

Home Instruction Packet for (ESL 1 Period 2)

Name of Teacher and Class: (Customize this page to your needs:)

<p>In this packet are materials and directions for ESL 1 students period 2</p> <p>This work will be collected by the teacher via email. This work will be graded and counted towards their marking period grade.</p>	
<p>I am available to support you during the hours 7:50am-2:50 pm to answer any of your questions. I will be responding to your emails within the hour.</p> <p>You contact me at: mkepuladze@rpsd.org</p>	
<p>Lesson: SWBAT recall, recognize, and recall facts about the ecosysytem. SWBAT compile a daily journal on flipgrid on life at home. SWBAT reasearch and present a topic of their choice.</p>	<p>Weekly due dates</p> <p>SWBAT identify a character's relationship with the natural world</p>
<p>Week 1-</p> <p>Lesson 1: SWBAT to use each commonly confused word in a sentence</p> <p>Lesson 2: SWBAT view grammar(pages 3-5 SWBAT to read the short story Project Mulberry and answer comprehension questions. SWBAT identify a character's relationship with the natural world</p> <p>Lesson 3 SWBAT read informational text on the Ecosystem</p>	<p>ESL 1 Period 2 Review list of commonly confused words, Write a complete sentence for each word. See list attached</p> <p>Students will start a five minutes flipgrid journal on life at home. Flipgrid code Kepuladze 6046</p> <p>Read Project Mulberry pages 8-12 and complete activities on pages 12 and 13</p> <p>Informational text Ecosystem The Systems of Nature pages 22-29 Read pages 22-27</p>
<p>Week 2-</p>	<p>How does the natural world affect us? Pages 1-7</p>

<p>Lesson 1: SWBAT expand and develop vocabulary Fix an error, read for fluency recall facts to respond to reading wrap up</p>	<p>Reading wrap up Edit for Meaning 1-10</p>
<p>Lesson 2:</p>	<p>Reading wrap up Edit for meaning 11-16</p>
<p>Lesson 3:</p>	<p>Reading wrap up Edit for meaning 16-21</p>
<p>Week 3</p> <p>Lesson 1 SWBAT create a power point</p>	<p>Research an article on the Ecosystem and summarize, identify 5 words from the science academic vocabulary list from the ACCESS prep lesson and use them in the summary.</p> <p>Research a new topic for the next public speaking presentation and prepare a power point.</p>
<p>Lesson 2 Practice pronunciation</p>	<p>spellingcity.com</p>
<p>Lesson 3 SWBAT to practice basic vocabulary using duolingo</p>	<p>Download duolingo app and practice the pronunciation of basic vocabulary in preparation for ACCESS testing.</p>

Commonly Confused Words

Review the commonly confused words and put each word in a complete sentence. Use notes with the activities in each lesson we went over in class.

Accept

Except

Advice

Advise

Affect

Effect

Aid

Aide

Aisle

Isle

I'll

Already

All ready

Altar

Alter

Among

Between

Bad

Badly

Besides

Beside

Bite

Byte

Break

Brake

Bred

Bread

By

Buy

Bye

Capital

Capitol

Close

Cloths

Clothes

Confident

Confidant

Conscience

Conscious

Course

Coarse

Die

Dye

Prepare to Read

What You Will Learn

Reading

- Vocabulary building:
Literary terms,
word study
- Reading strategy:
Predict
- Text type: *Literature*
(novel excerpt)

Grammar

Adjectival phrases:
Adjective order;
Adjectives after
indefinite pronouns

Writing

Describe an object

► THE BIG QUESTION

How does the natural world affect us?

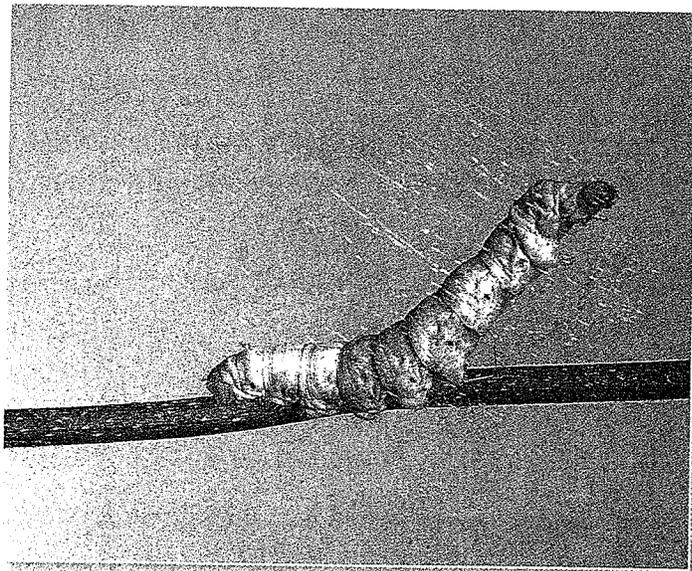
How do humans and animals relate to each other? Do humans learn from animals? Do animals learn from humans? Work with a partner. Use your prior knowledge to make a list of the ways humans and animals relate to each other in everyday life.

LEARNING STRATEGY

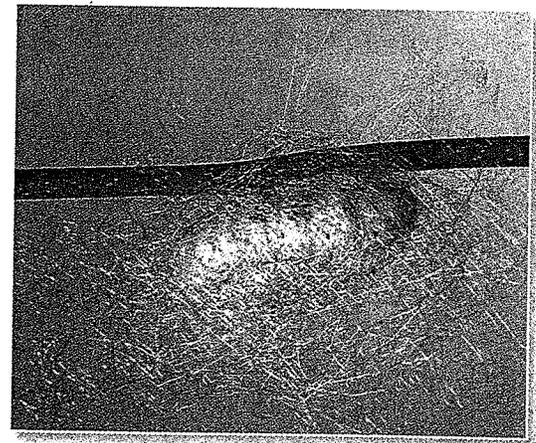
Use your prior knowledge. Relating what you already know to a new topic will make it easier to understand new meanings in English.

► BUILD BACKGROUND

This reading is an excerpt from the novel *Project Mulberry*. An excerpt is a small part of a long text. The reading is about two students who are raising silkworms for a contest at a state fair. Raising silkworms is easy to do at home. You need a lot of mulberry leaves—that is the only thing silkworms eat. You also need time to feed and take care of them. Silkworms produce a silk cocoon for their protection. Learning about silkworms will teach you a lot about nature and life cycles.



▲ A silkworm spinning a cocoon



▲ A silkworm inside a cocoon

► VOCABULARY

Learn Literary Words

Imagery is descriptive language that creates word pictures for readers. Imagery can make you feel like you are really experiencing what the writer is describing. A writer creates imagery by using **sensory details**. These are details of sight, sound, smell, taste, or touch. Sensory details can help you visualize, or imagine, a scene in a story or poem.

The poem below includes sensory details that appeal to your senses of sight and touch. "A host of golden daffodils" appeals to your sense of sight. "Fluttering and dancing in the breeze" appeals to your sense of touch and sight.

When all at once I saw a crowd,
A host, of golden daffodils;
Beside the lake, beneath the trees,
Fluttering and dancing in the breeze.

—William Wordsworth

The chart below gives an example of a sensory detail for each of the five senses.

Sight	Sound	Smell	Taste	Touch
a blue ribbon	a squeaky sound	a sweet smell	a salty taste	a silky scarf

Practice



Work with a partner. Take turns reading the sensory details below. Which of the five senses does each description appeal to? Some could appeal to a few senses.

baking bread	fluffy fur	sour lemons
beating drums	shiny buttons	sparkling water
buttery popcorn	silky hair	whistling wind

Literary Words

imagery
sensory details

Audio



▲ Daffodils

Listening and Speaking: Academic Words

Study the **red** words and their meanings. These words are used routinely in written classroom materials. You will find them useful when talking and writing about literature. Write each word and its meaning in your notebook, then say the words aloud with a partner. After you read the excerpt from *Project Mulberry*, try to use these words to respond to the text.

Academic Words

cycle
dramatic
percent
project



cycle = a set of events that happen again and again	→	The life cycle of a moth is <i>egg, worm, cocoon</i> , and finally <i>moth</i> .
dramatic = sudden and noticeable	→	In a few days the change to the caterpillars was dramatic . They were covered in layers of silk.
percent = an amount out of every hundred	→	I answered 100 percent of the questions correctly on my science test!
project = a plan to do something	→	The class is working on a project to learn about the life cycle of a frog.

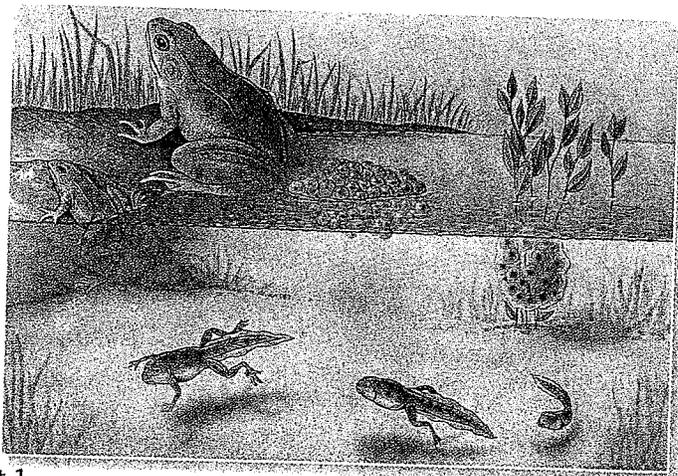


Practice



Work with a partner to answer these questions. Try to include the **red** word in your answer. Write the sentences in your notebook.

