

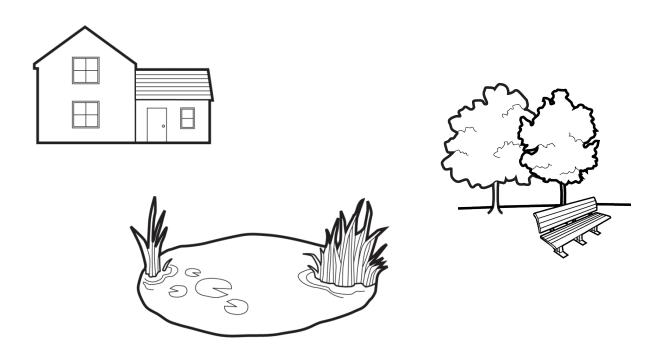
Accessing Prior Knowledge

Name:	Date:

Habitats

Where Do You Live?

Which picture looks most like your home?



Draw a picture of what you think a turtle's home looks like. Next, draw a picture of what you think a bird's home looks like.



Scope Phenomenon

I Depend on You

1.	How does the bird depend on the plant in the video?		
2.	How does the plant depend on the bird in the video?		
3.	In the video, how does the surrounding area that the flower and bird live in meet their needs?		



Name:	Date:	

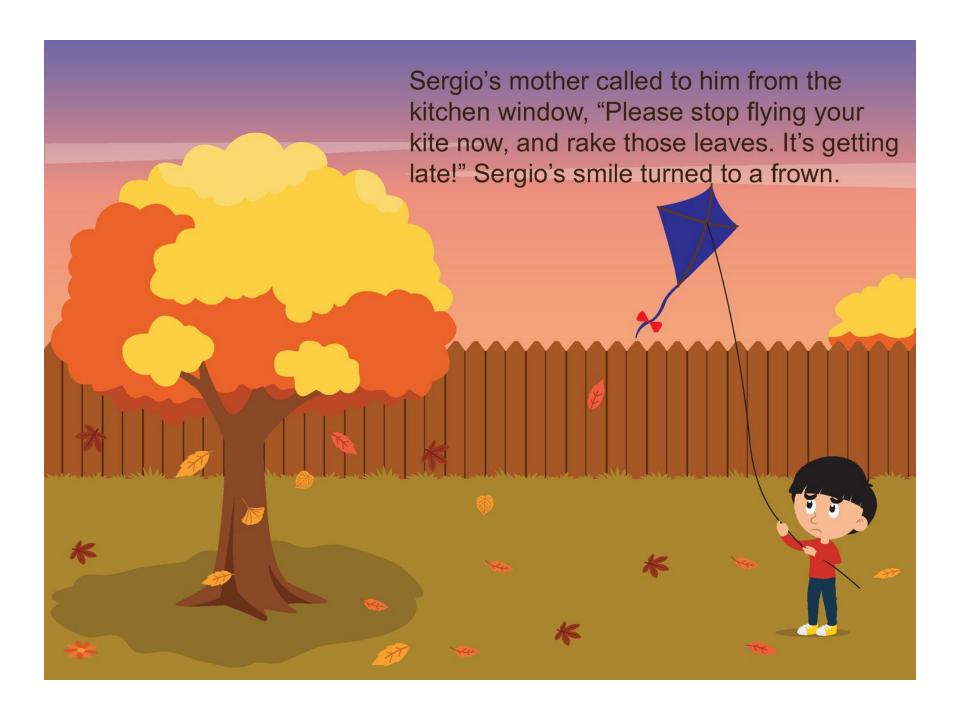
Interdependency Nature Hunt

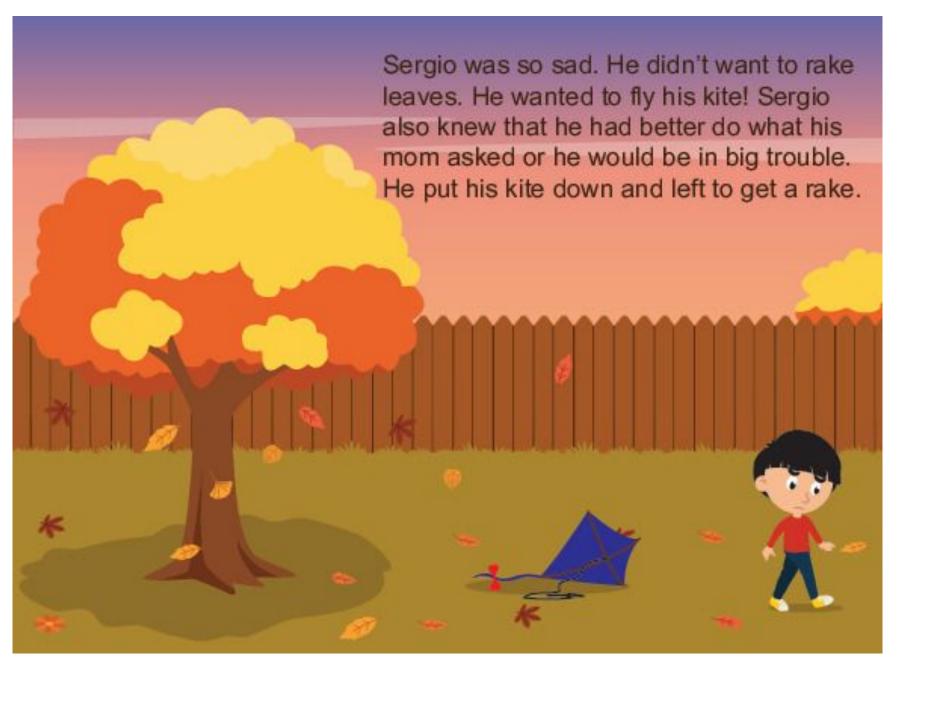
Draw one object from your nature walk. Draw a picture to answer the other questions.

