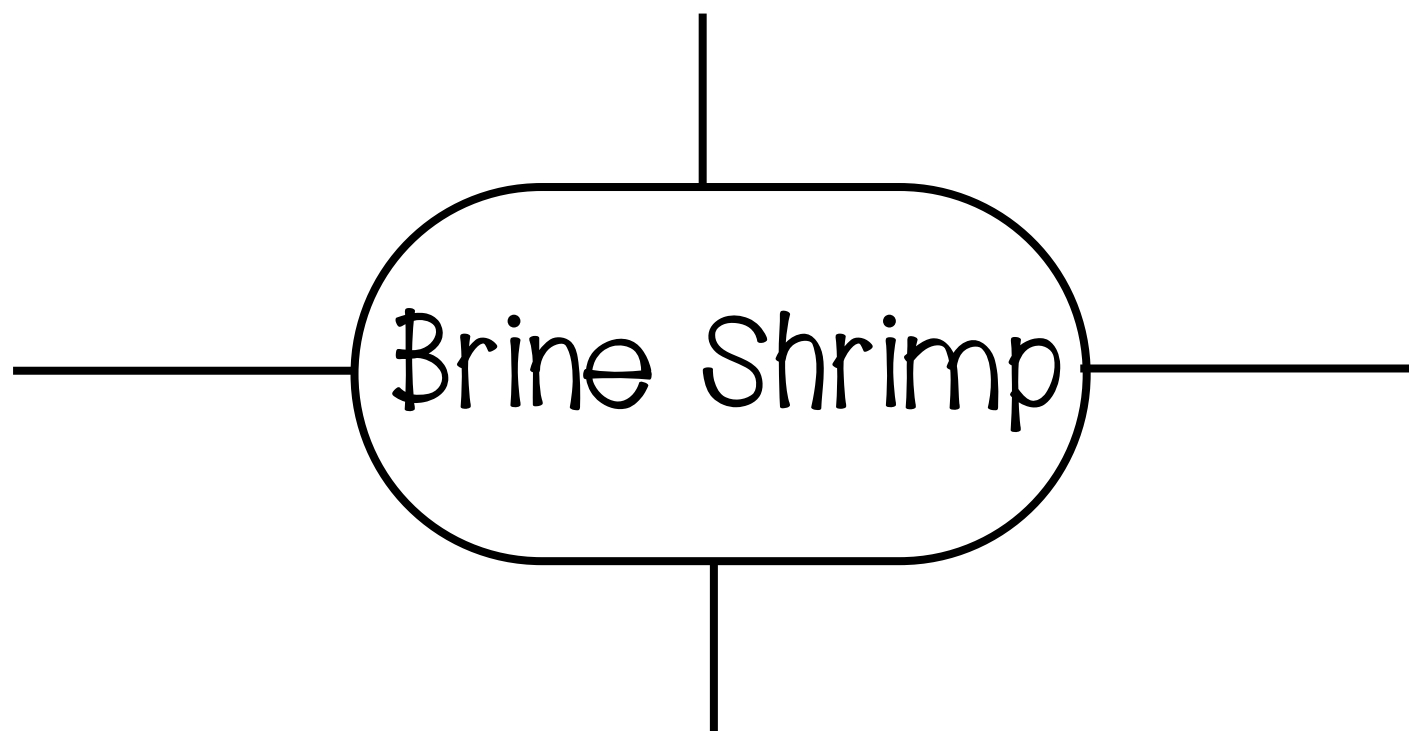
In today's investigation we set up the brine shrimp hatching experiment.
Write, draw, and label a summary of the procedure you are going to use
to test the different salinities.

INVESTIGATION # 3.1

Reading: "Brine Shrimp"

In today's reading we learned about brine shrimp. Below fill in the word web about brine shrimp. Then answer the question to show what you learned from the reading.

date



How do the structures of the brine shrimp and their function compare to the other organisms we've been investigating?

INVESTIGATION # 3.2

Brine Shrimp- Hatching Observations

Part 1:

What day of your experiment did you first observe hatching?
(count setup as day 1)

☐

Day 1

☐

Day 2

☐

Day 3

☐

Day 4

In what container did you first observe hatching?

☐

0 spoons

☐

2 spoons

☐

4 spoons

☐

6 spoons

What are your observations?

Part 2:

Record the number of eggs that hatched in each salt condition.
Make an X in one box for each salt condition.

Day _____ (count setup as day 1)

	0 Spoons	2 Spoons	4 Spoons	6 Spoons
Most				
Some				
None				

INVESTIGATION # 3.2

Reading: "The Mono Lake Story"

In today's reading we learned about Mono Lake. After reading, record your thoughts and ideas about each question in the response column.

date

Question:	Response:
Describe two kinds of competition in the Mono Lake ecosystem.	
What is the main environmental factor that affects the health of the Mono Lake ecosystem? Explain.	
Why did the California gull chicks not survive at Mono Lake in 1982?	



INVESTIGATION # 3.2

Brine Shrimp- Hatching Conclusions

	0 Spoons	2 Spoons	4 Spoons	6 Spoons
Most				
Some				
None				

What is the range of tolerance that brine shrimp eggs have for the environment factor of salt (salinity)?

Focus Question: How does salinity affect the hatching of brine shrimp?

INVESTIGATION # 3.3

Focus Question: Does changing the environment allow the brine shrimp to hatch?

_____ date

In today's investigation we formed predictions to figure out how environment changes the viability of unhatched eggs. Write, draw, and label your predictions and test below.

Ideas to guide your thinking:

1. What is your prediction?
2. What environmental factor/s will you change in your test?
3. Do you think that changing an environmental factor will change the viability of the unhatched eggs? Why/why not?
4. What do you need to carry out your test?

INVESTIGATION # 3.3

date

Think about it...

After giving the eggs a few days to hatch with their environmental changes, write a summary of the results you observed. Was your prediction correct?

Did anything surprising happen?

Does changing the environment allow the brine shrimp eggs to hatch?

[illegible]

INVESTIGATION # 3.3

Reading: "The Shrimp Club"

In today's reading we learned about an environmental action project called The Shrimp Club. After reading, record your thoughts and ideas about each question in the response column.

date

Question:	Response:
What is a watershed?	
What is a watershed restoration project?	
What activities did the class do as part of The Shrimp Club restoration project?	