1. Name one stage in the life **cycle** of a moth.
2. Why was the change to the caterpillars **dramatic**?
3. Suppose you answered all the questions on a test correctly. What **percent** of the answers did you get right?
4. What was the last **project** that you worked on in class?



◀ The life cycle of a frog

Word Study: Prefixes *in-*, *re-*, *over-*, *un-*

A prefix is a group of letters that is added to the front of a base word and changes the meaning of that word. Some common prefixes are *in-*, *re-*, *over-*, and *un-*. Knowing the meaning of these prefixes helps you to understand the meaning of many words. Learning how to quickly identify and pronounce prefixes will help you as you sound out words.

Prefix	Meaning	Base Word	New Word	Definition
<i>in-</i>	not	visible	invisible	not able to be seen
<i>re-</i>	again	write	rewrite	to change a text
<i>over-</i>	too much	priced	overpriced	too expensive
<i>un-</i>	not	certain	uncertain	not yet known

Practice



Work with a partner. Take turns reading the words in the box. Look up the definition of each word and use the word in a sentence.

inaccurate	reappear	overactive	unable
inactive	recharge	overdue	uncomfortable
incomplete	reheat	overload	unpleasant

READING STRATEGY PREDICT

You can expand your reading skills by learning to make predictions about texts. Predicting helps you better focus on the text and enhances your comprehension of it. Before you read, predict (or guess) what the story will be about. To predict, follow these steps:

- Stop reading from time to time and ask yourself, "What will happen next?"
- Look for clues in the story and illustrations.
- Think about what you already know. Make a prediction.
- As you read, check to see if your prediction is correct.

Read the first two paragraphs of *Project Mulberry*. What do you predict the students are so excited about?



READING

1

LITERATURE

NOVEL

Set a purpose for reading What does Julia learn about the natural world? How does it make her feel?

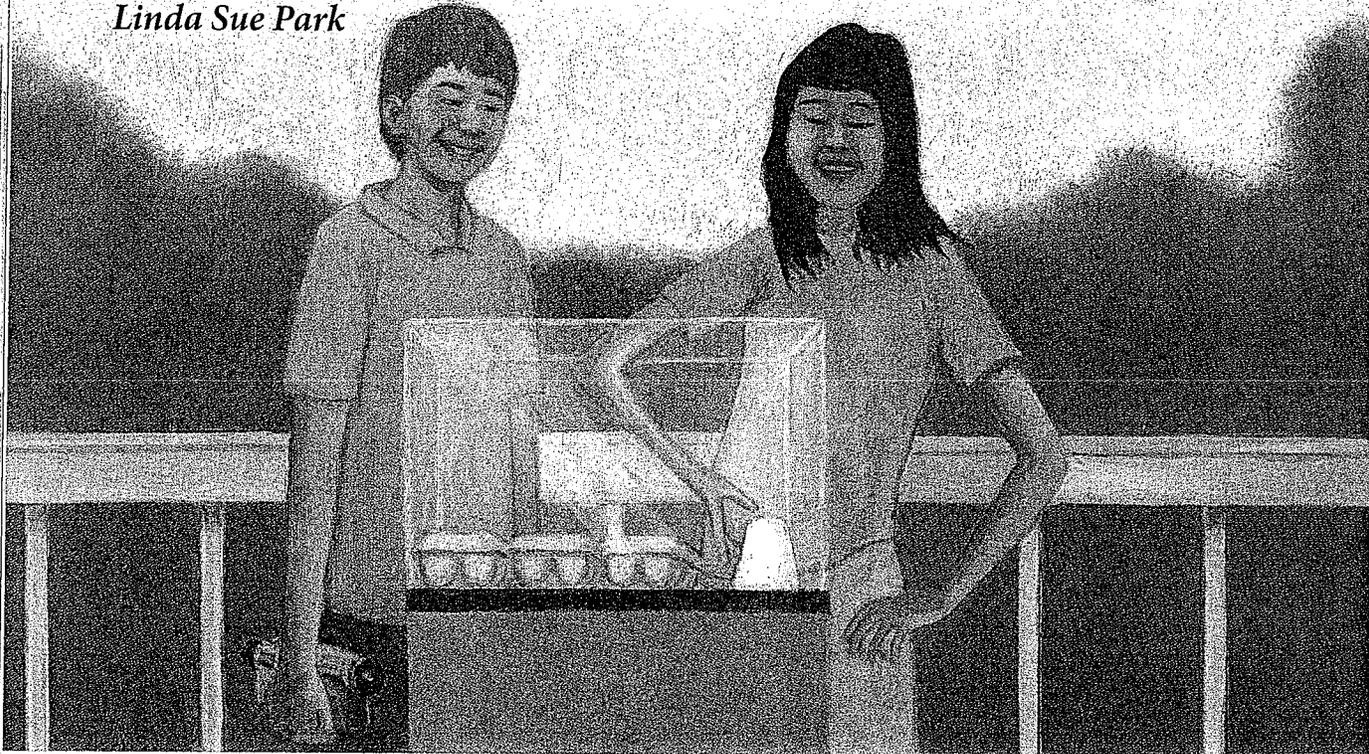
Audio



from

Project Mulberry

Linda Sue Park



Julia Song and her friend Patrick want to win first prize at the state fair. Julia's mother suggests raising silkworms, something she did when she was a young girl in Korea. Julia is not happy about the idea at first—it seems too Korean, and she wants to do an American project.

I opened the cardboard window one last time, took out the same **caterpillar**, and put it into a little glass jar. We'd poked air holes in the metal lid. We kept the jar in the **aquarium** alongside the egg cartons, and I put a cup upside down over it so it would be dark most of the time. But whenever Patrick wanted to film, we took the jar out for a few minutes.

caterpillar, young form of a moth or butterfly, which looks like a worm with many legs
aquarium, large glass container for fish

It was so cool. My parents came out to see, and Patrick's parents brought Hugh-Ben-Nicky over that evening to have a look. The porch was very crowded; I worried that all those people would upset the caterpillar. But it didn't seem to care, not even when both the twins started jumping up and down and screeching with excitement.

The caterpillar moved its head constantly. Sometimes fast, sometimes a little slower, but never stopping—it looked like really hard work. The silk came out of its mouth just as Patrick had said.

At first the silk was almost invisible. You could see the strands only if you looked really hard.

By the next morning, though, the caterpillar had already wrapped itself in a layer of silk. It looked like it was living inside a cloud. We could see its black mouth moving, moving, moving, busy, busy, busy. Patrick wanted to stay up all night to film it, but both our moms **vetoed** that idea. The following morning he was at our house in his pajamas again. The silk was almost solid; now we could barely see the black mouth moving inside.

I was glad Patrick was taping it; I'd be able to watch it again as many times as I wanted. But I knew it would never be as special on tape as it was now, happening right in front of me, those **wispy** threads at first barely more than air, and then like a cloud, the caterpillar spinning layer after layer after layer, each layer made of one hundred percent real silk thread.

I stood with a piece of paper held behind my back. "I am a genius," I said to Patrick.

It was the afternoon of the third day of the spinning, a Sunday. Patrick was sitting on the couch in our living room. I'd told him to sit there while I went and got the paper from my room. He raised his eyebrows at me but didn't say anything.

"I've decided what I'm going to **embroider**. I'm going to do"—I paused dramatically, then whipped out the paper—"the Life Cycle of the Silkworm."

I held up the sketch I'd drawn.

"Egg. Worm. Cocoon. Moth." I pointed to the drawings one by one.

"And wait till you hear the best part. I'm going to use regular embroidery floss to do the egg and the worm. And the moth, too. But for the cocoon, I'm going to use the thread we make. The cocoon is made of silk in real life, and it will be made of silk in the picture too, get it?"

Patrick grinned, a really huge grin.

He got it, all right. I almost felt like hugging him. He put his hands up in the air and bent forward a few times like he was bowing to me.

vetoed, refused to allow

wispy, soft and thin

embroider, sew pictures onto cloth using thread

LITERARY CHECK

How does the author use imagery to describe the caterpillar?

Reading Skill

To understand the words in bold, read the definitions at the bottom of the page. Later, use the words in your own sentences.

BEFORE YOU GO ON

- 1 Where did the silk come out of the caterpillar?
- 2 What kind of thread does Julia plan to use to embroider the cocoon?



On Your Own

How are silkworms and mulberry leaves connected to the natural world?

“Julia Song, you *are* a genius. We are absolutely, positively, going to win a prize at the fair.”

I made a silly **curtsy** back at him. “Thank you, thank you.” I’d thought of doing the life cycle a while back. But it was the caterpillar that had given me the idea for the cocoon part. I’d watched it spin for a while right before I went to bed, and I’d woken up that morning with my genius plan.

I had known right away that it was perfect. There was just something so completely *right* about it. It wasn’t American, like the flag—but it wasn’t Korean, either.

Or maybe it was both?

Patrick took the sketch from me and studied it for a second. Then he looked up. “It’s almost like an exact picture of the whole project, right?”

I nodded. “That’s what I was thinking.”