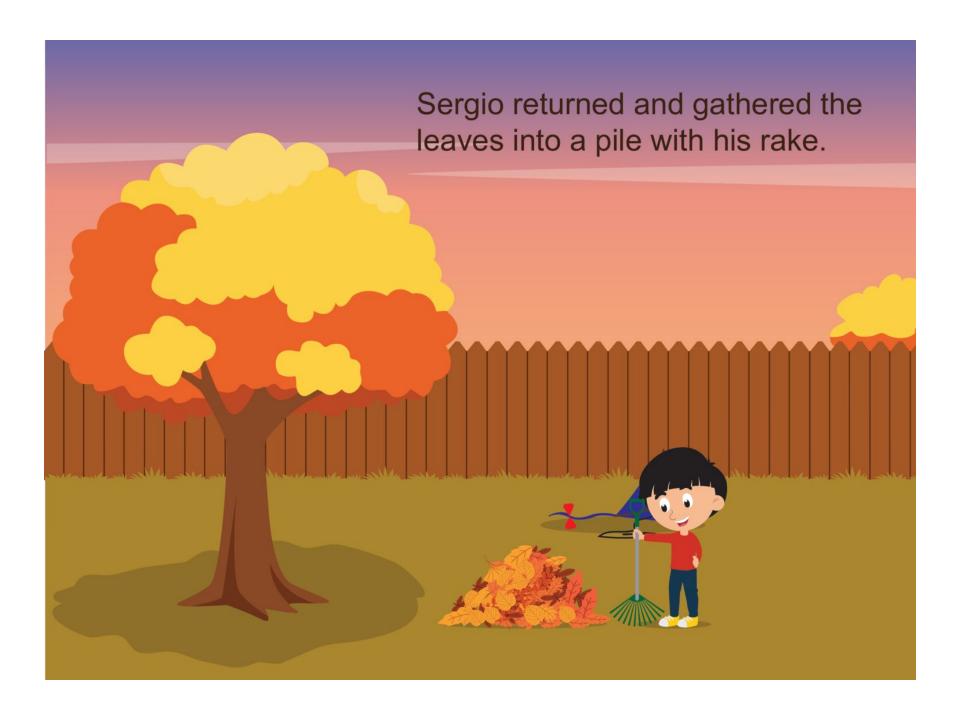
A plant I found in nature:	
What depends on that?	
•	
What depends on that?	
What depends on that?	