INVESTIGATION # 3.4

Focus Question: What are some benefits of having variation within a population?

_____ date

In today's investigation we went outdoors to conduct a simulation about population. Write, draw, and label your thoughts and observations below.

Use the questions to guide your thinking.

Ideas to guide your thinking:

1. What variations did we have in the starting population?
2. What variation was most successful? Least successful?
3. What are some benefits of having variation within a population?
4. How might variation in salt tolerance affect the survival of a population of brine shrimp?

INVESTIGATION # 3.4

Reading: "Variation and Selection"

In today's reading we learned about variation and selection. After reading, record your thoughts and ideas about each question in the response column.

date

Question:	Response:
Why don't all dogs look exactly alike?	
In nature, what is the mechanism that selects the individuals that will breed to produce offspring in a population?	
Describe what is meant by "a change in the environment might apply a new pressure on a population."	
What information has come from the studies of Darwin's finches on the Galapagos Islands?	

Teacher Tip

You will need to print notebook master pages 19 and 20 for this investigation. You can find these pages on FossWeb.

These pages will help guide investigation 4.1.


Plant Experiment—Water Tolerance

Environmental factor tested:

Controlled environmental factors:

Procedure

- Apply the four container labels and be sure they are securely attached:
DRY—0 mL
MOIST—0 mL
WET—40 mL
VERY WET—80 mL
- Put in 1 level plastic cup of soil without compacting it.
- Add three seeds of each of the four kinds (12 total). Put the seeds in exactly the same locations in all four containers.
- Make sure each seed is 1 cm deep in the soil. Add more soil if needed. Gently pat the soil, using the bottom of the cup.
- Add the experimental amount of water evenly to the WET and VERY WET containers, using the 100 mL beaker.
- Put each container in a large zip bag and seal it.
- Put the bagged container in the FOSS tray.




Plant Experiment—Salt Tolerance

Environmental factor tested:

Controlled environmental factors:

Procedure

- Label four planters, one for each type of water.
- Put 1 level cup of soil in each planter.
- Put three seeds of the four kinds (12 seeds total) in each planter.
- Make sure each seed is 1 cm deep in the soil. Add more soil if needed. Gently pat the soil, using the bottom of the cup.
- Wait for instructions on how to water the seeds.



INVESTIGATION # 4.1

Focus Question #1: How much water is needed for early growth of different kinds of plants?

In today's investigation we planted 3 different kinds of seeds in four planters. We prepared the planters exactly the same except for the amount of water added. We will use these planters to investigate how water affects the growth of different plants.

date

Make a prediction...

1. Which environment do you think will produce the tallest plants?

2. Which environment will produce the plants with the most leaves?

Focus Question #2: What is the salt tolerance of several common farm crops?

date

1. In your own words, explain how you set up the salt experiment. What needs to be controlled in the experiment? What is being tested?

INVESTIGATION # 4.1

Plant Observations A

Environmental factor tested: _____

Planting date: _____

Seed type: _____

Number of seeds of this kind planted: _____

Part 1: Number of days after planting _____

Environment	How many plants came up?	Height of tallest plant

Part 2: Number of days after planting _____

Environment	How many plants came up?	Height of tallest plant	Most leaves on one plant

INVESTIGATION # 4.1

Plant Observations B

Part 3: Number of days after planting _____

Environment	How many plants came up?	Height of tallest plant

Most leaves on one plant	Length of longest leaf	Length of longest root

Part 4: Use this table to determine the range of tolerance.
Label the columns. Mark an X where each plant grew.

Environment				
Peas				
Corn				
Barley				
Radishes				

INVESTIGATION # 4.1

Plant Profile

Plant type: _____ Environmental factor: _____

Days of growth: _____

Label the columns with the environments being studied.

Draw the plants in place.

		Shoot Above		
		Root Below		

INVESTIGATION # 4.1

date

Think about it...

Answer the focus questions.

1. How much water is needed for early growth of different kinds of plants?

2. What is the salt tolerance of several common farm crops?

INVESTIGATION #4.1

Reading: "Environmental Scientists"

date

Today we read about environmental scientists. Write three things you learned, two ideas you want to remember, and one question that you still have.

3

Things that you learned

2

Ideas you want to remember

1

Question you still have

INVESTIGATION #4.1

Reading: "Range of Tolerance"

date

Today we read about the range of tolerance in plants and animals. Write three things you learned, two ideas you want to remember, and one question that you still have.

3

Things that you learned

2

Ideas you want to remember

1

Question you still have

INVESTIGATION # 4.1

Reading: "How Organisms Depend on One Another"

In today's reading we learned about how plants and animals interact. After reading, record your thoughts and ideas about each question in the response column.

date

Question:	Response:
Do you think plants and animals need each other to survive and reproduce? If so, what are some examples?	
Describe 2 examples of how animals depend on plants for survival.	
Describe 2 examples of how plants depend of animals for survival.	
Do you think animals pollinate flowers and disperse seeds on purpose or by accident? Why?	

INVESTIGATION # 4.2

Focus Question: How does mapping the plants in the schoolyard help us to investigate environmental factors?

_____ date

In today's investigation we went outside to gather plants to create a map of schoolyard plant species. Write, draw, and label your thoughts and observations below. Use the questions to guide your thinking.