“Okay, so if it’s supposed to be just like the project, you should leave out the moth at the end.”

“Why would I leave out the moth? That’s the final stage, right?”

“The **final stage** of the silkworm life cycle, yeah. But not the final stage of our project.”

“What are you talking about?”

“We’re not going to have any moths.”

“Of course we’re going to have moths,” I said. “Look how great they’re doing—they’re almost done spinning their cocoons.”

“But we want thread. So you can sew with it.”

“Yeah, so?” What was Patrick’s problem?

Patrick rolled his eyes at me. “Oh, I get it. You never read the book, did you.”

“I did so. I mean, I didn’t read every word, but I looked through it. I studied the pictures a lot—I traced one for the caterpillar sketch.”

“Jules. If you’d read the book you’d know.”

“Patrick, *what* are you talking about?”

He shook his head. “If you want to get silk from the cocoons, you have to kill the—the creatures inside. *Before* they come out as moths.”

What?

I stared at him. I could feel the blood going out of my face. “You have to *kill* them?”

Patrick nodded. “You have to boil the cocoons. For about five minutes, to **dissolve** all the sticky stuff that keeps them together. Then you can unwind the silk. But the boiling kills them—the **pupae**.”

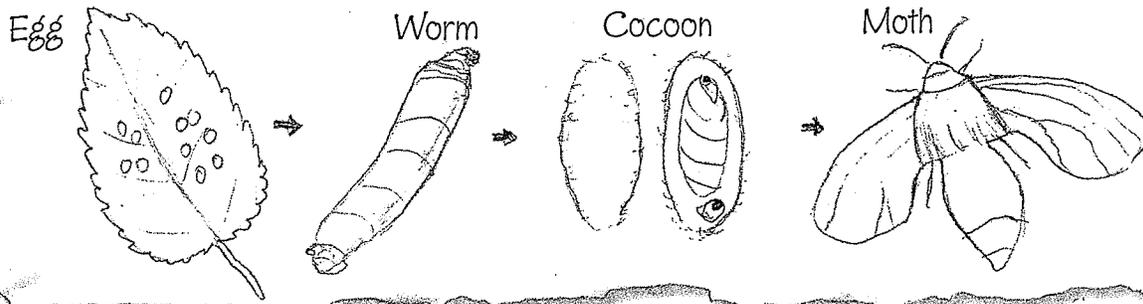
curtsy, act of respect done by putting one foot forward and bending the knees

final stage, last period in a process

dissolve, break up or melt

pupae, the resting stage before the adult insects emerge

Life Cycle of a Silkworm



For once, there was no **jostling** in my head because there was only one thought, with nothing else for it to bump into.

Kill them.

We'd have to kill them.

My hands were freezing cold. I closed them into fists—open, shut, open, shut—while I tried to get my brain to work.

“Patrick, wait. Why can't we unwind the cocoons *after* the moths come out?”

“Jules. It's all in the book.”

“Okay, okay. I didn't read the stupid book! Tell me!” I almost screamed.

Patrick spoke slowly, like he was trying to calm me down. “The moth gets out by making a hole in the cocoon, right? To make a hole it has to chew through the silk—well, it doesn't actually *chew*, it spits out this chemical that dissolves the silk and makes a hole. And the hole goes through *all* the layers of silk, see? So instead of one nice long thread, you'd end up with a million tiny short pieces that you couldn't sew with. Silk farmers never let the moths come out—it would ruin everything. Get it?”

I got it, all right. I closed my eyes because I felt dizzy.

I hadn't known that I didn't know.

✓ LITERARY CHECK

How does the author use sensory details to describe Julia's feelings?

jostling, pushing or knocking around

ABOUT THE AUTHOR

Linda Sue Park was born in Illinois to Korean immigrant parents. At a very young age she developed a love for writing poetry and stories. She earned her degree in English from Stanford University while also competing on the school's gymnastics team. Her first children's book, *Seesaw*, was published in 1999. *A Single Shard* was a 2002 Newbery Medal winner. She lives with her family in western New York.



BEFORE YOU GO ON

1 How are the caterpillars killed?

2 Why is Julia confused? Explain the problem.

☀ On Your Own

Did you ever find out something surprising when you were doing a project?

► READER'S THEATER

Act out the following scene between Julia and Patrick.

Julia: I have a really good idea. I'm going to make a picture of the entire life **cycle** of the silkworm. I'll show how it changes from an egg to a worm, and finally to a moth.

Patrick: That's a great idea! There's only one problem. Do you want your picture to show exactly what we do in our **project**?

Julia: That's right.

Patrick: Well then, to be 100 **percent** accurate, you can't have a picture of the moth at the end.

Julia: Why not?

Patrick: Didn't you read the book I gave you? If we're going to get silk from the cocoons, we'll have to kill the creatures inside.

Julia: Kill them?

Patrick: Yes, or they'll destroy the silk.

Julia: Oh, no. But kill them? That's terrible!

Audio



» Listening SKILL

Listen carefully to the other actor so you know when to say your lines.

► COMPREHENSION



Did you understand the story? If not, reread it with a partner. Then answer the questions below.

Recall

1. Why is Patrick videotaping the caterpillars?
2. What is the cocoon made of?

Comprehend

3. Describe the project Julia wants to embroider.
4. Why aren't there going to be any live moths at the end of Julia and Patrick's project?

Analyze

5. Does the author think Julia and Patrick work well together?
6. How does Julia feel about killing the silkworms?



▲ Silkworm moths resting on cocoons

Connect

7. What steps would you take to begin a research project?
8. Did you ever work with a partner on a project? Explain.

► DISCUSSION

Discuss in pairs or small groups.

1. What did Julia do well for her project? What did Julia do poorly?
2. What do you think will happen next in *Project Mulberry*?
3. Have you ever had any problems with an activity or project? What was one of your problems? How did you solve it?

Q How does the natural world affect us? In your opinion, should people have a responsibility to animals? Why or why not?

► RESPONSE TO LITERATURE



Utilize Have you ever done an activity or worked on a project that taught you something about nature? Did you learn anything that surprised you? Did you have any problems? Did you get **dramatic** results? Compare your activity or project to Julia's project. Copy the chart below into your notebook. Share your chart in a small group.

Speaking SKILL

Speak slowly and clearly.

LEARNING STRATEGY

Use a concept map to acquire new vocabulary. Adding words or phrases to a Venn diagram, a timeline, or a chart will help you see the relationships between words and their meanings.

	Julia's Project	My Project
Project:	Study the life cycle of a silkworm moth	
Facts learned:	How silkworms spin silk How people get silk thread from cocoons How a silkworm turns into a moth	
Surprising facts:	People have to kill the pupae in order to get silk from the cocoons.	
Problem:	The picture of the project can't show the entire life cycle.	

Set a purpose for reading How do living things depend on their natural environment to survive?

Ecosystems



THE SYSTEMS OF NATURE

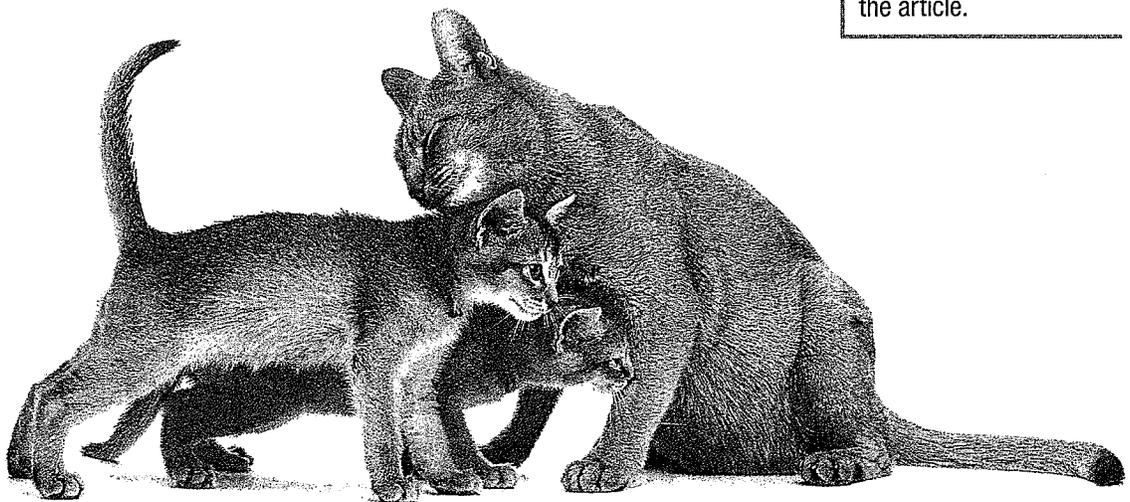
Organisms and Species

An organism is a living thing. A huge redwood tree is an organism. A small mouse is an organism. A tiny insect is an organism. A human is an organism, too. Some organisms, such as bacteria, are so small that you cannot see them.

A group of very similar organisms is a species. The organisms in a species are so similar that they can reproduce—that is, have offspring, or babies—together, and their offspring can reproduce, too. Horses and cows, for example, cannot have offspring together because they are different species.

Listening Skill

Follow along in your book as you listen to the Audio CD. Notice the words in bold. To understand them, read the definitions at the bottom of the page. Knowing the meanings of these words will enhance and confirm your understanding of the article.



▲ A cat and its offspring



▲ Birds tend their nest.