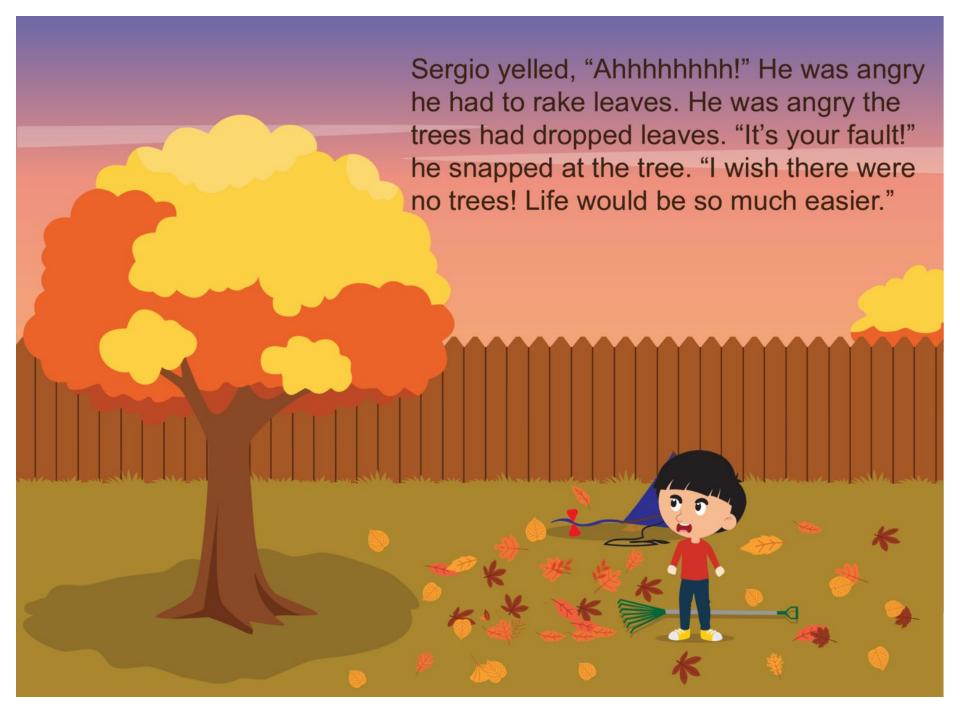




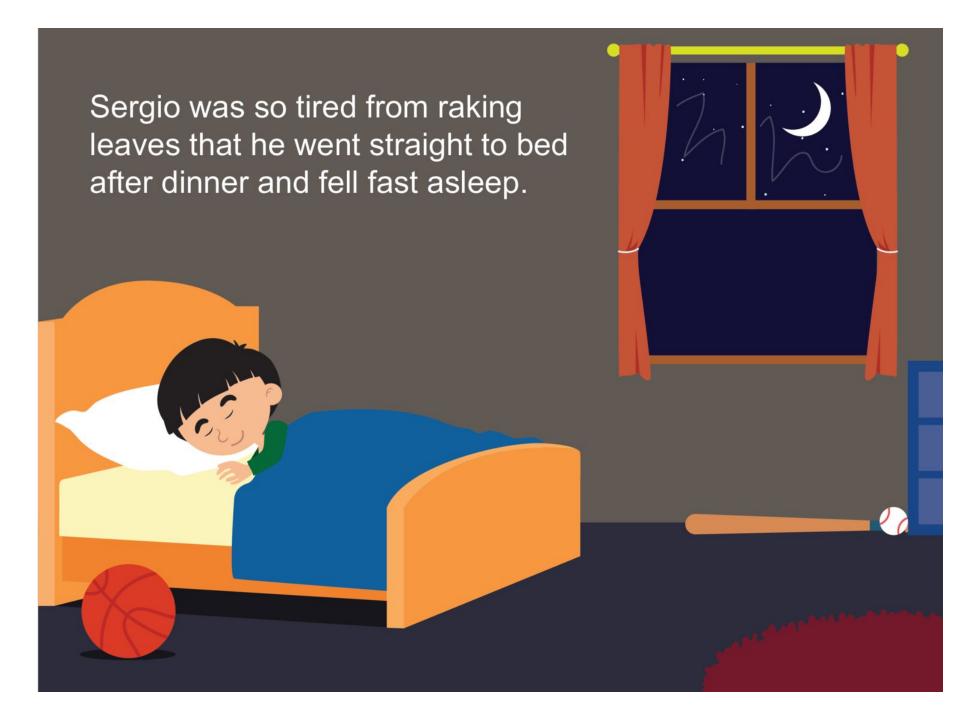




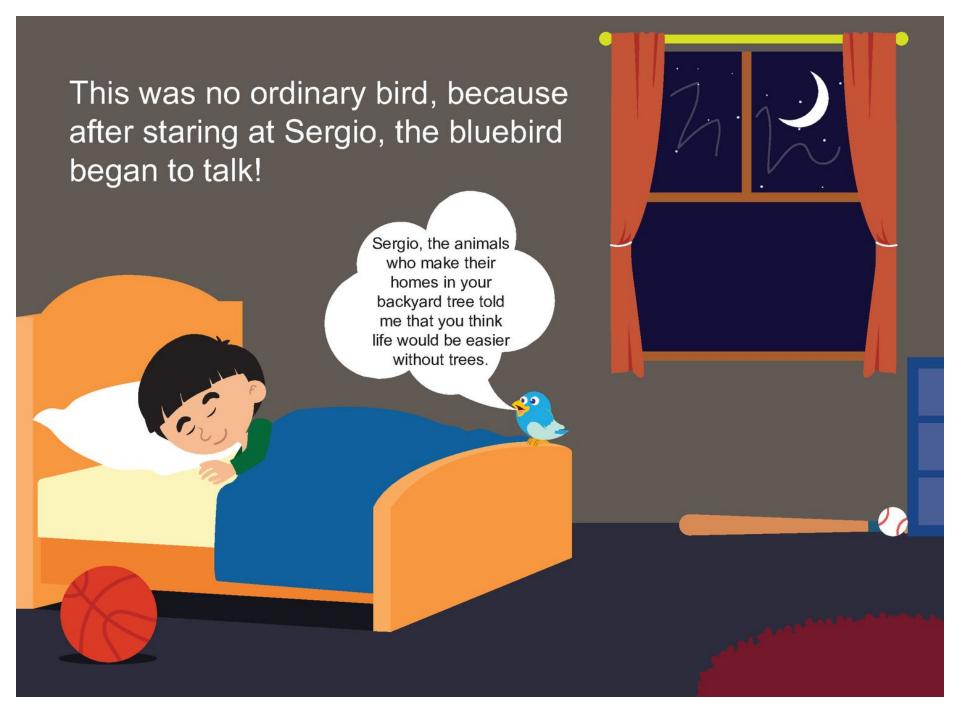




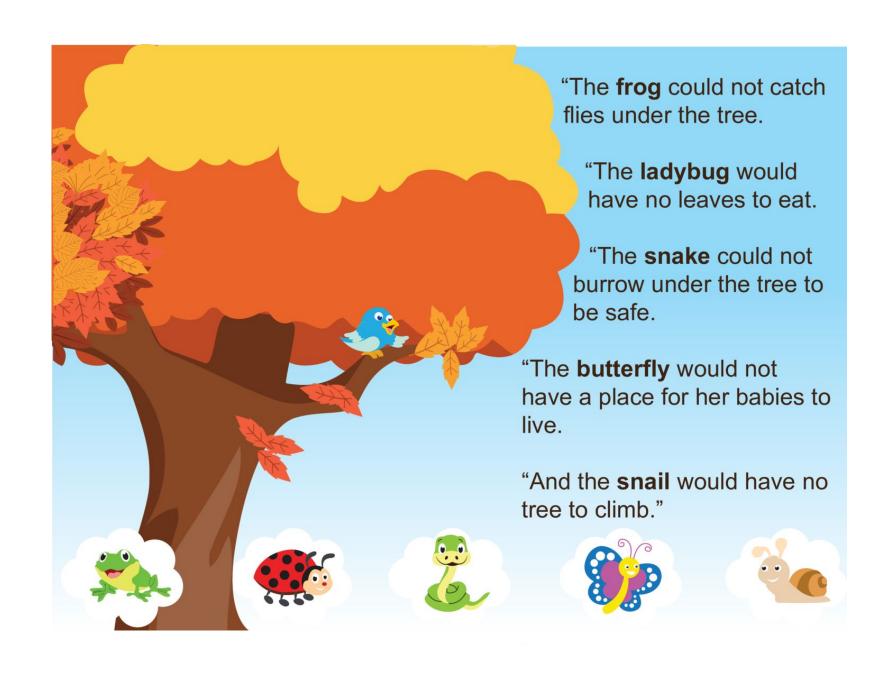












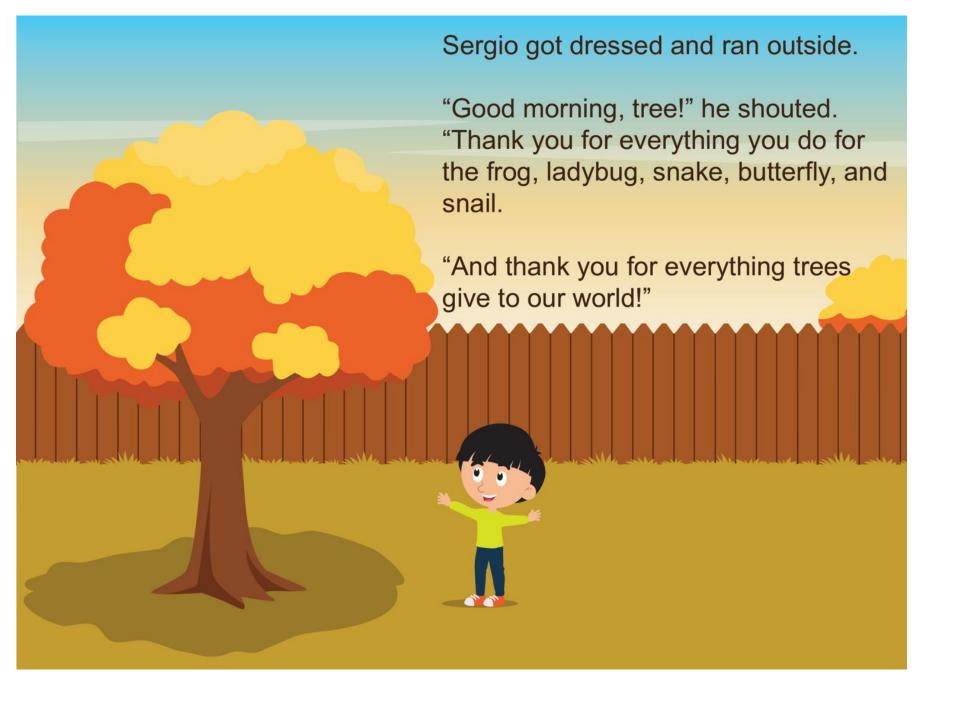






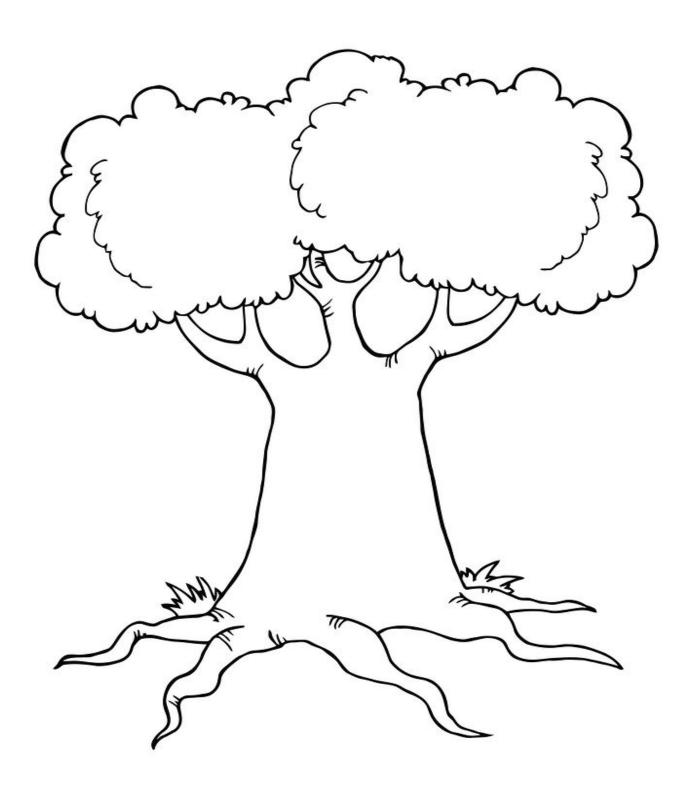


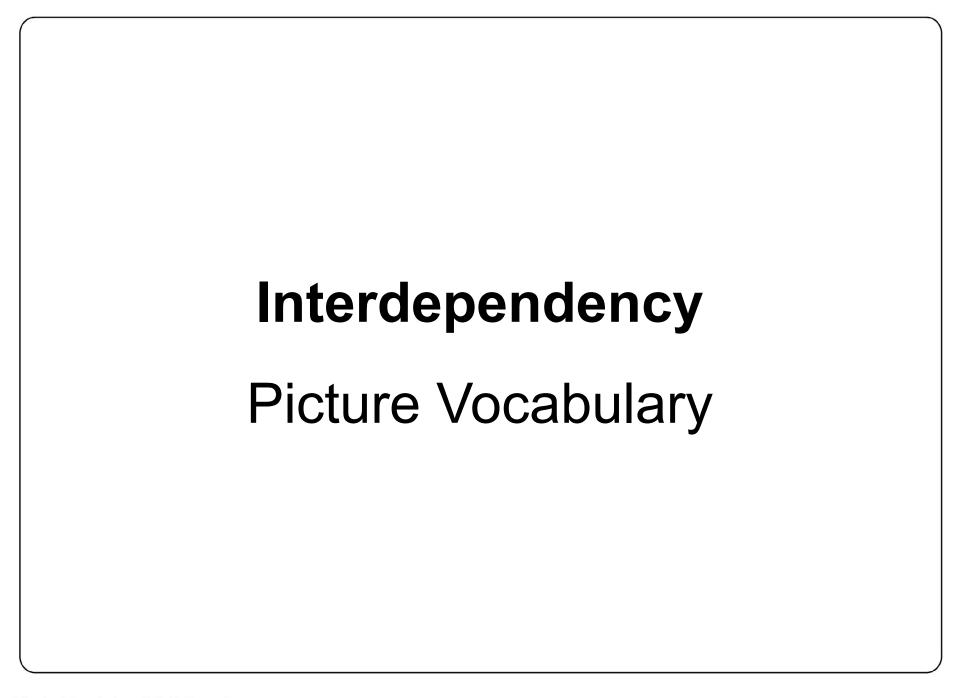




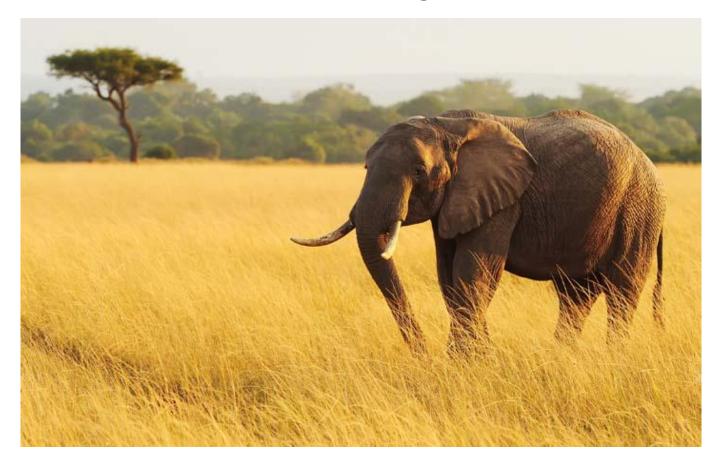








Animal



A living thing that can move on its own and that gets its energy from food

Environment



Everything that is around a living thing

Food



What animals eat to get energy

Grow



To increase in size

Interdependency



When the well-being of two or more things is linked together

Light



The type of energy that the eye can see

Living



Requires energy, grows, can produce offspring, and dies

Plant



A type of living thing that gets its energy from the Sun and is unable to move from place to place on its own

Reflect

Many plants and animals live together in different environments. Look at the picture of the pond. What **organisms** live there? Grass, trees, bugs, and birds live there. Fish and frogs live there, too. Can you think of anything else that might live there? How are these organisms important to one another? How are their surroundings important for their survival?



organism: a single living thing

Plants and animals depend on each other and their surroundings in many ways.

All plants and animals have basic needs that must be met to survive. All animals depend on plants to live. Animals need plants for food and air to breathe. Many plants need animals to help them to reproduce. Both plants and animals depend on nonliving things in their environments, such as water, rocks, sunlight, and air.