Ideas to guide your thinking:

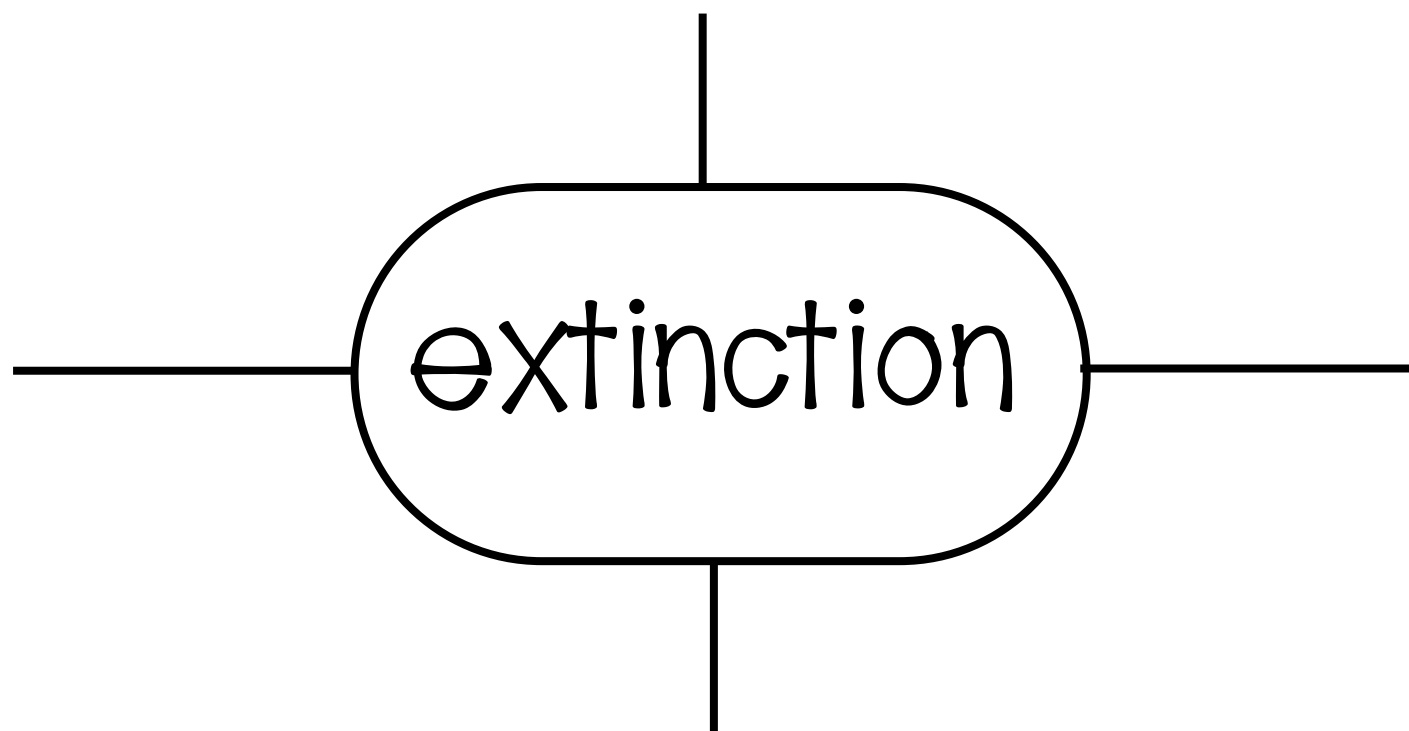
1. What is the most common color on each plant-distribution map and what does it represent?
2. Which environmental factors might be affecting the distribution of the plants that were found?
3. Were there any places that did not have plants growing? Why do you think this is so?

INVESTIGATION # 4.2

Reading: "Animals from the Past"

In today's reading we learned about extinction. Below fill in the word web about extinction. Then answer the questions to show what you learned from the reading.

date



1. What can cause animals to become extinct?

2. What are some animals that are similar to animals that are now extinct?

INVESTIGATION # 4.3

Reading: "Variation and Selection"

Focus Question: What are some examples of plant adaptation?

After reading, record your thoughts and ideas about each question in the response column.

date

Question:	Response:
What is natural selection?	
What is it about populations that allow natural selection to occur?	
What is an adaptation?	
What happens to a population of organisms when the environment changes?	

INVESTIGATION # 4.3

date

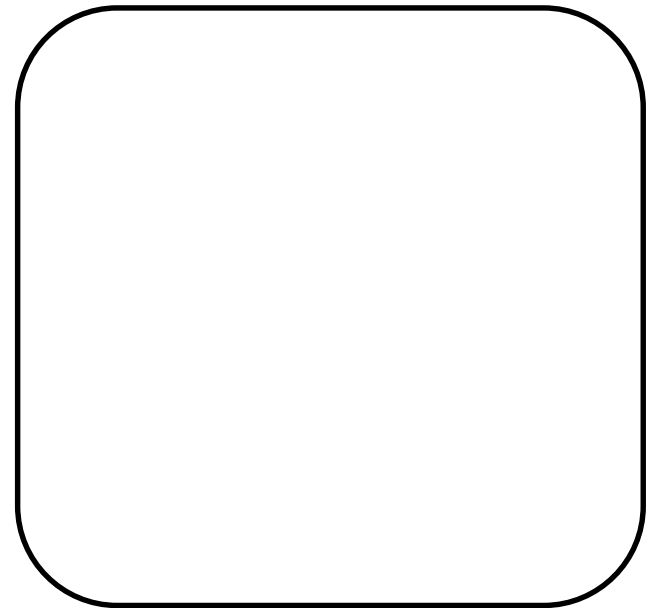
Think about it...

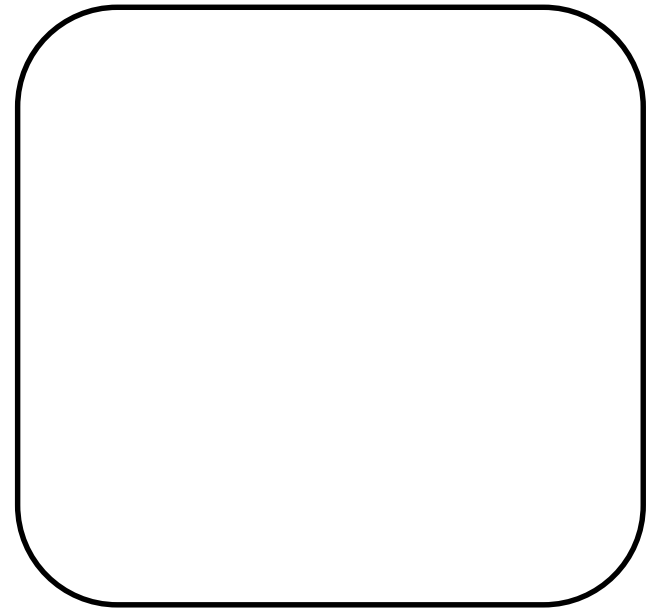
After reading the article and watching the video on plant adaptations, answer the focus question.