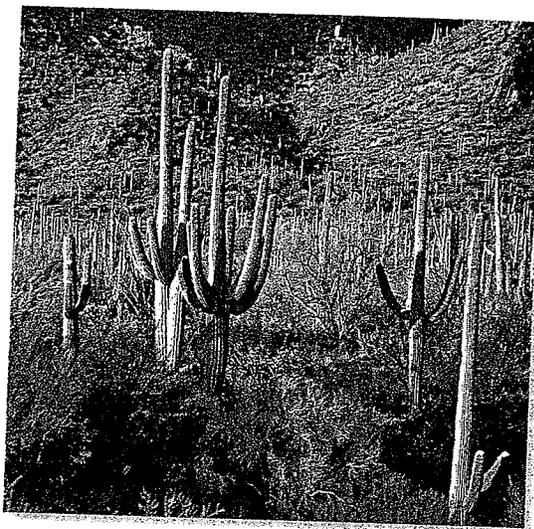
Habitats

A habitat is the place where an organism lives—its surroundings, or environment. A habitat provides the things an organism needs to survive, such as food, water, a livable temperature, and **shelter**. A habitat can be as large as an ocean or as small as a drop of water. It can be a forest or one tree. Several species may live in the same habitat, such as a river.

Different organisms live in different habitats because they have different **requirements** for survival. For example, a river or lake can be the habitat of some species of freshwater fish, such as trout. Freshwater trout cannot survive in the ocean, which contains salt water. An ocean and a lake are very different habitats. Similarly, the desert in the southwestern United States and northern Mexico is the habitat of the saguaro cactus. The saguaro cactus cannot survive in a **tropical** rain forest.

Sometimes animals move to different places within their habitats. For example, many kinds of frogs are born in water. However, they live mostly on land when they grow up. During very cold weather, some frogs go under the ground or bury themselves in mud at the bottom of **ponds** to stay warm.

shelter, place that protects you from bad weather or danger
requirements, needs
tropical, hot and wet
ponds, small lakes



▲ Saguaro cactuses

BEFORE YOU GO ON

- 1 What is an organism? Give an example.
- 2 What is a species? Give an example.

 **On Your Own**
What is your habitat?

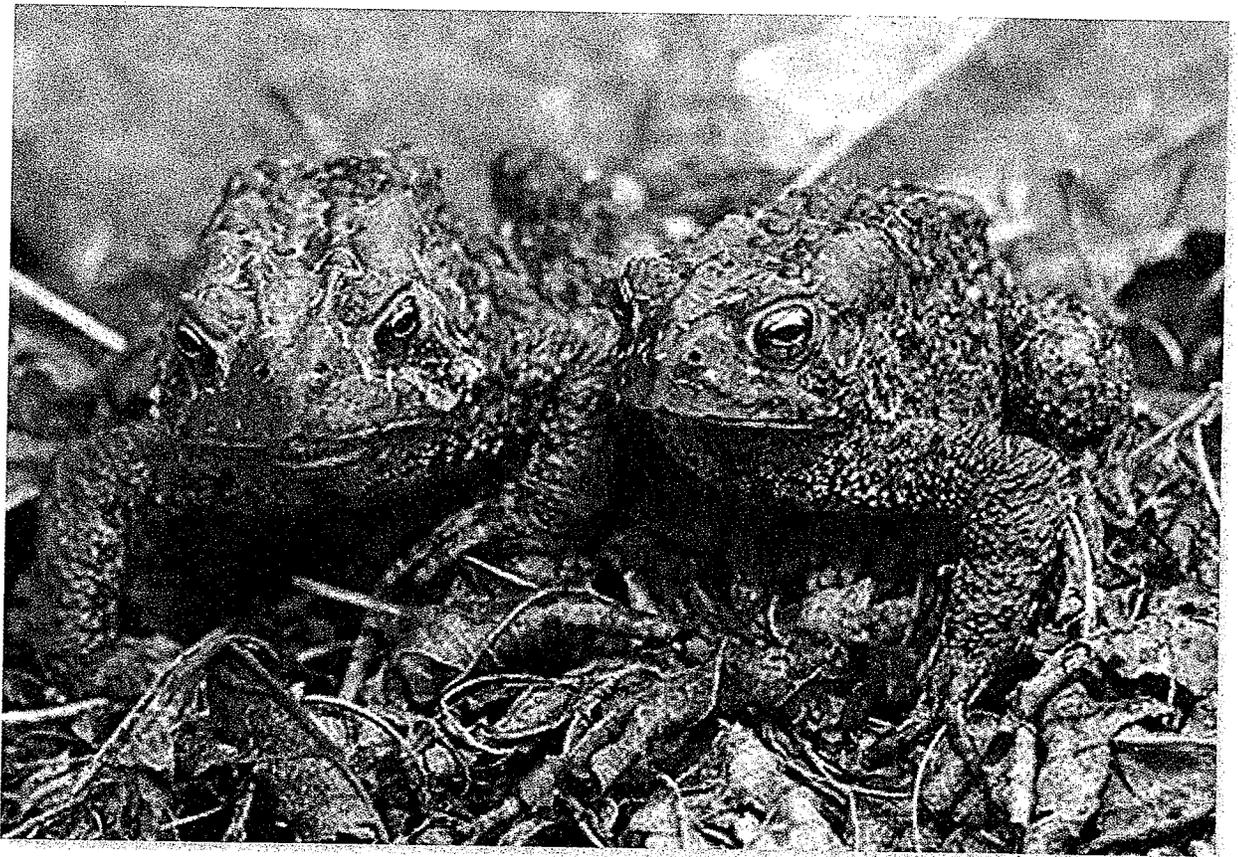
Populations and Communities

All the members of one species in the same area are a population. For example, all the frogs in a lake are a population. All the pine trees in a forest are a population. All the people in a city, state, or country are a population. Some populations do not stay in one place. Monarch butterflies travel south each year from parts of western Canada and the United States to Mexico. Some species of whales travel around many oceans.

A community is all the populations that live together in one place, such as all the plants and animals in a desert. In a community, the different populations live close together, so they interact with one another. One way populations interact in a community is by using the same resources, such as food and shelter. In a desert, for example, snakes, lizards, and spiders may all use rocks and holes for shelter. They may eat insects, other animals, or their own kind of food.



▲ A population of pine trees



▲ American toads

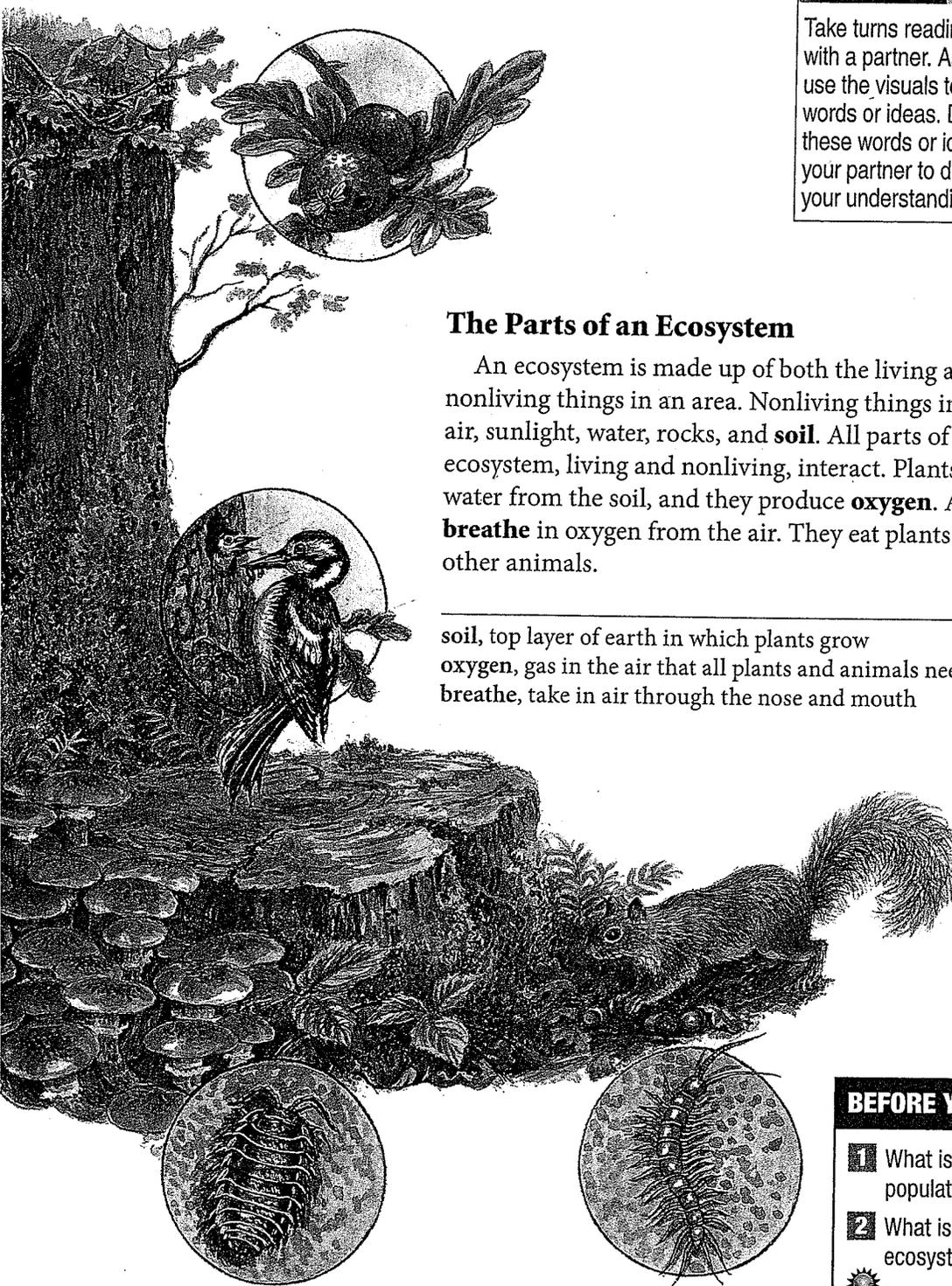
Reading Skill

Take turns reading aloud with a partner. As you listen, use the visuals to help clarify words or ideas. Discuss these words or ideas with your partner to demonstrate your understanding.

The Parts of an Ecosystem

An ecosystem is made up of both the living and nonliving things in an area. Nonliving things include air, sunlight, water, rocks, and **soil**. All parts of an ecosystem, living and nonliving, interact. Plants take water from the soil, and they produce **oxygen**. Animals **breathe** in oxygen from the air. They eat plants and other animals.

soil, top layer of earth in which plants grow
oxygen, gas in the air that all plants and animals need to live
breathe, take in air through the nose and mouth



▲ An oak tree ecosystem

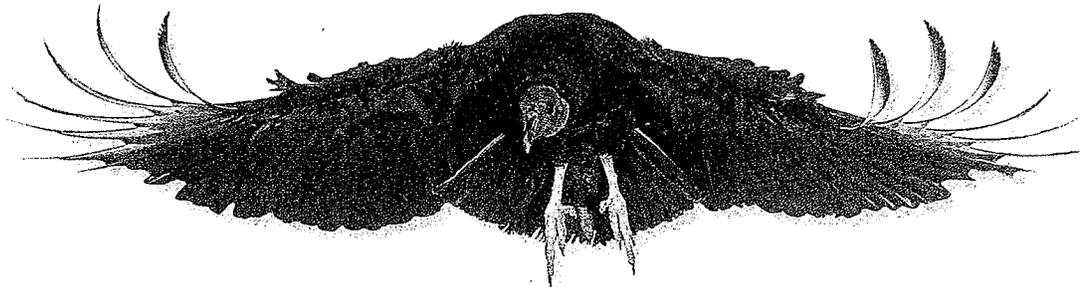
BEFORE YOU GO ON

- 1 What is a population?
- 2 What is an ecosystem?



On Your Own

What parts of the ecosystem do you interact with?



▲ A vulture (scavenger)

Three Kinds of Organisms

In an ecosystem, there are three kinds of organisms: producers, consumers, and decomposers. Each kind of organism is important.

Most producers are plants. They use **energy** from sunlight to make their own food from water and carbon dioxide. (Carbon dioxide is a gas in the air. People and animals breathe it out.) This process of making food is called photosynthesis.

Consumers cannot make their own food. They eat, or consume, other organisms. All animals are consumers. Consumers are **classified** by what they eat.

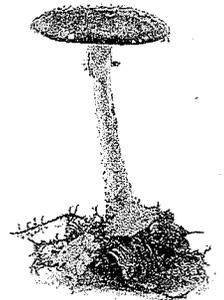
- **Herbivores**, such as deer, horses, and many birds, eat only plants.
- **Carnivores**, such as lions, spiders, and snakes, eat only animals. Some carnivores are scavengers. A scavenger eats dead organisms. Scavengers include vultures and catfish.
- **Omnivores**, such as crows and bears, eat plants *and* animals.

Some consumers are also decomposers. Decomposers break down dead plants and animals. The dead plants and animals are changed into nutrients, which go back into the soil. Producers—plants—consume these nutrients. Decomposers are very important in the ecosystem because plants need nutrients to grow.

The two main kinds of decomposers are bacteria and fungi. Bacteria are very small living things. We cannot see bacteria, but they live in soil, air, and water and on other organisms. A fungus is a plantlike organism without leaves that grows in dark, warm, wet places. Mushrooms are one kind of fungus.



▲ A bear (omnivore)



▲ A fungus (a decomposer)

energy, a source of power to do something
classified, put into groups



▲ A food chain of grass (a producer), a mouse (a small consumer), and a hawk (a larger consumer)

Food Chains

The movement of food through a community is called a food chain. A food chain always begins with producers—plants. In the ocean, a food chain begins with algae, which are very small plantlike organisms. Small fish eat the algae. Medium-size fish eat the small fish. Big fish eat the medium-size fish.

On land, a food chain is similar. It begins with a plant. A consumer, such as an insect, eats the plant. Then another consumer, such as a bat, eats the insect. Next, a bigger consumer, such as an owl, eats the bat. Finally, the owl dies, and decomposers break it down into nutrients.

Every part of the food chain is necessary to every other part. Without water, plants die. Without plants, animals cannot live.

BEFORE YOU GO ON

- 1 Name three kinds of organisms in an ecosystem.
- 2 What are three kinds of consumers?



On Your Own

Describe how living and nonliving things are important to the natural world.

► COMPREHENSION



Recall

1. What does a habitat provide for living things?
2. Name two main kinds of decomposers.

Comprehend

3. Compare and contrast a community and an ecosystem.
4. Describe how the different organisms interact in a food chain.

Analyze

5. What is one interesting fact you learned about ecosystems?
6. Do you think the author would agree with this statement: "All living things depend on nonliving things"? Explain.

Connect

7. Why do you think humans can **survive** in many different kinds of places?
8. Do you think it is important for humans to protect nature? Why?

► IN YOUR OWN WORDS

Demonstrate your understanding of the reading by summarizing it. Use the content-area words from the chart to tell a partner about ecosystems.

Organisms and Species	→	similar , reproduce, consume
Habitats	→	species, organisms, interact , resources
Populations and Communities	→	organisms, survive, environment
The Parts of an Ecosystem	→	living, nonliving, interact
Producers, Consumers, and Decomposers	→	process, carnivores, omnivores, herbivores
Food Chains	→	producer, consumer, decomposer

► DISCUSSION

Discuss in pairs or small groups.

1. Why do different organisms live in different habitats? Give examples.
2. What would happen to a forest ecosystem if someone cut down all the trees?
3. If you could choose, what type of habitat would you prefer to live in? Why?

Q How does the natural world affect us? How do the organisms in your community interact with each other?

► READ FOR FLUENCY

It is often easier to read a text if you understand the difficult words and phrases. Work with a partner. Choose a paragraph from the reading. Identify the words and phrases you do not know or have trouble pronouncing. Look up the difficult words in a dictionary.

Take turns pronouncing the words and phrases with your partner. If necessary, ask your teacher to model the correct pronunciation. Then take turns reading the paragraph aloud. Give each other feedback on your reading.

► EXTENSION



Utilize Explore the community that you live in. Find out which plants and types of animal consumers live there. Then copy and complete the chart below. Try to include the academic words.

In My Ecosystem

Carnivores:

Herbivores:

Omnivores:

Plants:



▲ A park in a community

» Listening SKILL

Listen carefully to other people's ideas.

UNIT
1

How does the natural world affect us?

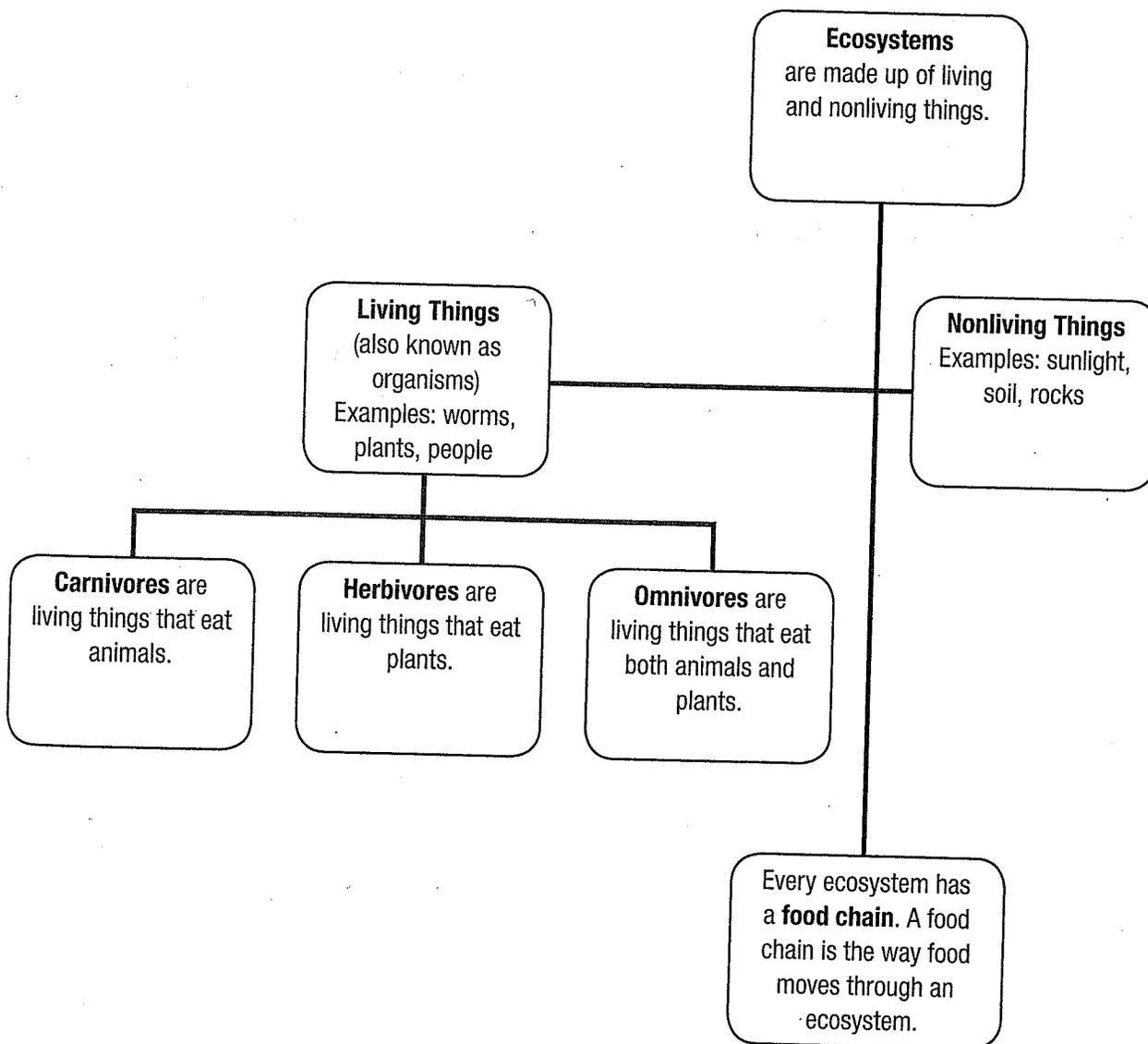
READING 2: "Ecosystems: The Systems of Nature"

SUMMARY

Use with textbook pages 22–27.

This passage tells how the different parts of nature work together. An ecosystem is made up of both the living things and the nonliving things in an area. Plants and animals are examples of living things. Rocks and water are examples of nonliving things. The passage tells about the different kinds of living things and the places, or habitats, they live in. It also explains that each member of the ecosystem is important to every other member.

Visual Summary



Use What You Know

Name three different kinds of organisms, or living things.

1. _____
2. _____
3. _____

Text Structure

The title tells what the article is about. Circle the title of the article.

What might "The Systems of Nature" mean?



Reading Strategy: Preview

Before reading the article, preview it by looking at the main title and headings of each section. Underline the main title and headings. What do you think this article will be about?



Ecosystems: The Systems of Nature

Organisms and Species

An organism is a living thing. A huge redwood tree is an organism. A small mouse is an organism. A tiny insect is an organism. A human is an organism, too. Some organisms, such as bacteria and viruses, are so small that you cannot see them.

A group of very similar organisms is a species. The organisms in a species are so similar that they can reproduce—that is, have offspring, or babies—together, and their offspring can reproduce, too. Horses and cows, for example, cannot have offspring together because they are different species.

Habitats

A habitat is the place where an organism lives—its surroundings or environment. A habitat provides the things an organism needs to survive, such as food, water, a livable temperature, and shelter. A habitat can be as large as an ocean or as small as a drop of water. It can be a forest or one tree. Several species may live in the same habitat, such as a river.

shelter, place that protects you from bad weather or danger

Different organisms live in different habitats because they have different requirements for survival. For example, a river or lake can be the habitat of some species of freshwater fish, such as trout. Freshwater trout cannot survive in the ocean, which contains salt water. An ocean and a lake are very different habitats. Similarly, the desert in the southwestern United States and northern Mexico is the habitat of the saguaro cactus. The saguaro cactus cannot survive in a tropical rain forest.

Sometimes animals move to different places within their habitats. For example, many kinds of frogs are born in water. However, they live mostly on land when they grow up. During very cold weather, some frogs go under the ground or bury themselves in mud at the bottom of ponds to stay warm.

requirements, needs
tropical, hot and wet
ponds, small lakes

Comprehension Check

Underline the reason why different organisms live in different habitats. Why would freshwater trout have trouble surviving in the ocean?



Text Structure

Science textbooks often have highlighted vocabulary words. Their definitions are at the bottom of the page. Circle one of the highlighted words on this page. Look at its definition. Reread the sentence in which it appears. Rewrite the sentence without using the word.



Comprehension Check

Underline the various places a frog may move within its habitat. Why would a frog live in one part of its habitat in summer and in another part in winter?



Reading Strategy: Preview

When you preview, you think about what you already know about the subject of the article. What is the difference between a population and a community?

Text Structure

A science article often explains important terms. Underline the definition of the term *population*. List three populations.



1. _____
2. _____
3. _____

Comprehension Check

Underline why different populations in a community interact with one another. Then give an example of how different animals use the same resources.



Populations and Communities

All the members of one species in the same area are a population. For example, all the frogs in a lake are a population. All the pine trees in a forest are a population. All the people in a city, state, or country are a population. Some populations do not stay in one place. Monarch butterflies travel south each year from parts of western Canada and the United States to Mexico. Some species of whales travel around many oceans.

A community is all the populations that live together in one place, such as all the plants and animals in a desert. In a community, the different populations live close together, so they interact with one another. One way populations interact in a community is by using the same resources, such as food and shelter. In a desert, for example, snakes, lizards, and spiders may all use rocks and holes for shelter. They may eat insects, other animals, or their own kind of food.

The Parts of an Ecosystem

An ecosystem is made up of both the living and nonliving things in an area. Nonliving things include air, sunlight, water, rocks, and soil. All parts of an ecosystem, living and nonliving, interact. Plants take water from the soil, and they produce oxygen. Animals breathe in oxygen from the air. They eat plants and other animals.

Three Kinds of Organisms

In an ecosystem, there are three kinds of organisms: producers, consumers, and decomposers. Each kind of organism is important.

Most producers are plants. They use energy from sunlight to make their own food from water and carbon dioxide. (Carbon dioxide is a gas in the air. People and animals breathe it out.) This process of making food is called photosynthesis.

Consumers cannot make their own food. They eat, or consume, other organisms. All animals are consumers. Consumers are classified by what they eat.

- **Herbivores**, such as deer, horses, and many birds, eat only plants.
- **Carnivores**, such as lions, spiders, and snakes, eat only animals. Some carnivores are scavengers. A scavenger eats dead organisms. Scavengers include vultures and catfish.
- **Omnivores**, such as crows and bears, eat plants *and* animals.

soil, top layer of earth
 oxygen, gas in the air that all plants and animals need to live
 breathe, take air through the nose and mouth
 energy, power that produces heat
 classified, put into groups

Comprehension Check

Underline the sentence that defines what an ecosystem is made up of. What are some examples of nonliving things?



Reading Strategy: Preview

Circle the word in the second heading that tells you how many kinds of organisms you will be reading about. How does putting a number in a heading help you preview what is coming next?



Comprehension Check

Circle the three different types of organisms. What is the difference between an herbivore and an omnivore?



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Food Chains

The movement of food through a community is called a food chain. A food chain always begins with producers—plants. In the ocean, a food chain begins with algae, which are very small plantlike organisms. Small fish eat the algae. Medium-size fish eat the small fish. Big fish eat the medium-size fish.

On land, a food chain is similar. It begins with a plant. A consumer, such as an insect, eats the plant. Then another consumer, such as a bat, eats the insect. Next, a bigger consumer, such as an owl, eats the bat. Finally, the owl dies, and decomposers break it down into nutrients.

Every part of the food chain is necessary to every other part. Without water, plants die. Without plants, animals cannot live.

Choose one and complete:

1. Research the different kinds of living creatures that might live in a forest. Then make a drawing of that community.
2. Research an animal mentioned in this article. Learn more about its habitat and where it fits in the food chain. Write a short report that shows all you have learned.
3. Write a poem describing your own ecosystem. Try to include plants and animals that live in your area.

Reading Strategy: Preview

Circle the heading of this section. Based on the heading, what do you think the section will be about?



Text Structure

Science articles often introduce key terms in context. Underline the definition of a food chain in the first paragraph. Describe the links in a food chain for fish.



1. _____
2. _____
3. _____
4. _____

Comprehension Check

Underline the text that describes the very end of a food chain on land. How does the biggest consumer, such as an owl, contribute to the food chain?



READING WRAP-UP

Retell It!

Think about the different parts of the food chain that feed you. Tell the story of how this food chain works. Make sure you include how producers and small consumers make a difference to you and why they are needed.

Reader's Response

Since plants produce oxygen and humans need oxygen to breathe, it's important to protect the forests. How can you help protect the world's forests?

Think About the Skill

How did previewing the different sections help you better understand the article?

EDIT FOR MEANING**Read**

You have read "Ecosystems: The Systems of Nature." Now read one paragraph from it again.

Habitats

Different organisms live in different habitats because they have different requirements for survival. For example, a river or lake can be the habitat of some species of freshwater fish, such as trout. Freshwater trout cannot survive in the ocean, which contains salt water. An ocean and a lake are very different habitats. Similarly, the desert in the southwestern United States and northern Mexico is the habitat of the saguaro cactus. The saguaro cactus cannot survive in a tropical rain forest.

The paragraphs below and on the next page contain the same information as the paragraph you just read. However, each contains one error. First, find the error. Then fix it by editing the sentence so that the information is correct. The first one has been done for you.

Example:**Habitats**

Different organisms live in different habitats. That is because they have different needs for survival. A river or lake can be a good habitat for some species of freshwater fish, such as trout. Freshwater trout cannot survive in the ocean, which contains salt water. An ocean and a freshwater lake are very ^{different} similar habitats. The saguaro cactus's habitat is in the southwestern United States and northern Mexico. The saguaro cactus cannot survive in a tropical rain forest.

Fix the Error

1. Find and fix the error.

Habitats

Every organism on earth can survive in any habitat. For example, some species of freshwater fish, such as trout, have a river or lake for their habitat. Freshwater trout cannot live in the sea, because it contains salt water. An ocean and a lake are different habitats. Similarly, a desert in the southwestern United States and northern Mexico is the habitat of the saguaro cactus. The saguaro cactus cannot endure life in a tropical rain forest.

2. Find and fix the error.

Habitats

Different organisms live in different habitats because they have different needs. For example, some species of freshwater fish, such as trout, use a river or lake as their habitat. Freshwater trout can't survive in the salt water of the ocean. A lake and an ocean are very different habitats. The tropical rain forest in Costa Rica is the habitat of the saguaro cactus.

FOCUS ON DETAILS

Word Search Puzzle

To complete this word search puzzle, you'll need to remember or search for details in the reading. Look at the clues and circle the answers in the puzzle below. Check off each answer. Write the word on the line next to its clue. The first answer is done for you.

1. A gas that plants produce oxygen
2. A butterfly that travels from Canada and the United States to Mexico _____
3. One kind of fungus _____
4. A carnivore that eats dead organisms _____
5. The process plants use to make food _____
6. A freshwater fish _____
7. A gas that people and animals breathe out _____
8. The ocean food chain begins with it _____
9. A decomposer we can't see _____
10. A large herbivore with four legs that people can ride _____

S	O	A	Y	O	T	W	O	A	L	E	E	P	E	C
X	I	M	U	S	H	R	O	O	M	Q	S	H	D	A
B	Z	O	X	Y	G	E	N	J	R	Q	R	O	O	R
Q	A	N	S	X	Y	T	Y	U	W	B	N	T	E	B
S	C	A	V	E	N	G	E	R	O	H	S	O	G	O
S	T	R	O	U	T	N	V	J	H	O	R	S	E	N
I	L	C	G	E	E	N	K	B	V	A	Z	Y	D	D
B	R	H	R	V	R	U	Y	N	R	R	H	N	W	I
I	A	H	A	R	E	I	G	S	E	C	G	T	I	O
Y	E	C	C	D	J	O	A	N	O	H	J	H	P	X
F	S	A	T	L	N	Q	A	A	L	G	A	E	K	I
V	P	R	G	E	M	B	E	A	Q	L	O	S	Y	D
L	L	U	M	L	R	R	N	C	D	V	R	I	R	E
E	X	D	W	F	A	I	X	O	I	D	V	S	P	K
M	F	Y	Y	M	W	I	A	N	L	U	H	N	X	B

READ FOR FLUENCY

1. Silently read the text below. Make sure you understand the point that each sentence is making.
2. Underline the word or words in each sentence that are most important. When you read, you should say these underlined words with expression.
3. Look again at the punctuation in the paragraphs. Remember that when a sentence ends in a period, you should read the words as a statement and take a breath before beginning a new sentence. When you see a comma, you should pause briefly. When you see an exclamation mark, you should sound excited. When you see a question mark, you should read as though you are asking a question.
4. Now read the paragraphs below out loud. Pay attention to the important words and punctuation as you read.
5. Write down any words that slowed you down. Practice saying these words out loud.
6. Read the text below out loud two more times. You may want to ask a friend or family member to listen to you and tell you their reactions to your reading.

Food Chains

The movement of food through a community is called a food chain. A food chain always begins with producers—plants. In the ocean, a food chain begins with algae, which are very small plantlike organisms. Small fish eat the algae. Medium-size fish eat the small fish. Big fish eat the medium-size fish.

On land, a food chain is similar. It begins with a plant. A consumer, such as an insect, eats the plant. Then another consumer, such as a bat, eats the insect. Next, a bigger consumer, such as an owl, eats the bat. Finally, the owl dies, and decomposers break it down into nutrients.

Every part of the food chain is necessary to every other part. Without water, plants die. Without plants, animals cannot live.

UNIT
1

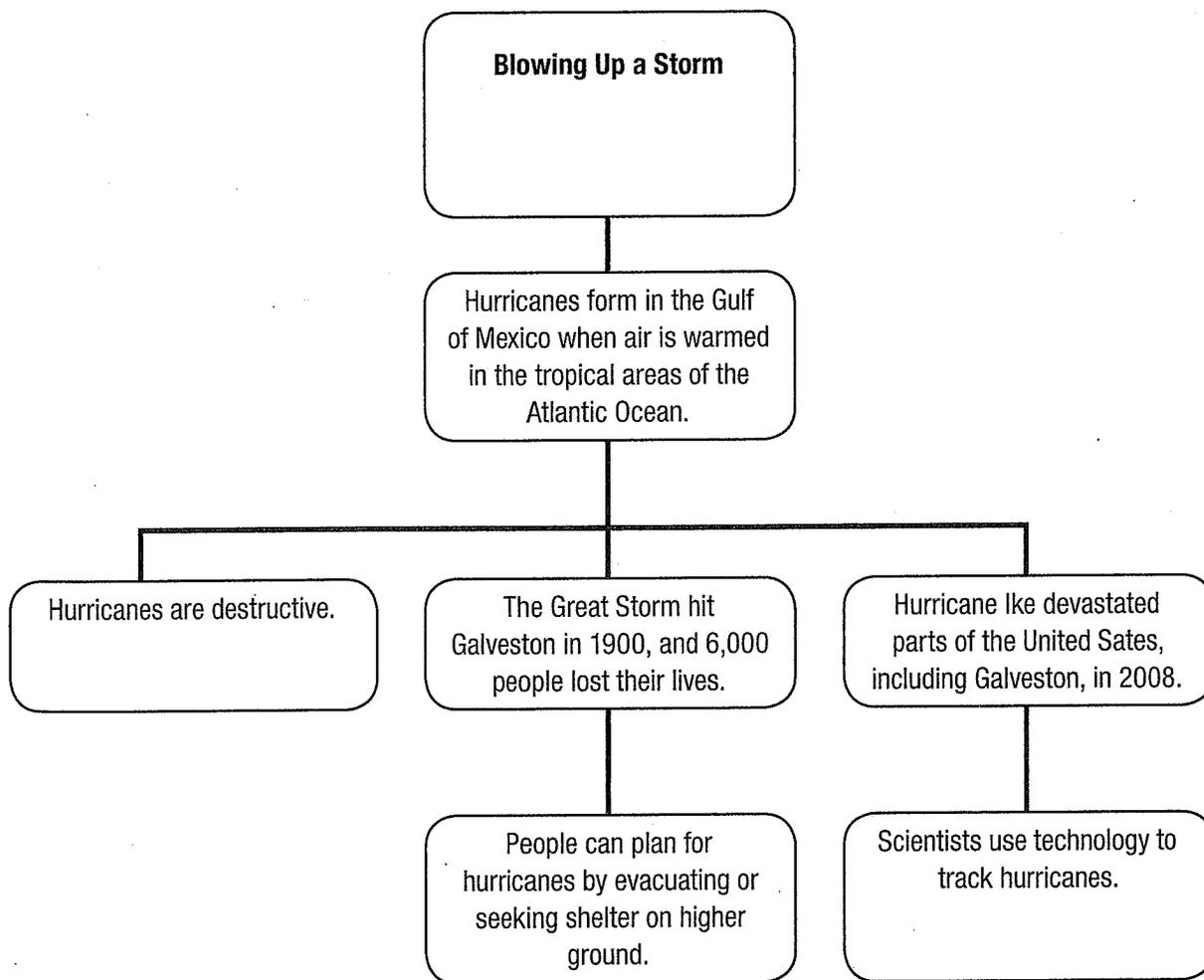
How does the natural world affect us?

READING 4: "Blowing Up a Storm"

SUMMARY Use with textbook pages 56–59.

Galveston is located on the Gulf Coast in Texas. Two major hurricanes have hit Galveston. The most devastating storm occurred in 1900. People were not prepared and more than 6,000 people died. Hurricane Ike is a major storm that hit in 2008. This time people were prepared. Because of advances in technology, people knew a hurricane was coming. There was still a lot of property damage, but people knew how to stay safe.

Visual Summary



Use What You Know

List three reasons why hurricanes are dangerous storms.

1. _____
2. _____
3. _____

Text Structure

A science article provides facts and information. Read the third paragraph on this page. Underline the facts that tell how hurricanes are formed. In your own words, write the most interesting fact you have just read.



Reading Strategy: Identify Main Idea and Details

The main idea is the most important message of the paragraph. Read the second paragraph. Underline the sentence that contains the main idea. Then list two details in the paragraph that support the main idea.



1. _____
2. _____

Blowing Up a Storm

Have you ever heard the name Ike? Besides being the name of a **popular** president, Ike is the name of a **destructive** hurricane that **devastated** parts of the United States in 2008. Just ask the people of Galveston, Texas, about Ike. They are no strangers to tropical storms and hurricanes. They know firsthand how strong these storms can be. And many people of Galveston say that Ike was one of the worst.

Galveston is a beautiful island on the Gulf Coast of Texas. With 32 miles of beaches, Galveston is a popular place for people to live. It is great for people who enjoy swimming as well as other water sports. Fishing and bird watching are also popular activities there.

The waters near Galveston are mostly calm, but storms do arise. The source of these storms is the tropical areas of the Atlantic Ocean. The storms grow by gathering energy from the warm ocean waters. As the air is warmed, it starts to move in a circular pattern. The wind **spirals** upward counterclockwise as its speed increases. The winds form a circular pattern around the “eye” of the storm.

popular, liked by many people
destructive, causes damage to people or things
devastated, destroyed
spirals, moves in a winding pattern around a central point

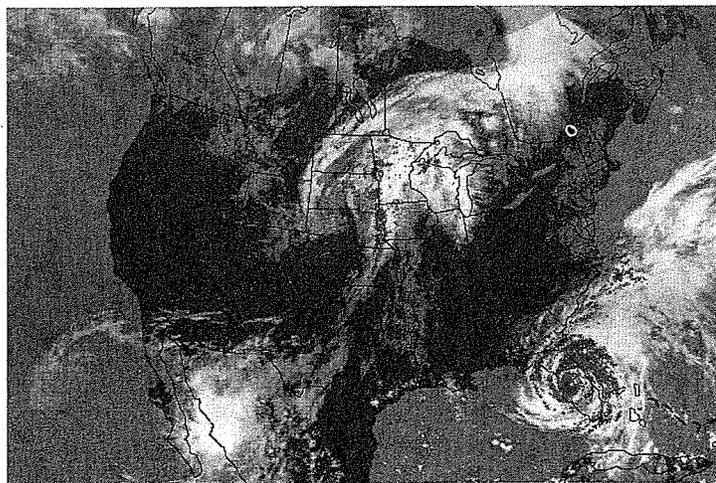
The center of a hurricane is called the “eye.” The eye is a calm area in the center of the storm. But don’t let the eye fool you. The storm that surrounds the eye is extremely violent. Remember, hurricanes can cause **tremendous** damage when they sweep over land.

One of the worst storms to strike Galveston occurred on September 8, 1900. This hurricane produced heavy rains and flooding. The wind swirled at speeds of over 130 miles per hour (209 km/h). As the storm reached land, its energy caused coastal waters to tear apart homes and buildings. More than 6,000 people lost their lives. Those who survived called this hurricane The Great Storm of 1900.

Today, the people of Galveston have their own hurricane **horror story**. In 2008, Hurricane Ike ravaged Galveston. It was one of the largest hurricanes to hit the Gulf Coast.

tremendous, very big, powerful or huge, large in degree or size

horror story, scary story



Comprehension Check

Underline what the first paragraph says about the center of a hurricane. What is the eye of a hurricane?



Text Structure

A science textbook often has highlighted words. Their definitions are at the bottom of the page. Circle a highlighted word on this page. Look at its definition. Reread the sentence in which it appears. Rewrite the sentence without using the word.



Comprehension Check

Underline the words in the second paragraph that explain why the hurricane on Sept. 8, 1900 is called “The Great Storm.” Why do you think the hurricane was called “The Great Storm”?



Reading Strategy: Identify Main Idea and Details

What is the main idea of the first paragraph? Underline the sentence that contains the main idea about the category of hurricanes. Write three details about the categories of hurricanes.



1. _____
2. _____
3. _____

Text Structure

A science article often defines key terms within the text and provides examples. Underline the words that define *evacuate*. List three examples of when people should evacuate.



1. _____
2. _____
3. _____

Comprehension Check

Underline the words that describe how people use technology to plan for a hurricane. In your own words, write how residents use technology during a severe storm.



The strength of a hurricane is measured and categorized. The categories range from one to five, with five having the fastest winds and causing the most damage. Ike began as a Category 5 hurricane. By the time it reached Galveston, it was a Category 2 hurricane. That's because a hurricane's rating can change over time as it gains or loses energy.

Science has yet to find a way to stop a hurricane. But residents of the Atlantic and Gulf coasts can plan for an attack. That's because scientists can use technology to spot and track hurricanes. As Hurricane Ike was moving, the National Weather Service used a type of weather radar to track the storm. This allowed them to predict the path the storm would take. Residents in the path of Hurricane Ike were warned to evacuate or seek shelter on higher ground. The evacuation was one of the largest in Texas history. Many people were able to leave the area unharmed.

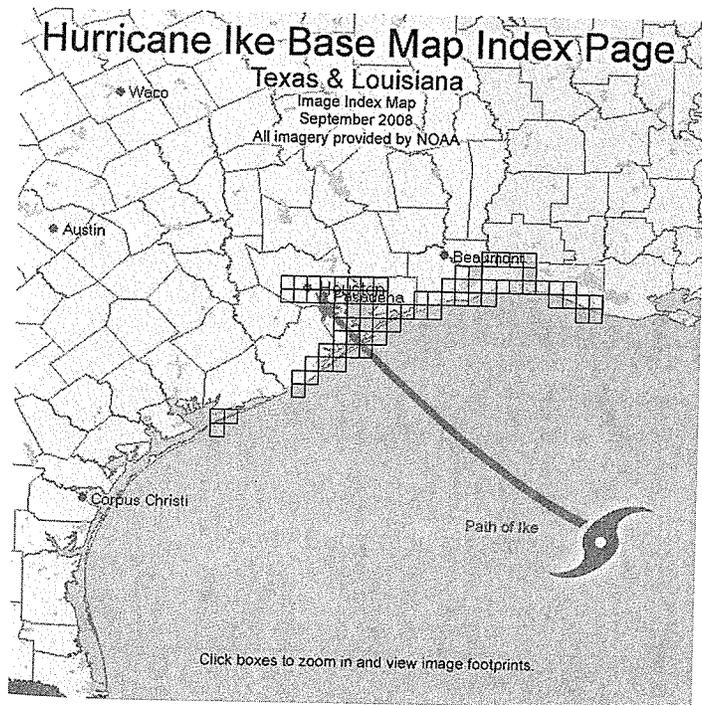
_____ category, a group of things that are all the same type
weather radar, storm tracking system

Choose one and complete:

1. Draw a poster listing each category of a hurricane and draw pictures to represent the danger of each category.
2. Research other hurricanes in history. Find out what areas were affected by the hurricane and what category the hurricane was when it struck land. Write a short report that shows what you learned.
3. Research what other kinds of storms the National Weather Service uses weather radar to track. Write a short report that shows what you learned.

Unfortunately, some people did not heed the warnings. They refused to evacuate their homes and leave Galveston. The Weather Bureau, the mayor, the governor, and even the president of the United States warned them of the danger if they did not leave. Sadly, many of those who stayed behind lost their lives.

Though we can protect ourselves from the forces of nature, we cannot control them. Hurricane Ike caused tremendous destruction. However, the people of Galveston have rebuilt their city. This shows that even though a hurricane destroys property, it does not destroy the spirit of the people who live in its path.



Comprehension Check

Underline the important point the paragraph makes about the need to evacuate during a hurricane. What can happen if people do not evacuate?



Text Structure

A science textbook often defines key terms within the text and provides examples. Underline the sentence that uses the term *evacuate*. What other word in the sentence is similar in meaning to *evacuate*?



Comprehension Check

Underline what the second paragraph says about the damage hurricanes cause. What can't a hurricane destroy?



READING WRAP-UP

Retell It!

Imagine you are a weather reporter. Explain how a hurricane has formed, where it has formed, and what the category is. Tell how you can track the hurricane. Explain what people should do before the hurricane arrives and tell what can happen if they do not take action. Be sure to use Hurricane Ike, Katrina, and The Great Storm to explain the importance of taking action.

Reader's Response

Hurricanes and other severe storms cause destruction. What are some ways you and your family can prepare for a severe storm or hurricane?

Think About the Skill

How did finding the main idea and details of some paragraphs help you better understand the article?

EDIT FOR MEANING

Read

You have read "Blowing Up a Storm." Now read one paragraph from it again.

Galveston is a beautiful island on the Gulf Coast of Texas. With 32 miles of beaches, Galveston is a popular place for people to live. It is great for people who enjoy swimming as well as other water sports. Fishing and bird watching are also popular activities there.



Comprehension Check

Underline what decomposers do. Why is it good for the ecosystem that decomposers break down plants and animals?



Text Structure

A paragraph contains a main idea. Circle the main idea in the second paragraph on this page. In your own words, explain the main idea of this paragraph.



Comprehension Check

Underline the two main kinds of decomposers. In what kinds of places does a fungus grow?



Some consumers are also decomposers. Decomposers break down dead plants and animals. The dead plants and animals are changed into nutrients, which go back into the soil. Producers—plants—consume these nutrients. Decomposers are very important in the ecosystem because plants need nutrients to grow.

The two main kinds of decomposers are bacteria and fungi. Bacteria are very small living things. We cannot see bacteria, but they live in soil, air, and water and on other organisms. A fungus is a plantlike organism without leaves that grows in dark, warm, wet places. Mushrooms are one kind of fungus.