How do living things depend upon their surroundings?

Plants and animals use their surroundings in different ways. Plants use sunlight, water, and air to make food. They use soil for nutrients and to anchor their roots. Animals need water to survive. They also use their surroundings for shelter. Some animals use caves or dig burrows underground. Some live in or near water, such as rivers, lakes, or oceans.









Plants and animals depend upon their surroundings for survival.

Reflect

How do animals help plants?

Some plants have flowers. Flowers have pollen in them. To make seeds, pollen has to move from one part of a flower to another part. Animals help plants by moving pollen. Bees, butterflies, and other insects visit flowers to eat their nectar or pollen. As they visit flowers, they spread pollen. Bats and birds also spread pollen.









Plants also need to spread their seeds. This way, young plants will have room to grow. Animals help plants spread seeds. When an animal eats a fruit, it also eats the seeds inside the fruit. When the animal moves somewhere else, seeds are dropped in the animal's waste. Some seeds have little hooks on them. These seeds stick to animals that pass by. When the seeds fall off the animals, new plants get to grow in a new spot.







How do plants help animals?

Some animals use plants for shelter. This protects them from weather or other animals. Birds build nests in trees to protect their eggs from predators like snakes. Beavers use trees to build lodges for their families.

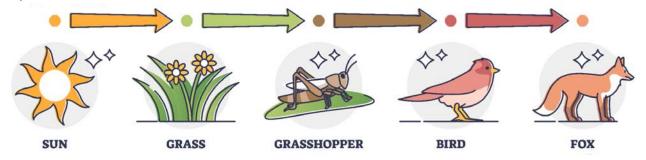




Animals depend on plants for food and oxygen. Food gives animals energy. All animals need energy to live. Animals cannot make their own food.