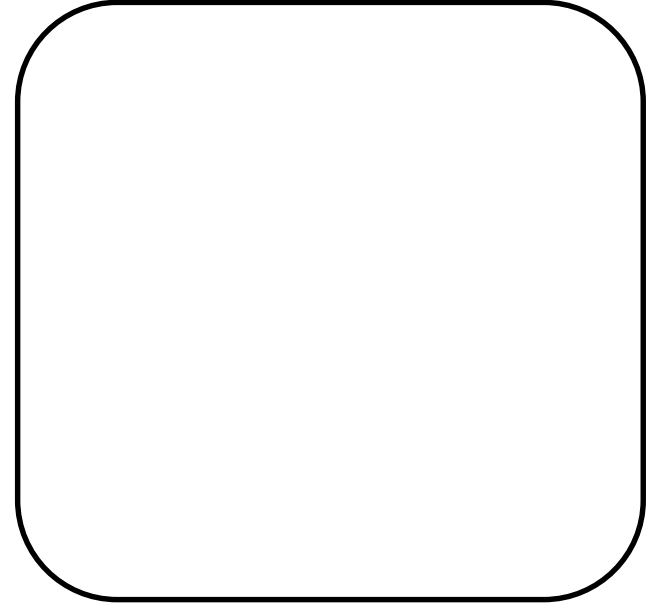
What are some examples of plant adaptations?

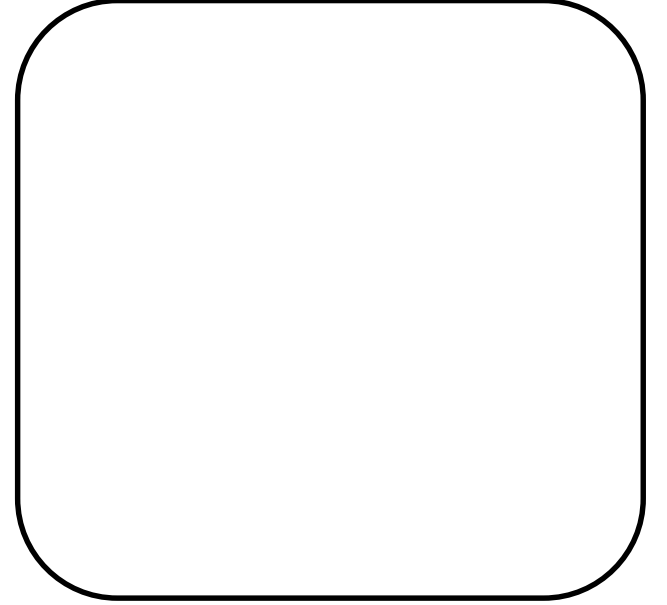
Glossary

Write the word, define, and draw a picture to go with it.









Teacher Tip

You could have kids put each vocabulary word into their glossary as you put them up on your word wall!! Kids love to add a detailed picture as well!

Use the following black checkered pages to enlarge and turn into your word wall for each investigation. Just print the vocab cards at a slightly reduced size so more will fit on the page

Investigation 1:

Environmental Factors

Investigation 2:

Ecosystems

Investigation 3:

Brine Shrimp Hatching

Investigation 4:

Range of Tolerance

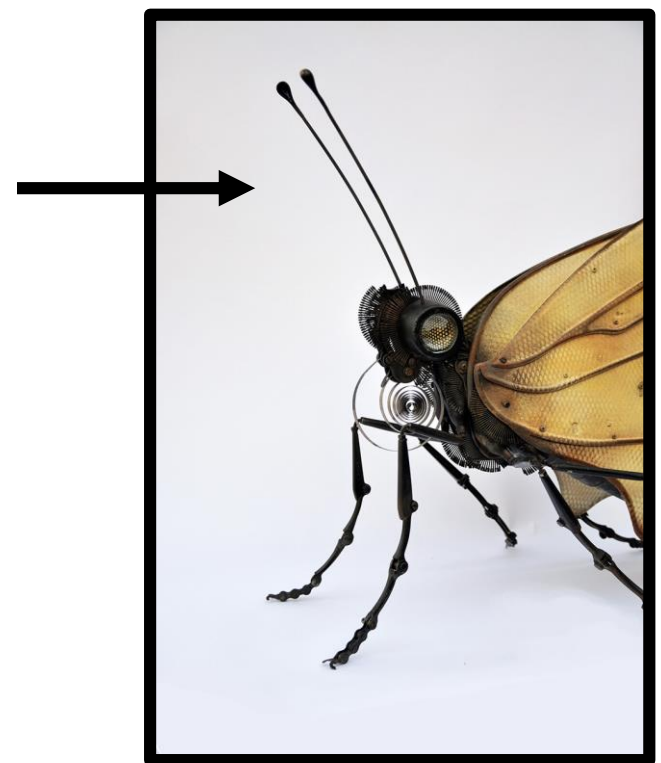
adult

a fully grown
organism



antennae

a sensitive organ on the
head of an insect that is
used mainly to feel and
touch things



behavior

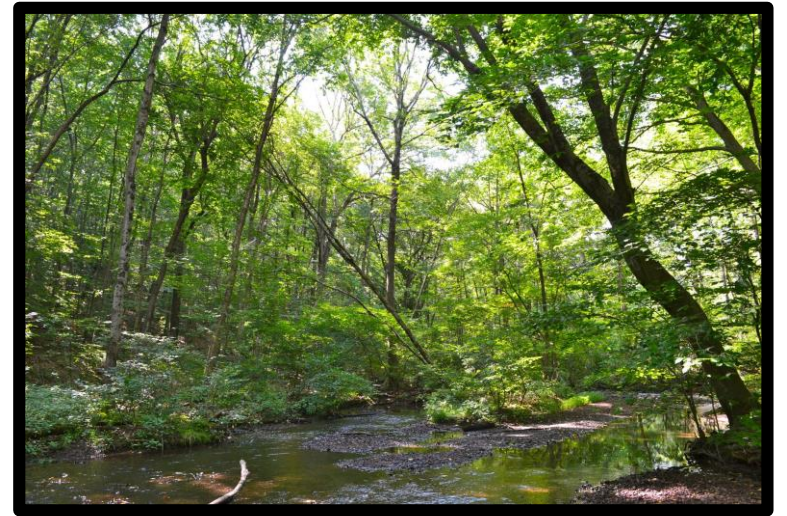
the actions of an
animal in response to
its environment



Investigation 1 Words

condition

the factors of an environment, such as water, light, air, chemicals, and temperature



darkling beetle

an adult mealworm



environment

everything that surrounds and influences an organism
Deserts, forests, and the ocean are environments.