Food chains show how energy moves from one organism to the next.

Energy always starts with the Sun. Energy moves from the Sun to the plants because plants use the Sun's energy to make food. Then, it moves from plants to animals.

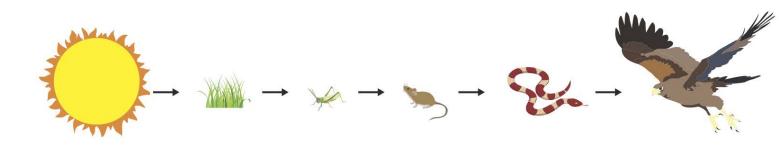


Arrows connect items in a food chain. They show how energy moves.

Food chains are important for life. Imagine if a plant or animal in the chain disappeared. Animals further along the chain would suffer. Look at the park habitat food chain above. What might happen if grasshoppers disappear from the park?

Interdependency

What Do You Think?



Write more about the grassland habitat food chain (shown above) in the blank spaces below.

Choose from the following words: *hawk, snake, mouse, grasshopper, grass, plant, animal,* and *Sun.*

- 1. The _____ is the food chain's source of energy.
- 2. The ______ is an animal that eats plants.
- 3. The ______ is an animal that eats other animals.
- 4. The _____ makes its own food using the Sun's energy.

Try Now

Now it is your turn! Look at the photo below. Think of how each organism depends on its surroundings, plants, and animals. Use your imagination about the surroundings. Write your answers in the chart.



Organism	Surroundings	Plants	Animals
Tree			
Squirrel			
Fox			

Connecting With Your Child

Food Chains at Home

Food chains are a wonderful example of the interdependence of organisms in an environment, and children easily grasp the concept of needing to eat to survive. By discussing how each organism is linked to others, children gain perspective on the interdependence of living organisms.