Investigation 1 Words

environmental factor

one part of the environment

An environmental factor can be nonliving, such as water, light, and temperature. It can be living, such as plants and animals.



function

an action that helps a plant or an animal survive



inference

the meaning that you make from your observations



Investigation 1 Words

isopod

a small crustacean with
14 legs that all function
the same



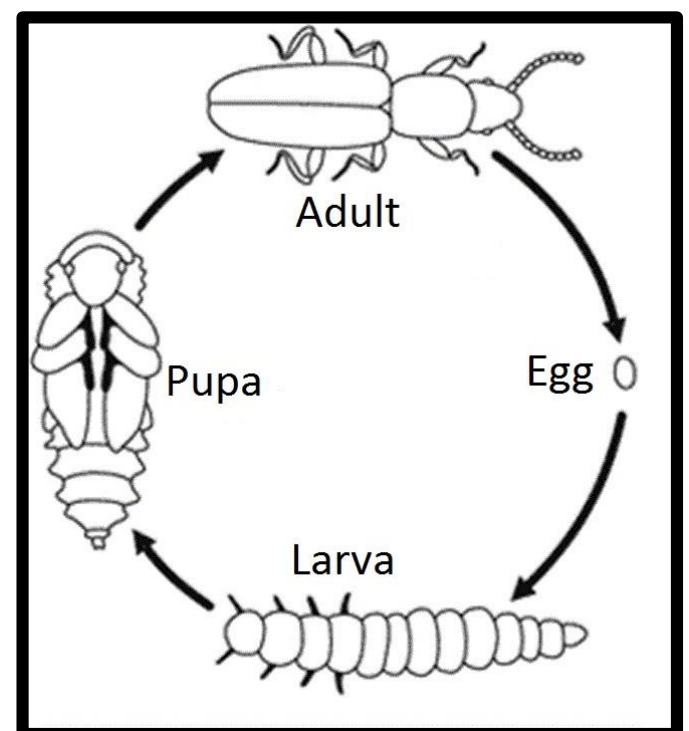
larva

the wormlike early
stage in the life
cycle of an insect



life cycle

the stages in the life
of a plant or animal



Investigation 1 Words

living

the condition of
being alive



mealworm

a darkling beetle
larva



molting

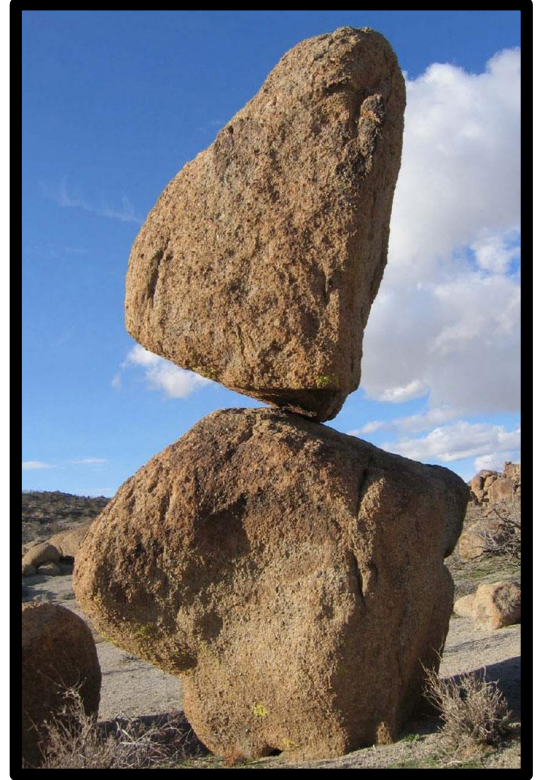
the process of
shedding skin to make
room for growing



Investigation 1 Words

nonliving

referring to something that has never been alive or to things that were once alive and are no longer alive



observation

information obtained through your senses (sight, hearing, smell, touch, and taste)



organism

any living thing



Investigation 1 Words

pill bug

isopod that has a highly domed shape, short legs, and inconspicuous antennae



preferred environment

the set of environmental conditions that an organism appears to choose over other conditions



pupa

the stage of an animal's life cycle between the larva and the adult stages



Investigation 1 Words

pupate

to change into a
pupa



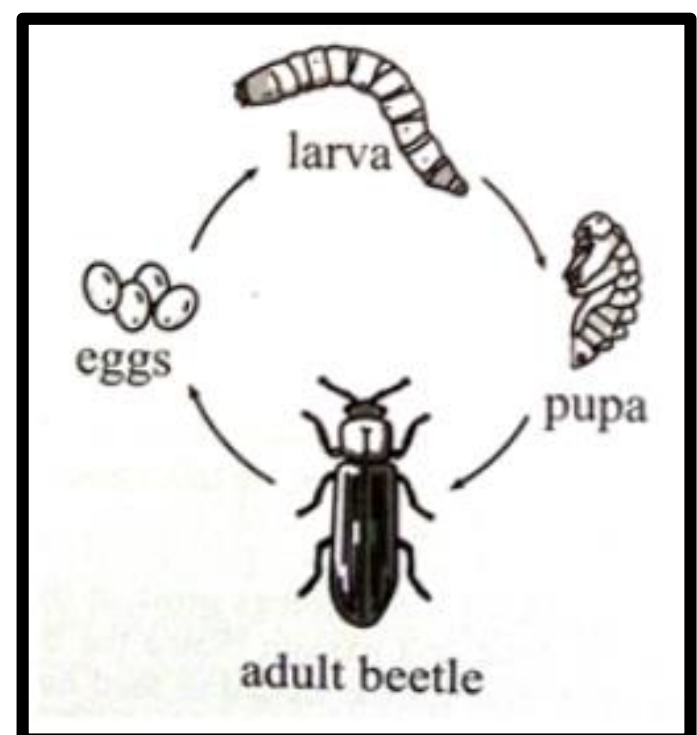
sow bug

isopod that is relatively flat with
legs that extend a little beyond
the edge of the shell and
powerful antennae to sense its
environment



stage

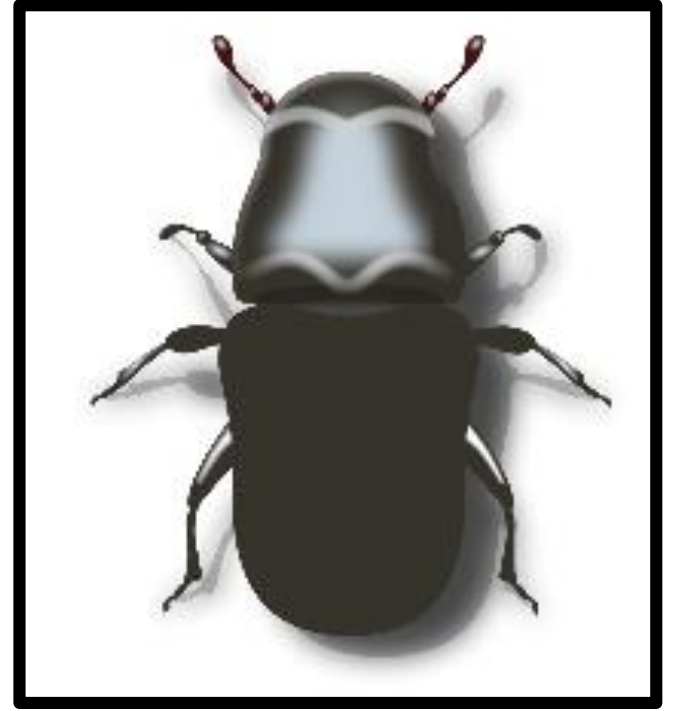
the name for different
points of insect
development



Investigation 1 Words

structure

any identifiable part
of an organism



Investigation 1 Words

algae

a large plantlike
group of water
organisms



aquarium

a tank for keeping live
water plants and
animals



aquatic environment

referring to the two kinds of
freshwater environments:
standing water and flowing
water



Investigation 2 Words

carnivore

an animal that only
eats animals



carrying capacity

the greatest number of
organisms that can be
supported (carried) by an
area without damaging it



competition

a demand for resources,
such as food, water, or
space, by two or more
organisms



Investigation 2 Words

consumer

an organism that cannot make its own food (consumers eat other organisms)



decomposer

an organism that breaks down plant and animal material into simple chemicals



ecosystem

a community of organisms interacting with each other and with the nonliving environment



Investigation 2 Words

elodea

a vascular plant often
found in freshwater
aquariums



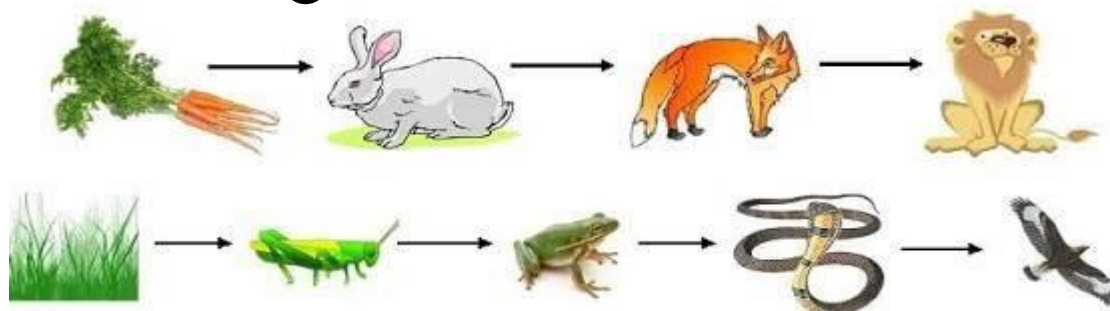
energy

what allows
organisms to grow
and move



food chain

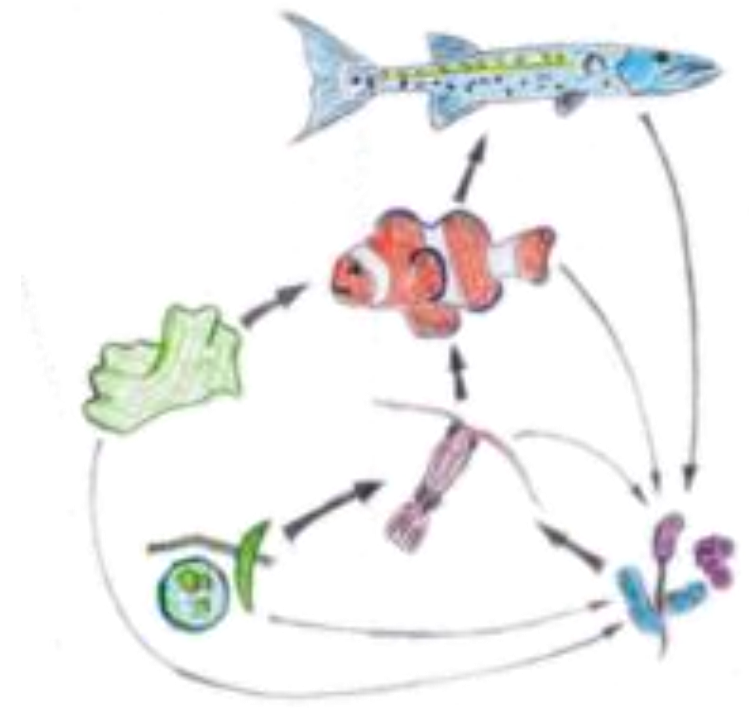
a description of the feeding relationships
between organisms in an environment