One way to discuss food chains is to help your child increase their awareness of their own place in a food chain. Just before you have your next meal together, grab a sheet of paper and help your child list all of the food items on the plate. Then, after the meal, talk about which food items are plants (all the fruits and vegetables) and which are animals (any meat products). Some items may be combinations of both. If possible, choose one plant from the list and one animal, and have your child make a model of the food chain for each. Arrows should point from the Sun to the plant and then to the animals in order of consumption.

For example, if you have a salad as a food item, you might choose lettuce as the plant and your child as the animal. If you have a hamburger, you might add grass as the plant, the cow as the first animal in line, and your child as the next animal.

Have your child create models for each food chain to display.

These are the materials needed:

- Index cards
- Hangers
- Markers or crayons
- Tape

Steps to follow:

1. Have your child draw and label each part of the food chains on index cards: one card for the Sun, one card for the plant, one to three

Interdependency

cards for animals. Each card should have an arrow pointing to the next card.

- 2. Tape all the index cards to each other and to the hangers.
- 3. Display and ask questions.

Here are some questions to discuss with your child:

- Are the two food chains you drew the same?
- Did these foods come from the same type of habitat?
- What other plants and animals might be part of these food chains?
- How do the animals depend on the plants? How do the plants depend on the animals?



Name	Date

Relationships: True or False

Before you read: Cut out the statements at the bottom. Read each statement, and decide if it is true or false. Place each statement in the correct column. Do not glue them yet.

While you read: When you find a statement in the STEMscopedia, record the page number. Decide if it is in the correct column. Make a change if necessary. Do this for each statement.

True	False
Page:	Animals use sunlight, water, and air to make food. Page:
·	Some plants use animals for shelter. Page:
Page:	Energy always starts with the Sun. Page:



Name	Date

Relationships: True or False

 	 - —	 - —	 	

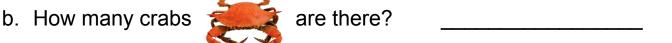


Name:	Date:

1. The ocean is a habitat for many animals. Look at the animals below.

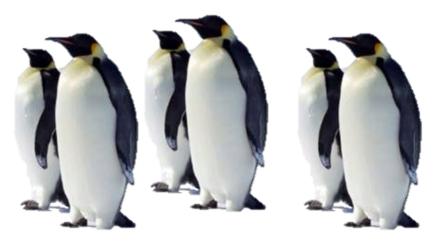
Ocean Animals				
Fish	Crab	Seahorse		
	3 3			





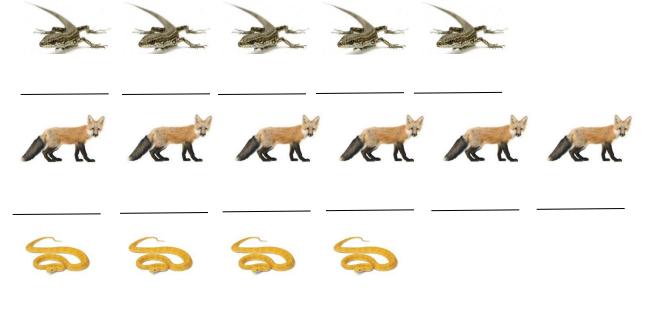
- c. How many seahorses are there?
- d. Are there more crabs or seahorses?

2. Penguins live in the arctic. Count how many penguins you see below.



Penguins

3. Lizards, foxes, and snakes all live in the desert. Count how many of each animal there are and write the number underneath it.





Name:

Don't Eat My Lettuce

Lexile 430L

- 1 Maggie and her sister love to work in the garden.
- 2 They grow flowers of all different colors.



- 3 They even grow fruits and vegetables.
- 4 While Maggie is tending the garden, she notices that something has been eating her lettuce.
- 5 She spies a little bunny.





- 6 Could he be eating the plants?
- 7 Maggie is angry!
- 8 Her sister says, "Do not be angry. The bunny needs to eat, just like you and me!"
- 9 "All living things depend on each other. The hummingbird needs the flowers for food."



- 10 "So do the bees."
- 11 "What other living things use our garden?" asks Maggie.
- 12 "Look!" her sister says. "The caterpillar uses our garden to eat and build a chrysalis!"





- 13 Maggie asks her sister, "Do any other animals depend on us?"
- 14 "Yes, our pets depend on us. They cannot take care of themselves."
- 15 Maggie wonders how she can help other animals.
- 16 She and her sister decide to plant a tree.
- 17 Which animals do you think can use the tree? What would they use it for?





- 1. What do Maggie and her sister love to do?
 - A. Play outdoors
 - B. Read books
 - C. Work in the garden
 - D. Make arts and crafts
- 2. Maggie and her sister grow-
 - A. plants and animals.
 - **B.** lakes and ponds.
 - C. bats and balls.
 - **D.** fruits and vegetables.
- 3. What conclusion can Maggie make about what is happening to her lettuce?
 - A. The hot sun is destroying it.
 - B. A plague is destroying it.
 - C. Animals are eating it.
 - **D.** Her family is eating it because they are hungry.
- **4.** Why does Maggie get angry?
 - **A.** A rabbit was eating her lettuce.
 - **B.** Her sister would not share the lettuce.
 - C. The lettuce would not grow.
 - D. There was too much lettuce.



- 5. How does her sister explain the idea of interdependency?
 - **A.** Like everyone else, the rabbit needs to eat.
 - **B.** All living things depend on each other.
 - C. Living things use gardens.
 - **D.** Pets cannot take care of themselves.



Name:	Date:
Engineering Design Define the Problem, Brainstorm	

1. Define the Problem

The Problem

Design a blueprint of a terrarium in which a bearded dragon can survive in comfort.

Criteria and Constraints

- The terrarium must be drawn in pencil and colored pencil.
- The terrarium must contain everything the bearded dragon needs to meet its basic needs.
- The terrarium must demonstrate examples of interactions between living organisms and nonliving things.

2. Brainstorm

Z. Brainstonn				
Write down any ideas you have to solve the defined problem. If you need				
more information, write down what you need to know, and ask your				
teacher for permission to research the answer.				



3	P	la	n
J.		ıa	

Choose one of the ideas you wrote down plan, and label the parts. Be sure to list all the plan.	
4. Build and Test Build your design, and test it. Does it mee Does it solve the problem? Use the space need to fix in your design.	



Engineering Design Process Student Rubric

Category	3	2	1	0
Brainstorm	The student listed multiple brainstormed ideas.	The student listed a couple brainstormed ideas.	The student listed only one brainstormed idea.	The student did not attempt to brainstorm a solution.
Plan	The plan could successfully solve the problem.	The plan has some issues that would make it unlikely to fully solve the problem.	The plan would not solve the problem at all.	No plan was created.
Build and Test	The student successfully built their planned solution, tested it, and identified areas for design improvement following the test.	The student successfully built their planned solution and tested it but did not identify areas for design improvement.	The student successfully attempted to build their planned solution but did not test it.	The student did not attempt to build.
STEM Skill: Critical Thinking	The student presented an evidence-bas ed solution to the posed	The student presented a solution to the posed problem or scenario, but	The student presented a solution that did not align with the posed	The student did not present any solution to the posed



	problem or scenario.	they did not include any evidence from research.	problem or scenario.	problem or scenario.
STEM Skill: Promptness and Time/Resource Management	The student completed work on time and planned and utilized resources or materials appropriately with no waste.	The student completed work on time and utilized some resources appropriately with little waste.	The student completed work on time but did not plan out the use of resources or materials, resulting in waste.	The student did not complete the work on time and wasted resources or materials.



Claim-Evidence-Reasoning

Name:	Date:

Scenario

Some animals in Alabama were all mixed up and wandered out of their natural habitats.









Let's help the animals find their habitats so they get what they need to live and grow.







Procedure



LOOK at the cards your teacher passed out.



the teacher reads you the question.

MATCH the ANIMAL CARD to its CORRECT HABITAT.



LOOK at the NEED
CARDS your teacher passed out to you.

MATCH the
NEED
CARDS up
with your
ANIMAL
CARDS.

Prompt

Living things need water, air, and resources from the land. Plants and animals live in places that have the things they need. Choose one plant or animal from above to write your claim.

Claim:		
	lives in the	habitat.



Claim-Evidence-Reasoning

Evidence: Oraw the animal in its habitat.	Draw what it needs.



Claim-Evidence-Reasoning

Habitats CER

Student Rubric

	3	2	1
Claim	© © ©	:	\odot
1	My claim was correct.	I made a claim, but it was incorrect.	I did not make a claim.
Evidence	$\odot \odot \odot$	⊕ ⊕	\odot
	I gave evidence that helped me make my claim.	I gave evidence, but it did not have anything to do with my claim.	I did not give any evidence.



Name:	Date:

Interdependency

Short Answer

1. Something is missing from this picture. What else does this white-tailed deer need to live?



The deer needs	 _	_	 _	 	_	 _	_

2. Draw the habitat where you would find this long-leaf pine growing.





3. Draw a picture of what you need to make a home for this beaver.





Name:	Date:	Group:

- 1 A classroom has a frog in a tank with some crickets. The frog depends on the crickets for—
 - A air.
 - **B** shelter.
 - C food.
 - **D** water.

2



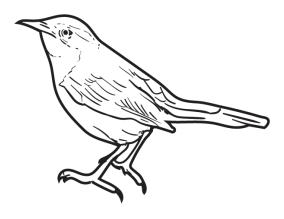
To stay alive, this mouse must eat. For food it depends on –

A B C

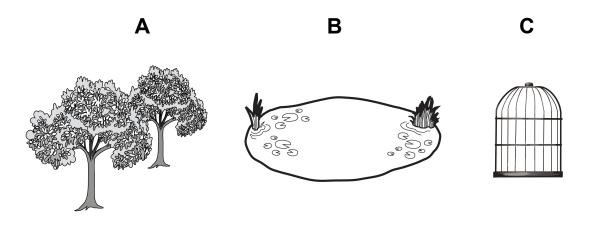
air. money. plants.



3



Birds build their nests in trees. This is why birds live in-



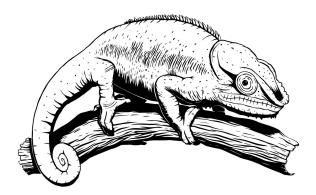
forests.

ponds.

cages.



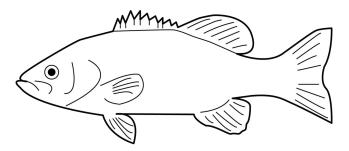
4 The picture shows a chameleon.



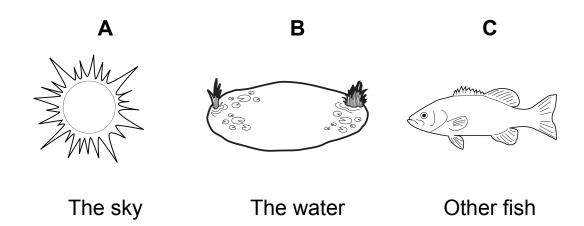
Some animals, such as this lizard, live in trees because-

- **A** trees provide shelter and food.
- **B** tree lizards sleep in the day.
- **C** tree lizards are very small.
- **D** trees grow in many places.





What is a living thing that fish depend on?





Note: Due to the nature of this element, not all sections of the activity can be completed and submitted online by students.

Description

Students observe and record their observations of a garden pond photograph.

Materials

Printed Materials

1 Organisms and Environment (per class)

Reusable

- 1 Document camera (per teacher)
- 1 Projector (per teacher)

Procedure

- 1. Display the picture of the garden pond (Organisms and Environment) using the document camera. Have students record their observations about the pond on a piece of paper. Have students list all the living and nonliving objects they see.
- 2. Ask students to share what they actually see in the photograph.
- 3. Say, "I wonder what organisms that cannot be seen might be found in the pond or living in the various plants." Call on volunteers to share their ideas.
- 4. Discuss how the organisms in and around a garden pond depend on the living and nonliving elements of the habitat. For example, fish depend on the water for shelter and survival; pill bugs live under rocks, etc.
- 5. Ask students to share other instances of interdependence among organisms with which they are familiar. If necessary, stimulate the discussion by asking if anyone has a pet. How does the pet depend on him or her? How does he or she depend on the pet?
- 6. Discuss what living and nonliving things pets need.

Guiding Points

- Students should understand that living organisms need food, sunlight, air, and shelter to survive.
- Students should understand that nonliving objects do not need the above items.
- Air, water, soil, and sunlight are all nonliving.

Guiding Questions

- 1. What do you see in the photograph of the garden pond that is nonliving? Air, water, sunlight, soil
- 2. What do you think might be in the pond or the grass that you cannot see? Insects, fish
- 3. What are some other examples of organisms depending on living and nonliving things in order to survive? The fish need water to survive. They also need air to breathe. Insects eat plants in order to survive.
- 4. What living organisms might depend on living plants for shelter? Birds, insects
- 5. Which organisms make their homes in the water? Fish, insects, microscopic organisms

Organisms and Environment



Reflect

Many plants and animals live together in different environments. Look at the picture of the pond. What **organisms** live there? Grass, trees, bugs, and birds live there. Fish and frogs live there, too. Can you think of anything else that might live there? How are these organisms important to one another? How are their surroundings important for their survival?



organism: a single living thing

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How do living things depend upon their surroundings?

Plants and animals use their surroundings in different ways. Plants use sunlight, water, and air to make food. They use soil for nutrients and to anchor their roots. Animals need water to survive. They also use their surroundings for shelter. Some animals use caves or dig burrows underground. Some live in or near water, such as rivers, lakes, or oceans.









Plants and animals depend upon their surroundings for survival.

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How do animals help plants?

Some plants have flowers. Flowers have pollen in them. To make seeds, pollen has to move from one part of a flower to another part. Animals help plants by moving pollen. Bees, butterflies, and other insects visit flowers to eat their nectar or pollen. As they visit flowers, they spread pollen. Bats and birds also spread pollen.









Plants also need to spread their seeds. This way, young plants will have room to grow. Animals help plants spread seeds. When an animal eats a fruit, it also eats the seeds inside the fruit. When the animal moves somewhere else, seeds are dropped in the animal's waste. Some seeds have little hooks on them. These seeds stick to animals that pass by. When the seeds fall off the animals, new plants get to grow in a new spot.







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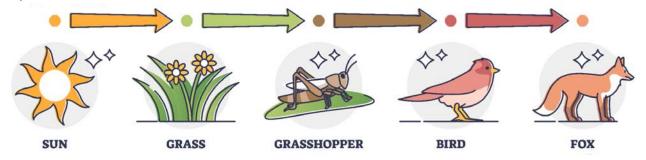




Animals depend on plants for food and oxygen. Food gives animals energy. All animals need energy to live. Animals cannot make their own food.

Food chains show how energy moves from one organism to the next.

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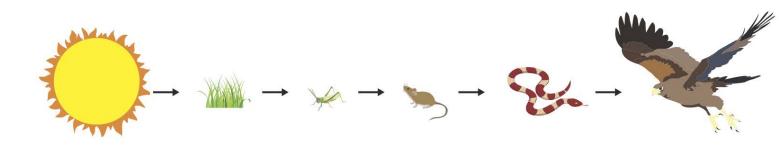


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Food chains are important for life. Imagine if a plant or animal in the chain disappeared. Animals further along the chain would suffer. Look at the park habitat food chain above. What might happen if grasshoppers disappear from the park?

Interdependency

What Do You Think?



Write more about the grassland habitat food chain (shown above) in the blank spaces below.

Choose from the following words: *hawk, snake, mouse, grasshopper, grass, plant, animal,* and *Sun.*

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Try Now

Now it is your turn! Look at the photo below. Think of how each organism depends on its surroundings, plants, and animals. Use your imagination about the surroundings. Write your answers in the chart.



Organism	Surroundings	Plants	Animals
Tree			
Squirrel			
Fox			

Connecting With Your Child

Food Chains at Home

Food chains are a wonderful example of the interdependence of organisms in an environment, and children easily grasp the concept of needing to eat to survive. By discussing how each organism is linked to others, children gain perspective on the interdependence of living organisms.

One way to discuss food chains is to help your child increase their awareness of their own place in a food chain. Just before you have your next meal together, grab a sheet of paper and help your child list all of the food items on the plate. Then, after the meal, talk about which food items are plants (all the fruits and vegetables) and which are animals (any meat products). Some items may be combinations of both. If possible, choose one plant from the list and one animal, and have your child make a model of the food chain for each. Arrows should point from the Sun to the plant and then to the animals in order of consumption.

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Have your child create models for each food chain to display.

These are the materials needed:

- Index cards
- Hangers
- Markers or crayons
- Tape

Steps to follow:

1. Have your child draw and label each part of the food chains on index cards: one card for the Sun, one card for the plant, one to three

Interdependency

cards for animals. Each card should have an arrow pointing to the next card.

- 2. Tape all the index cards to each other and to the hangers.
- 3. Display and ask questions.

Here are some questions to discuss with your child:

- Are the two food chains you drew the same?
- Did these foods come from the same type of habitat?
- What other plants and animals might be part of these food chains?
- How do the animals depend on the plants? How do the plants depend on the animals?