Investigation 2 Words

food web

all of the connected
and interacting food
chains in an
ecosystem



freshwater environment

a lake, pond, river, or stream



herbivore

an animal that eats
only plants or algae



Investigation 2 Words

home range

a well-established territory that animals forage for food in year after year



interaction

how living and nonliving components act together in an ecosystem



microorganism

a microscopic organism, such as bacteria and some algae



Investigation 2 Words

omnivore

an animal that eats
both plants and
animals



phytoplankton

microscopic plantlike
organisms in aquatic
environments that produce
their own food



population

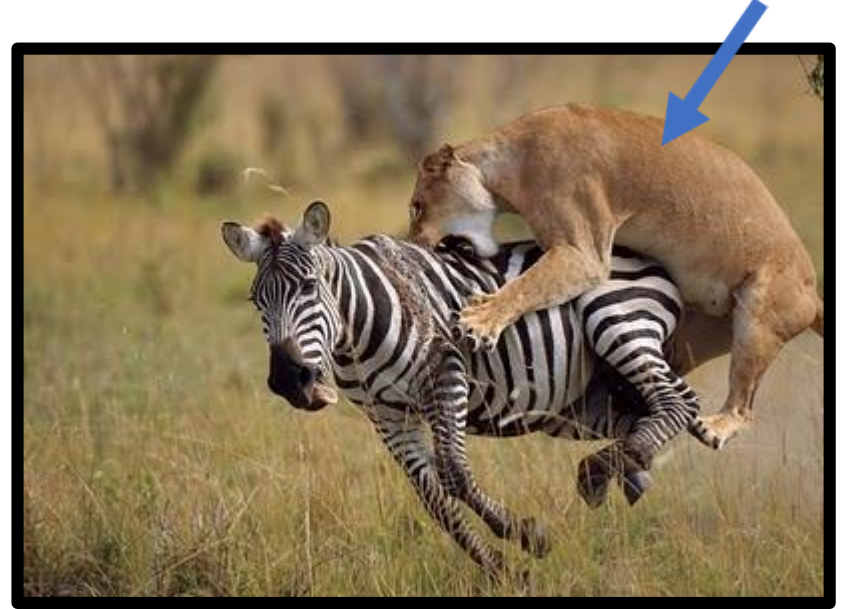
all organisms of one
kind that are living
together



Investigation 2 Words

predator

an animal that hunts
and catches other
animal for food



prey

an animal eaten by
another animal



producer

an organism, such as a
plant or algae, that
makes its own food



Investigation 2 Words

zooplankton

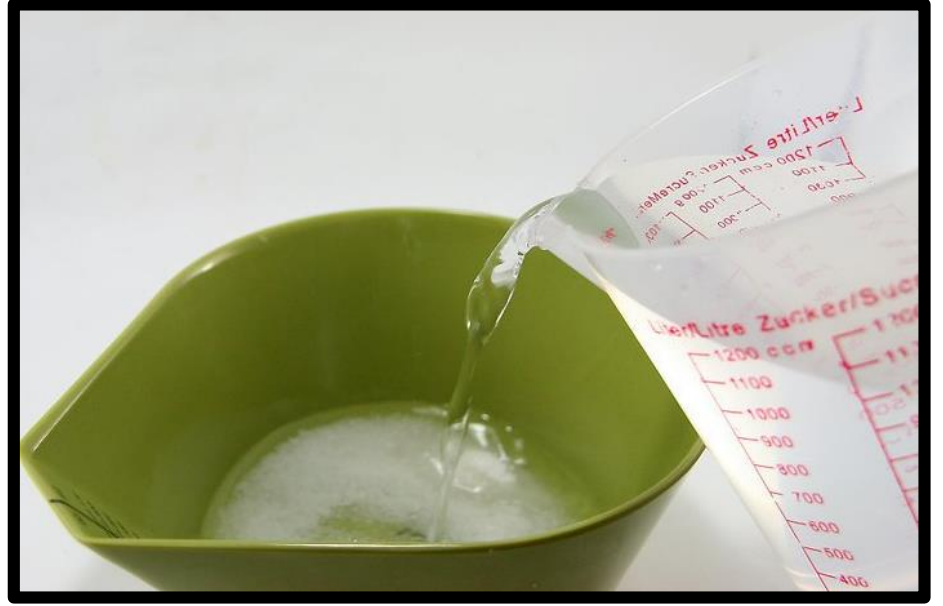
microscopic
animals in aquatic
environments



Investigation 2 Words

brine

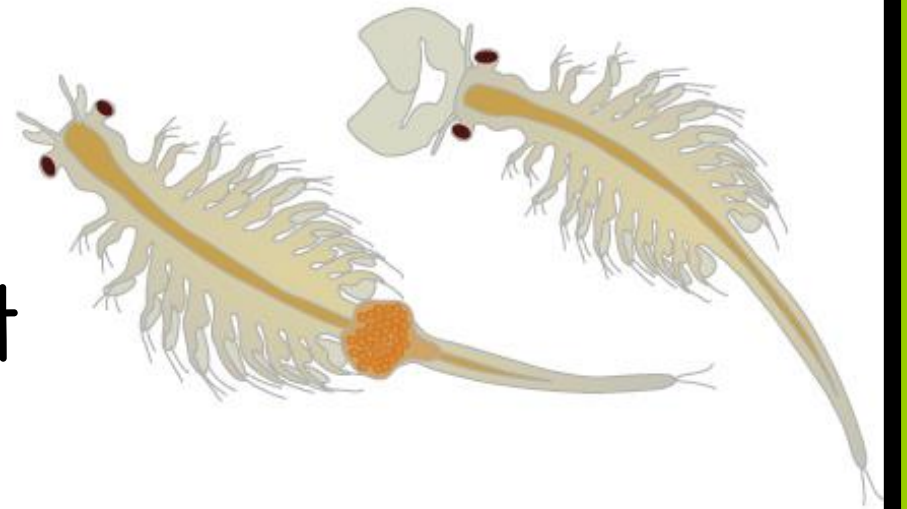
salty water



brine shrimp

tiny animals related to
crabs and lobsters

(Brine shrimp are found in salt
ponds and salt lakes.)



concentration

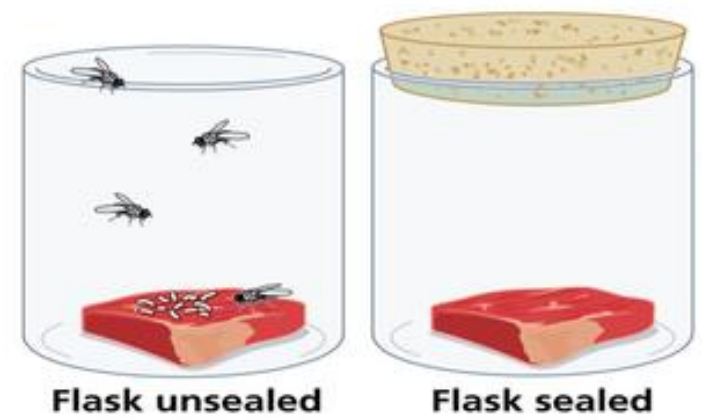
the amount of a substance, such as salt, in an
amount of another substance, such as water



Investigation 3 Words

controlled experiment

a set of compared investigations
in which one variable is
manipulated by steps while all
other variables are controlled or
kept the same



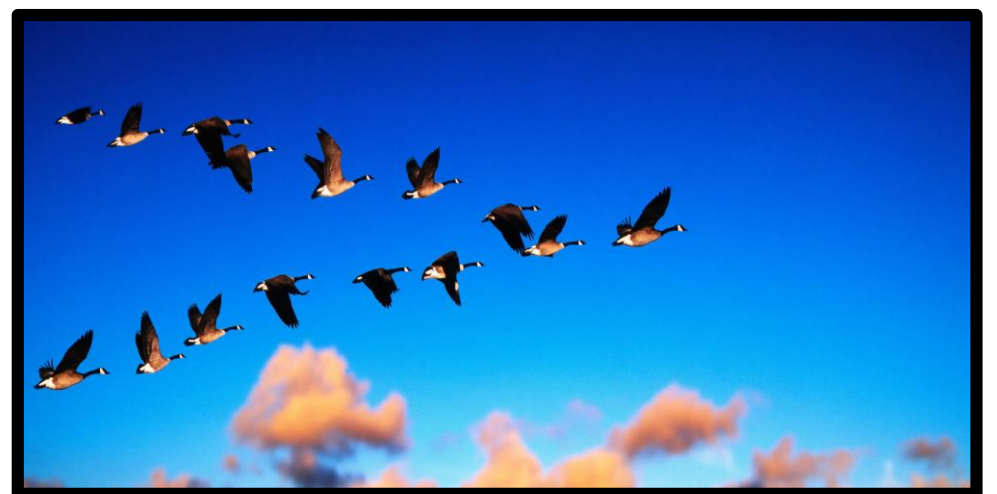
inherited trait

a characteristic that is
passed down from
generation to generation



migrate

when animals move
from place to place
with a change in the
weather



Investigation 3 Words

optimum

most favorable to growth,
development, and
reproduction of an
organism



range of tolerance

the varying conditions of
one environmental factor
in which an organism
can survive

reproduce

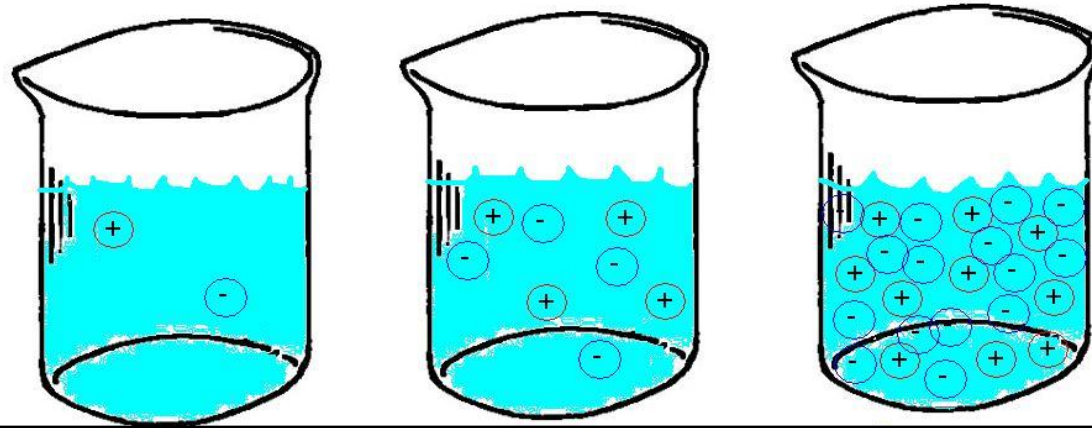
to have offspring



Investigation 3 Words

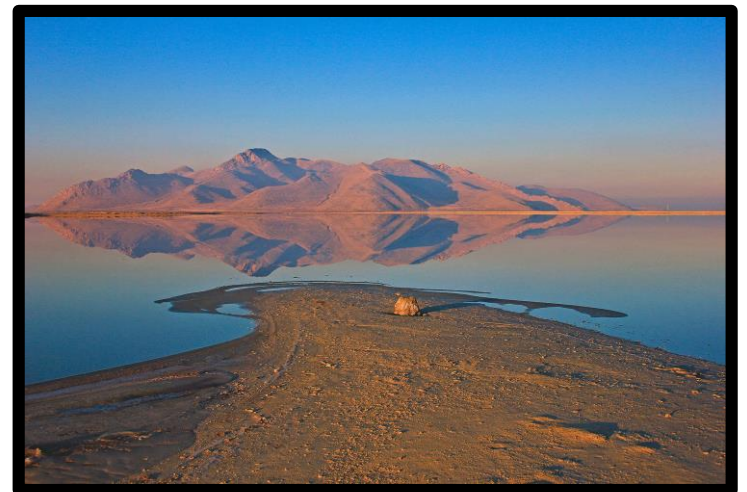
salinity

the concentration of salt in water



salt lake

a body of water that
contains a high
concentration of salt



survive

to remain living



Investigation 3 Words

thrive

to grow fast and
stay healthy



tolerance

the ability of an organism
to survive under a given
set of conditions



variation

difference



Investigation 3 Words

viable

alive and able to
grow



Investigation 3 Words

adaptation

any structure or behavior
of an organism that
allows it to survive in its
environment



dominant plant

a plant that covers more
space or is larger than others
and usually has a significant
influence on other organisms
in the area



drought

a long period of dry
weather



Investigation 4 Words

irrigate

to water crops by
artificial means



plant distribution

how plants are spread
out or arranged in an
area related to
environmental factors



salt-sensitive

unable to survive
in salty
environments



Investigation 4 Words

salt-tolerant

able to survive in
salty environments



Investigation 4 Words

Many Thanks:

Graphics by the
amazingly talented:



Fonts by the lovely:

