

DRAFT

For Review Purposes Only

These draft materials are intended to provide teachers with insight into the content and structure of the Listening & Learning strand of Core Knowledge Language Arts materials.

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The Core Knowledge Language Arts Program

Listening & Learning Strand



Tell It Again! Read-Aloud Anthology
Animals and Habitats



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The Core Knowledge Language Arts Program

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Introduction to Animals and Habitats



This introduction includes the necessary background information to be used in teaching the Animals and Habitats domain. The *Tell It Again! Read-Aloud Anthology* for Animals and Habitats contains fourteen daily lessons, each of which is composed of two distinct parts, so that the lesson may be divided into smaller chunks of time and presented at different intervals during the day. The entire lesson will require a total of sixty minutes.

We have included three Pausing Points in this domain, after Lessons 4, 10, and 14. You may wish to pause and spend one to two days reviewing, reinforcing, or extending the material taught prior to each Pausing Point. You should spend no more than twenty days total on this domain.

Along with this anthology, you will need:

- *Tell It Again! Media Disk* or the *Tell It Again! Flip Book* for Animals and Habitats
- *Tell It Again! Image Cards* for Animals and Habitats
- *Tell It Again! Workbook* for Animals and Habitats
- *Tell It Again! Posters* for Animals and Habitats

You will find the Instructional Objectives and Core Vocabulary for this domain below. The lessons that include Student Choice/ Domain-Related Trade Book Extensions, Image Cards, Parent Letters, Instructional Masters, and Assessments are also listed in the information below.

Why Animals and Habitats Are Important

This domain will introduce your students to the wonder of the natural world, focusing on the interconnectedness of all living things with one another and their physical environment. Students will learn what a habitat is, as well as learn to identify specific types of habitats and their related characteristics. They will learn

to recognize different plants and animals as being indigenous to specific habitats and will begin to develop an understanding of several fundamental principles of nature. They will learn, for example, that animals and plants typically live in those habitats to which they are best suited, often developing unique characteristics or features that enable them to specifically adapt to the climate and conditions of a given environment. They will also be introduced to simple classifications of animals according to the types of food they eat and the notion of a food chain.

Students will build in later grades upon the knowledge of habitats and animals that they gain by listening to and discussing the read-alouds in this domain; the concepts and factual information that they learn now will serve as the basis for later in-depth understanding of increasingly detailed and sophisticated biological taxonomies, the interdependence of all of nature and its fragile balance, as well as an appreciation of the role that human beings must assume to protect the world in which they live.

What Students Have Already Learned in Core Knowledge Language Arts during Kindergarten

The following kindergarten domains are particularly relevant to the read-alouds your students will hear in *Animals and Habitats*:

- Plants
- Farms
- Seasons and Weather
- Taking Care of the Earth

Listed below are the specific kindergarten content objectives that your students targeted in these domains. This background knowledge will greatly enhance your students' understanding of the read-alouds they are about to enjoy.

- Understand that there are many different kinds and sizes of plants
- Understand that different kinds of plants grow in different environments
- Understand that plants are living things
- Describe what plants need to live and grow: food, water, air, and sunlight
- Identify the root, stem, leaf, flower, and seed of a plant
- Explain that roots anchor the plant and take in water and nutrients
- Explain that stems support the plant and carry water and nutrients to the various parts of the plant
- Explain that the plant makes its food in the leaves
- Understand the basic life cycle of plants
- Compare and contrast deciduous and evergreen plants
- Identify needs of farm animals: food, water, and space to live and grow
- Match pictures and/or names of farm animal babies to their adult parents
- Describe how farm animal babies need to be fed and cared for by their parents or people
- Name the four seasons in cyclical order, as experienced in the United States, and correctly name a few characteristics of each season
- Characterize winter as generally the coldest season, summer as generally the warmest season, and spring and autumn as more temperate, transitional seasons
- Describe any unique seasonal differences that are characteristic of their own locality (change of color and dropping of leaves in autumn; snow or ice in winter; increased rain and/or flooding in spring, etc.)

- Describe daily weather conditions of their own locality in terms of temperature (hot, warm, cool, cold); cloud cover (sunny, cloudy); and precipitation (rain, snow, or sleet)
- Characterize the North and South Poles as always cold in temperature, the middle section of the earth as usually warm, and the United States as having four seasons
- Understand that Earth is composed of land, water, and air
- Identify examples of land, water, and air from their own environments
- Understand that humans, plants, and animals depend on Earth’s land, water, and air to live
- Understand that humans generate large amounts of garbage, which must be disposed of
- Sequence what happens to garbage from its creation to being dumped in the landfill
- Understand that natural resources are things found in nature that are valuable and of great importance to people
- Recognize the phrase “Reduce, reuse, recycle!” and explain how doing these three things can help to conserve natural resources
- Understand that land, air, and water all suffer from different types of pollution, and all types of pollution are caused by human activities
- Identify sources of air pollution, including cars and electricity produced by coal-fired power plants
- Compare and contrast fresh water, salt water, and waste water
- Understand that many living things, including humans, need fresh water to survive, and that there is a limited supply of fresh water on Earth
- Identify sources of water pollution, including factory waste and garbage

Instructional Objectives for Animals and Habitats

The following chart contains all of the Core Content Objectives and Language Arts Objectives for this domain, broken down by lesson.

Animals and Habitats Overview														
Objectives	Lessons													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Core Content														
Describe what a habitat is	✓	✓	✓	✓										
Understand that living things live in habitats to which they are particularly suited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Identify the characteristics of the Arctic tundra habitat		✓												
Explain how Arctic animals have adapted to the Arctic tundra habitat		✓												
Identify the characteristics of the Arctic Ocean habitat			✓											
Explain how Arctic animals have adapted to the Arctic Ocean habitat			✓											
Identify the characteristics of the desert habitat				✓										
Explain how desert animals have adapted to the desert habitat				✓										
Identify the characteristics of the grassland habitat					✓	✓								
Explain how grassland animals have adapted to the grassland habitat						✓								
Match specific plants and animals to their habitats						✓								
Identify the characteristics of the temperate deciduous forest habitat							✓	✓						
Explain how temperate deciduous forest animals have adapted to the temperate deciduous forest habitat								✓						
Identify the characteristics of the tropical rainforest habitat									✓	✓				
Explain how tropical rainforest animals have adapted to the tropical rainforest habitat										✓				
Classify water habitats as either freshwater or saltwater habitats											✓	✓		
Identify the characteristics of the freshwater habitat											✓			
Classify animals on the basis of the types of food they eat (herbivore, carnivore, omnivore)				✓		✓		✓		✓	✓		✓	

Animals and Habitats Overview

Objectives	Lessons													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Core Content														
Describe the landscape of the ocean floor												✓		
Understand that ocean life is very diverse												✓	✓	
Match saltwater plants and animals to the saltwater habitat													✓	
Understand that saltwater covers most of Earth and is found in several oceans												✓		
Identify and locate the oceans of the world on a globe: Arctic, Pacific, Atlantic, Indian, Southern												✓		
Identify the characteristics of the bald eagles' habitat														✓
Understand why and how habitat destruction can cause extinction														✓
Language Arts														
Use agreed-upon rules for group discussions . . . (L.1.1)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ask questions to clarify . . . classroom routines (L.1.2)				✓		✓		✓		✓		✓		✓
Carry on and participate in a conversation . . . (L.1.3)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Give simple directions (L.1.6)				✓										
Learn common sayings and phrases such as "A fish out of water" (L.1.9)											✓			
Prior to listening to a read-aloud, identify what they know and have learned that may be related . . . (L.1.10)		✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓
Listen to and understand a variety of texts . . . (L.1.11)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Make predictions prior to and during a read-aloud . . . (L.1.12)				✓		✓							✓	✓
Describe illustrations (L.1.13)	✓	✓	✓										✓	
Use pictures accompanying the read-aloud to check and support understanding . . . (L.1.14)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Learn new words from read-alouds and discussions (L.1.15)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Learn synonyms and antonyms (L.1.16)												✓		
Answer questions (orally or in writing) requiring literal recall and understanding of the details and/or facts of a read-aloud . . . (L.1.17)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ask questions to clarify information or the topic in a read-aloud . . . (L.1.18)		✓		✓				✓		✓				✓
Answer questions (orally or in writing) that require making interpretations, judgments, or giving opinions . . . (L.1.20)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Animals and Habitats Overview

Objectives	Lessons													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Language Arts														
Compare and contrast (orally or in writing) similarities and differences . . . (L.1.21)	✓			✓	✓	✓	✓							
Make personal connections . . . (L.1.22)	✓	✓				✓							✓	✓
Draw pictures, dictate, or write simple sentences to represent details or information from a read-aloud (L.1.24)			✓					✓			✓			
Evaluate and select read-alouds, books, or poems on the basis of personal choice for rereading (L.1.27)							✓		✓			✓		
Share writing with others (L.1.29)			✓					✓						
Create, tell, and/or draw and write an original story with characters . . . (L.1.34)										✓				
Retell (orally or in writing) important facts and information from a read-aloud (L.1.36)		✓												
With assistance, categorize and organize facts and information within a . . . (L.1.38)				✓		✓		✓			✓			✓

Core Vocabulary for Animals and Habitats

The following list contains all of the boldfaced words in *Animals and Habitats* in the forms in which they appear in the text. The inclusion of the words on this list *does not* mean that students are expected to immediately be able to use all of these words on their own. However, through repeated exposure to these words, they should acquire a good understanding of most of these words and begin to use some of them in conversation.

Lesson 1

habitat
living
shelter
survive

Lesson 2

adapted
Arctic
exposed
scavenger
tundra

Lesson 3

blubber
burrow
flippers
tusks

Lesson 4

camouflage
carnivore
herbivores
nocturnal
omnivore

Lesson 5

grassland
hardy
prickly
savanna

Lesson 6

coexist
explore
food chain
predators
prey
trunk

Lesson 7

broadleaf
climate
deciduous
species
temperate

Lesson 8

antlers
claws
hibernate
store
territory

Lesson 9

canopy
dense
evergreen
humid
tropical rainforest

Lesson 10

colonies
jaws
patterns
pouncing
stalk

Lesson 11

amphibious
float
freshwater
gills

Lesson 12

coastline
saltwater
shallow
slopes
valleys

Lesson 13

blowholes
plankton
regeneration
shellfish

Lesson 14

destroy
endanger
endangered species
extinction

Student Choice and Domain-Related Trade Book Extensions

In the *Tell It Again! Read-Aloud Anthology* for Animals and Habitats, Student Choice activities are suggested in the Pausing Points and in Lessons 7 and 12. Domain-Related Trade Book activities are suggested in the Pausing Points and in Lessons 5, 9, and 12. A list of recommended titles is included at the end of this introduction, or you may select another title of your choice.

Animals and Habitats Image Cards

There are twenty-six Image Cards for Animals and Habitats. The Image Cards can be used to show examples of the animals and plants found in each habitat the students will study. These may also be used in conjunction with the Habitat Posters to allow students to match each animal or plant to the correct habitat. In the *Tell It Again! Read-Aloud Anthology* for Animals and Habitats, Image Cards are referenced in the Pausing Points and in Lessons 2, 3, 6, 8, and 13.

Animals and Habitats Posters

There are seven posters for Animals and Habitats. The Habitat Posters can be used to review with students the characteristics of each habitat and to discuss what animals and plants that live in a specific habitat have to adapt to in order to survive. Habitat Posters are referenced in the Pausing Points and in Lessons 3, 6, 8, and 13.

Instructional Masters and Parent Take-Home Letters

Blackline Instructional Masters and Parent Take-Home Letters are included in the *Tell It Again! Workbook*.

In the *Tell It Again! Read-Aloud Anthology* for Animals and Habitats, Instructional Masters are referenced in the Domain Assessment and in Lessons 4B and 6B. The Parent Letters are referenced in Lessons 1B and 7B.

Assessments

In the *Tell It Again! Read-Aloud Anthology* for Animals and Habitats, Instructional Masters 6B-1 and DA-1 are used for this purpose. Use the following Tens Conversion Chart to convert a raw score on each assessment into a Tens score.

Tens Conversion Chart

		Number Correct																																			
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30					
Number of Questions	1	0	10																																		
	2	0	5	10																																	
	3	0	3	7	10																																
	4	0	3	5	8	10																															
	5	0	2	4	6	8	10																														
	6	0	2	3	5	7	8	10																													
	7	0	1	3	4	6	7	9	10																												
	8	0	1	3	4	5	6	8	9	10																											
	9	0	1	2	3	4	6	7	8	9	10																										
	10	0	1	2	3	4	5	6	7	8	9	10																									
	11	0	1	2	3	4	5	5	6	7	8	9	10																								
	12	0	1	2	3	3	4	5	6	7	8	8	9	10																							
	13	0	1	2	2	3	4	5	5	6	7	8	8	9	10																						
	14	0	1	1	2	3	4	4	5	6	6	7	8	9	9	10																					
	15	0	1	1	2	3	3	4	5	5	6	7	7	8	9	9	10																				
	16	0	1	1	2	3	3	4	4	5	6	6	7	8	8	9	9	10																			
	17	0	1	1	2	2	3	4	4	5	5	6	6	7	8	8	9	9	10																		
	18	0	1	1	2	2	3	3	4	4	5	6	6	7	7	8	8	9	9	10																	
	19	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10																
	20	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10															
	21	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10														
	22	0	0	1	1	2	2	3	3	4	4	5	5	5	6	6	7	7	8	8	9	9	10	10													
	23	0	0	1	1	2	2	3	3	3	4	4	5	5	6	6	7	7	7	8	8	9	9	10	10												
	24	0	0	1	1	2	2	3	3	3	4	4	4	5	5	5	6	6	7	7	8	8	8	9	9	10	10										
	25	0	0	1	1	2	2	2	3	3	4	4	4	5	5	6	6	6	7	7	8	8	8	9	9	10	10										
	26	0	0	1	1	2	2	2	3	3	3	4	4	4	5	5	5	6	6	7	7	7	8	8	8	9	9	10	10								
	27	0	0	1	1	1	2	2	3	3	3	4	4	4	5	5	6	6	6	7	7	7	8	8	9	9	9	10	10								
	28	0	0	1	1	1	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	8	8	8	9	9	9	10	10							
	29	0	0	1	1	1	2	2	2	3	3	3	4	4	4	5	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10						
	30	0	0	1	1	1	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10					

Simply find the number of correct answers the student produced along the top of the chart, and locate the number of total questions on the worksheet or activity along the left side. Then find the cell where the column and the row converge. This indicates the Tens score. By using the *Tens Conversion Chart*, you can easily convert any raw score, from 0 to 30, into a Tens score. You may choose to use the Tens Recording Chart which is at the end of the appendix.

Recommended Trade Books for Animals and Habitats

If you recommend that parents read aloud with their child each night, you may wish to suggest that they choose titles from this trade book list to reinforce the domain concepts.

1. *About Birds: A Guide for Children*, by Cathryn Sill and illustrated by John Sill (Peachtree Publishers, 1997) ISBN 1561451479
2. *Afternoon on the Amazon (Magic Tree House, No. 6)*, by Mary Pope Osborne and Sal Murdocca (Random House Books for Young Readers, 1995) ISBN 0375823778
3. *Animal Homes (Luxury Lift the Flap Learners)*, by Debbie Martin, Jane Rigby, and Alan Baker (Usborne Books, 2004) ISBN 0794507158
4. *Buffalo Before Breakfast (Magic Tree House, No. 18)*, by Mary Pope Osborne and Sal Murdocca (Random House, 1999) ISBN 0679890645
5. *Cactus Hotel (An Owlet Book)*, by Brenda Z. Guiberson and Megan Lloyd (Henry Holt and Company, 1993) ISBN 0805029605
6. *Dark Day in the Deep Sea (Magic Tree House, No. 40)*, by Mary Pope Osborne and Sal Murdocca (Random House Books for Young Readers, 2009) ISBN 0375837329
7. *The Desert Giant (Tree Tales)*, by Barbara Bash (Sierra Club Books for Children, 2002) ISBN 1578050855
8. *Dingoes at Dinnertime (Magic Tree House, No. 20)*, by Mary Pope Osborne and Sal Murdocca (Random House Books for Young Readers, 2000) ISBN 0679890661
9. *Dolphins and Sharks: A Magic Tree House Research Guide*, by Mary Pope Osborne, Natalie Pope Boyce, and Sal Murdocca (Random House Books for Young Readers, 2003) ISBN 0375823778
10. *Dolphins at Daybreak (Magic Tree House, No. 9)*, by Mary Pope Osborne and Sal Murdocca (Random House Books for Young Readers, 1997) ISBN 067988338X

11. *Eve of the Emperor Penguin (Magic Tree House, No. 40)*, by Mary Pope Osborne and Sal Murdocca (Random House Books for Young Readers, 2008) ISBN 0375837337
12. *Good Morning, Gorillas (Magic Tree House, No. 26)*, by Mary Pope Osborne and Sal Murdocca (Random House Books for Young Readers, 2002) ISBN 0375806148
13. *The Great Kapok Tree: A Tale of the Amazon Rainforest*, by Lynne Cherry (Voyager Books, 2000) ISBN 0152026142
14. *Here Is the African Savanna (Web of Life)*, by Madeleine Dunphy and Tom Leonard (Web of Life Children's Books, 2006) ISBN 0977379523
15. *Here Is the Arctic Winter (Web of Life)*, by Madeleine Dunphy and Alan James Robinson (Web of Life Children's Books, 2007) ISBN 0977753913
16. *Here Is the Coral Reef (Web of Life)*, by Madeleine Dunphy and Tom Leonard (Web of Life Children's Book, 2006) ISBN 097737954X
17. *How to Hide an Octopus and Other Sea Creatures (All Aboard Book)*, by Ruth Heller (Grosset and Dunlap, 1992) ISBN 0448404788
18. *Life in a Pond (Pebble Plus: Living in a Biome)*, by Carol K. Lindeen (Capstone Press, 2003) ISBN 0736834028
19. *Life in a Wetland (Living in a Biome)*, by Carol K. Lindeen (Capstone Press, 2006) ISBN 0736834052
20. *Lions at Lunchtime (Magic Tree House, No. 11)*, by Mary Pope Osborne and Sal Murdocca (Random House Books for Young Readers, 1998) ISBN 0679883401
21. *Oil Spill! (Soar to Success)*, by Melvin Berger and illustrated by Paul Mirocha (Houghton Mifflin Company, 2006) ISBN 0395779138
22. *Penguins and Antarctica (Magic Tree House Research Guides)*, by Mary Pope Osborne, Natalie Pope Boyce, and Sal Murdocca (Random House Books for Young Readers, 2008) ISBN 0375846646

23. *Polar Bears and the Arctic (Magic Tree House Research Guide)*, by Mary Pope Osborne and Natalie Pope Boyce (A Stepping Stone Book, 2007) ISBN 0375832222
24. *Polar Bears Past Bedtime (Magic Tree House, No. 12)*, by Mary Pope Osborne and Sal Murdocca (Random House Books for Young Readers, 1998) ISBN 067988341X
25. *Rain Forests (Magic Tree House Research Guide)*, by Will Osborne and Mary Pope Osborne (A Stepping Stone Book, 2001) ISBN 0375813551
26. *Sea Monsters: A Nonfiction Companion to Dark Day in the Deep Sea*, by Mary Pope Osborne, Natalie Pope Boyce, and Sal Murdocca (Random House Books for Young Readers, 2008) ISBN 0375846638
27. *Snakes Are Hunters (Let's-Read-and-Find-Out Science, Stage 2)*, by Patrica Lauber and Holly Keller (HarperTrophy, 1989) ISBN 0064450910
28. *Starfish (Let's-Read-and-Find-Out-Science)*, by Edith Thacher Hurd and illustrated by Robin Brickman (HarperTrophy, 2000) ISBN 0064451984
29. *Tigers at Twilight (Magic Tree House, No. 19)*, by Mary Pope Osborne and Sal Murdocca (Random House Books for Young Readers, 1999) ISBN 0679890653
30. *Who Eats What? Food Chains and Food Webs (Let's-Read-and-Find-Out-Science, Stage 2)*, by Patrica Lauber and Holly Keller (HarperTrophy, 1994) ISBN 0064451305

1

What is a Habitat?



Lesson Objectives

Core Content Objectives

Students will:

- Describe what a habitat is
- Understand that living things live in habitats to which they are particularly suited

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say “excuse me” or “please,” etc. (L.1.1)
- Carry on and participate in a conversation over at least six turns, staying on topic, initiating comments or responding to a partner’s comments, with either an adult or another child of the same age (L.1.3)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.1.11)
- Describe illustrations (orally or in writing) (L.1.13)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.1.14)
- Learn new words from read-alouds and discussions (L.1.15)
- Answer questions (orally or in writing) requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.1.17)

- Answer questions (orally or in writing) that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering “why” questions that require recognizing cause/effect relationships (L.1.20)
- Compare and contrast (orally or in writing) similarities and differences within a single read-aloud or between two or more read-alouds (L.1.21)
- Make personal connections (orally or in writing) to events or experiences in a read-aloud, and/or make connections among several read-alouds (L.1.22)

Core Vocabulary

habitat, n. The place where an animal or plant normally lives and grows
Example: The forest is a deer’s natural habitat.

Variation(s): habitats

living, adj. Being alive; having life

Example: Animals are living things that need food and water.

Variation(s): none

shelter, n. Something that protects from weather or danger

Example: During the thunderstorm, we sat in the car for shelter so we wouldn’t get wet.

Variation(s): shelters

survive, v. To remain alive

Example: Humans need food and water to survive.

Variation(s): survives, survived, surviving

<i>At a Glance</i>	Exercise	Materials	Minutes
Introducing the Read-Aloud	Essential Background Information or Terms		10
	Domain Introduction		
	Purpose for Listening		
Presenting the Read-Aloud	What is a Habitat?		15
Discussing the Read-Aloud	Comprehension Questions		10
	Word Work: Shelter		5
 Complete Remainder of the Lesson Later in the Day			
Extensions	Safari	chart paper, chalkboard, or whiteboard	20
Take-Home Material	Parent Letter	Instructional Master 1B-1	

1A

What is a Habitat?



Introducing the Read-Aloud

10 minutes

Essential Background Information or Terms

Tell students that you want them to think about some things that are living and nonliving. How do they know if something is living or nonliving?

Explain to students that all living things need food and water. People, plants, and animals are all living things because they all need food and water to stay alive. Most living things also grow and change during their lives and do not always look exactly the same. Living things can also reproduce, or make new living things that look like them.

Have students name things that are living, and then have them name things that are nonliving. Be sure to reinforce the fact that nonliving things do not need food or water because they are not alive. Explain to students that you are going to read a list of things—some that are living and some that are not. If what you name is alive, the students should say, “living.” If what you name is not alive, the students should say, “nonliving.”

- dog (living)
- tree (living)
- rock (nonliving)
- cat (living)
- chalkboard (nonliving)

Domain Introduction



Explain to students that living things generally live in a place that is just right for them. Tell students that over the next several weeks they will learn about many animals and plants and the places where they live.

← **Show image 1A-1: Rattenborough the explorer**

Explain to students that an explorer rat named Rattenborough will introduce them to many different animals and plants and the places where they live. Point to Rattenborough in the picture.

Purpose for Listening

Tell students to listen to find out more about why plants and animals live where they do.



What is a Habitat?

← Show image 1A-1: Rattenborough the explorer

Greetings, fellow adventurers. You are here to learn something new and, believe it or not, I'm here to teach it to you. I know you may be wondering what you could possibly learn from a rat climbing out of a dumpster, but I am Rattenborough, the famous rat adventurer.

I travel the world looking at plants and animals and all the different places they call home. I'm going to take you on a special adventure all around the world. We're going to learn about some amazing and incredible places and animals. And we're going to start our exciting journey right here! I know, I know—it doesn't look like much, but it's special to me, and it has everything I need.



← Show image 1A-2: Alleyway

Welcome to my home. This is the alleyway where I live. Take a look around. What do you see? ¹ There are trash cans; litter; boxes; drains and dripping pipes; old buildings and gutters. It's a perfect home for a rat. It has everything I need to live.

All **living** things need food and water to **survive**. ² Animals, like me, also need **shelter**. ³ So, animals need food, water, and shelter to stay alive. My food comes from these trash cans and the litter on the street; my water comes from the gutters, drains, and pipes; and my family and I have a shelter down under some steps nearby. All of these things make up my **habitat**. A habitat is a place where an animal or plant lives that has food, water, and shelter.

What were those three things again? ⁴ If a place lacks any of these three things, then it's not a good habitat.

Animals and plants usually live in habitats that are just right for them. Just as people can't live underwater or in the air, plants and animals can't all live in the same sorts of places. You don't hear about elephants living near the North Pole on all that ice, and

1 (Allow students to name what they see in the picture.)

2 *Survive* means to continue living or to stay alive.

3 A shelter is something that protects from the weather or from danger. A house or an apartment can be a shelter; a tree can also be a shelter.

4 (Give students a moment to reply, naming food, water, and shelter.)

you definitely don't hear about polar bears living in the desert! Pumpkins don't grow in the sea, and fish don't live in trees (at least none that I've ever seen).



← **Show image 1A-3: Friendly climate for rats**

I can tell you first-hand that rats can't live just anywhere in the world. I don't like the weather to be too cold, and I need to live in a place where food is easy to find! That's why I like my cozy little shelter under the steps: it is warm enough for my family and me, there is always plenty of water, and there is always a good supply of food in the trash.



← **Show image 1A-4: Park**

5 Do you have a park in your neighborhood? What kinds of plants live in the park habitat in your neighborhood?

How about we have a look around? You might have a park like this somewhere near your neighborhood. People like to spend time playing and relaxing in this park. But it's a habitat for many other things too! The grass, trees, flowers, and bushes in this park need food and water to live.⁵



← **Show image 1A-5: Park animals**

6 Where do you think these animals might find food, water, and shelter in the park habitat?

The animals that live in the park share it as a habitat. That includes the pigeons that fly around looking for crumbs to eat; the squirrels, owls, and chipmunks that live in those trees; the bees, fireflies, and mosquitoes buzzing about; the raccoons and opossums that come out at night; and even the frogs and fish in the pond nearby.⁶



← **Show image 1A-6: Arctic landscape**⁷

7 What do you see in this picture?

This is a picture of a place called the Arctic. Do you think you could live easily in the Arctic with its very cold temperatures and snow-covered ground? Not many things can live there, but later I'm going to show you some incredible plants and animals that do live in the Arctic.

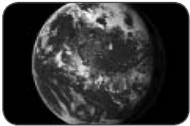


← **Show image 1A-7: Several places where people have made habitats**⁸

8 What do you see in this picture?

Most animals have to live in habitats that are specific to them. But you human beings are very clever: You can build habitats for yourselves! If you want to live in the desert, where there isn't much

water to grow food with or to drink, you can build a pipeline to bring you water for watering crops or drinking. You can have food transported to the desert by road or rail since it would be difficult to grow food in the desert, and you can build houses for shelter so you don't have to sleep in the sand. In fact, people like you have been able to live in some really unfriendly places.



← **Show image 1A-8: Earth**

We're going on an adventure that will take us all over our amazing planet Earth. Over the next several weeks, I'm going to show you some fascinating animal and plant habitats that might be quite different from yours. You'll see some wonderful and unusual places where things can live.



← **Show image 1A-9: Rattenborough packing his gear**

I can't wait to show you all these interesting places, but first I have a lot to pack. Since we're going all over the world I'm going to need a backpack full of gear. So hold on to your whiskers . . . I mean hats, and get ready for a marvelous adventure!

Discussing the Read-Aloud

15 minutes

Comprehension Questions

(10 minutes)

If students have difficulty responding to questions, reread pertinent passages of the read-aloud and/or refer to specific images. If students give one-word answers and/or fail to use read-aloud or domain vocabulary in their responses, acknowledge correct responses by expanding the students' responses using richer and more complex language. It is highly recommended that you ask students to answer in complete sentences by asking them to restate the question in their responses.

1. What is a habitat? (a place that has food, water, and shelter for a living thing)
2. Describe Rattenborough's habitat. (lives under steps in an alley; gets food from the trash cans, water from the drains and pipes)

3. Would Rattenborough be able to live in his habitat without food, water, or shelter? Why or why not? (No, he needs food, water, and shelter to survive since he is a living thing.)
4. Why can't all plants and animals live in every place on earth? (They have to live in a place that provides the kind of food, water, and shelter that they need to stay alive. Animals and plants live in a place that is just right for them.)
5. Describe your habitat. Where do you find food, water, and shelter in your habitat? (Answers may vary.)

I am going to ask a question. I will give you a minute to think about the question, and then I will ask you to turn to your neighbor and discuss the question. Finally, I will call on several of you to share what you discussed with your partner.

6. *Think Pair Share:* Compare your habitat with Rattenborough's habitat. Think about food, water, and shelter. How is your habitat the same and/or different? (Answers may vary.)

Word Work: Shelter

(5 minutes)

1. In the read-aloud today, we heard that animals need food, water, and *shelter* to live.
2. Say the word *shelter* with me.
3. A shelter is something that protects you from the weather or from danger.
4. The two friends used the tree as a shelter when it began to rain.
5. What other kinds of things could you use as a shelter? Try to use the word *shelter* when you talk about it. (Ask two or three students. If necessary, guide and/or rephrase the students' responses: "A ____ could be used as a shelter.")
6. What's the word we've been talking about?

Use a *Making Choices* activity as a follow-up. Directions: Tell students that you are going to name a few items and they should decide if it could be a shelter or not. If they think it could be a shelter, they should say, "That's a shelter!" If they don't think it could be a shelter, they should say, "That's not a shelter!"

1. a house (That's a shelter!)
2. a pencil (That's not a shelter!)
3. school (That's a shelter!)
4. a tree (That's a shelter!)
5. a chair (That's not a shelter!)



Complete Remainder of the Lesson Later in the Day

1B

What is a Habitat?



Extensions

20 minutes

Safari

Hold a supervised local “safari.” Point out animals and plants living in the habitat surrounding your school. Places to look include holes and cracks in pavement, along fences and walls, and around buildings. Compare and contrast all the different types of plants you see, including trees, weeds, grasses, flowers, bushes, etc. Have students identify things that animals might eat and things that might be shelters for animals.

Back in the classroom, have each student make a list on a T-Chart using pictures of or words for what they observed, labeling the chart “Food” on one side and “Shelter” on the other side. Talk with students about what they discovered. Record their observations on a class list on the board or on chart paper. Ask students if they think the area around their school is a good habitat for animals. Which animals? Why or why not?

If the weather is not conducive for a safari, you should use the extension from Lesson 5, Domain-Related Trade Book, as a substitute. You may wish to hold the safari on a later date with more favorable weather.

Parent Letter

Send home Instructional Master 1B-1.

2

The Arctic Tundra



Lesson Objectives

Core Content Objectives

Students will:

- Describe what a habitat is
- Understand that living things live in habitats to which they are particularly suited
- Identify the characteristics of the Arctic tundra habitat
- Explain how Arctic animals have adapted to the Arctic tundra habitat

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say “excuse me” or “please,” etc. (L.1.1)
- Carry on and participate in a conversation over at least six turns, staying on topic, initiating comments or responding to a partner’s comments, with either an adult or another child of the same age (L.1.3)
- Prior to listening to a read-aloud, identify (orally or in writing) what they know and have learned that may be related to the specific story or topic to be read aloud (L.1.10)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.1.11)
- Describe illustrations (orally or in writing) (L.1.13)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.1.14)

- Learn new words from read-alouds and discussions (L.1.15)
- Answer questions (orally or in writing) requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.1.17)
- Ask questions to clarify information or the topic in a read-aloud (L.1.18)
- Answer questions (orally or in writing) that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering “why” questions that require recognizing cause/effect relationships (L.1.20)
- Make personal connections (orally or in writing) to events or experiences in a read-aloud, and/or make connections among several read-alouds (L.1.22)
- Retell (orally or in writing) important facts and information from a read-aloud (L.1.36)

Core Vocabulary

adapted, v. Changed to suit a special purpose or situation; adjusted

Example: Over the years, animals in the Arctic have adapted to the cold.

Variation(s): adapt, adapts, adapting

Arctic, n. A region between the North Pole and the tip of North America and Asia

Example: The Arctic is a very cold place near the North Pole.

Variation(s): none

exposed, v. Unprotected; out in the open with no covering

Example: His bike, which he stored outside, became rusty because it was exposed to the rain.

Variation(s): expose, exposes, exposing

scavenger, n. An animal that eats meat and waste left by other animals

Example: That rat is quite a scavenger; it ate all the leftovers in the alley.

Variation(s): scavengers

tundra, n. A treeless area, or an area without trees, in a specific part of the Arctic

Example: Plants in the tundra do not grow very tall, because it is very cold there.

Variations: none

<i>At a Glance</i>	Exercise	Materials	Minutes
<i>Introducing the Read-Aloud</i>	What Have We Already Learned?		10
	Where Are We?		
	Purpose for Listening		
<i>Presenting the Read-Aloud</i>	The Arctic Tundra		15
<i>Discussing the Read-Aloud</i>	Comprehension Questions		10
	Word Work: Exposed		5
 Complete Remainder of the Lesson Later in the Day			
<i>Extensions</i>	What Am I?	Image Cards 1–3	20

2A

The Arctic Tundra



Introducing the Read-Aloud

10 minutes

What Have We Already Learned?

Ask students if they remember what the word *habitat* means. If students have trouble remembering, remind them that a habitat is a place that has food, water, and shelter for a living thing, such as an animal or plant. Ask students to describe what they remember about Rattenborough's habitat.



Where Are We?

← **Show image 2A-1: Map of the world with the North Pole highlighted**

Explain to the students that today they will be learning about a place called the Arctic. Point to the Arctic. Explain to the students that the Arctic is the region around the North Pole, which is not part of any continent. Ask students if they have ever heard of the Arctic. Have students share what they may already know about the Arctic.

Purpose for Listening

Explain to students that today they will hear about some plants and animals that live in the Arctic tundra. Explain that the tundra is the type of habitat found in the Arctic region. Tell students to listen carefully to find out which plants and animals live in the Arctic tundra and how they survive.



The Arctic Tundra

← Show image 2A-2: Rattenborough in Arctic

Hello again, Rattenborough the adventurer here to take you on a tour of one of the coldest habitats on earth: the **Arctic tundra**. In the tundra, there aren't very many plants. In fact, there are no trees at all.

Right now I'm standing in the Arctic tundra. The Arctic tundra is cold—very, very cold—so cold that even a rat like me has to wear long johns and mittens.



← Show image 2A-3: View of Arctic¹

1 What do you see in this image?

The wind here is incredibly strong, which makes the air feel even colder.

The ground is frozen and nearly everything is covered in ice. In the winter, daylight lasts only a few hours, and at times the sun does not come out at all. Some ice will still be here in the summer, but in the summer, the top layer of ice melts so that the ground gets wet and muddy. The temperatures here are so low that most people and animals would freeze. All of these things make the Arctic tundra one of the least friendly habitats for plants and animals.



← Show image 2A-4: Arctic plants

Some plants and animals can only live in the Arctic tundra in the summer months when the temperature is warmer, but some are able to live there all year long. Arctic plants grow very close together and do not grow very tall. By growing closer together and being low to the ground, the plants can keep from being blown away by the Arctic winds. The kinds of plants that can live in the Arctic tundra are mosses and different types of grasses. For once, I'm one of the tallest things around!



← **Show image 2A-5: Muskox**

The animals that call the Arctic tundra habitat home all year round have **adapted** to the harsh conditions. When an animal has adapted to a habitat, that means it has changed over the years and now has special things that help it live in that habitat. For example, animals in the Arctic often have heavy fur coats that help them stay warm in the cold temperatures. Growing long, heavy fur is the way those animals have adapted to the cold.² This creature is called a muskox. It is adapted to the Arctic in several ways. The muskox's long shaggy coat has an extra layer of hair underneath that keeps him warm when the temperature is cold enough to turn a rat into a Popsicle. The muskox sheds its extra coat of hair in the warmer summer months.

2 What do you do to adapt when the weather outside is cold?

Muskoxen travel in herds so that they can huddle together for added warmth. They also have hooves specially adapted to this habitat.³ Their hooves are very wide to keep them from slipping on the snow and ice, and in the winter muskoxen use their sharp hooves to dig under the snow to find plants to eat.

3 Hooves are at the bottom of some animals' feet. They are what muskoxen stand on.



← **Show image 2A-6: Wolverine**

Here comes an animal I want to stay hidden from. This is a wolverine.⁴ The wolverine uses its fur coat to keep nice and warm. Like the muskox, the wolverine has large paws to help him move across the snow. Those paws also come in handy when he's trying to catch food. The wolverine eats rodents like me, birds, and caribou.

4 Do you have any idea why Rattenborough wants to stay hidden from the wolverine?

The wolverine is an excellent hunter and is also a **scavenger**; that means it eats foods that other animals have left behind. Basically, it'll eat whatever it can get those paws on. I wonder what this wolverine is waiting for?



← **Show image 2A-7: Caribou**

This is what the wolverine was waiting for. These animals are called caribou and they are herbivores. Caribou are large animals from the deer family. They are sometimes called reindeer. These

caribou are traveling in a huge herd, which helps to protect them against attack by wolves—and wolverines, I hope.

Caribou hair traps air, which helps keep these animals warm. Their hooves change depending on the time of year, so they can walk and run in mushy, wet terrain, or in hard, icy terrain. Male caribou also have antlers to help them dig for grass in the snow. It looks like this herd is moving quickly enough to get away from that wolverine. Time for me to move on, too. Maybe I can hitch a ride on one of these caribou.



← **Show image 2A-8: Arctic fox**⁵

5 What do you see in this picture?

Here we have another Arctic animal you might find interesting. Some animals, like this arctic fox, have coats that change during the winter. The fox's brown summer coat changes into this very thick white fur to help the fox blend into its surroundings. The fur also covers its feet so it can walk on snow and ice. Thanks to the fox's fur, it can hide and sneak up on birds, hares, and rodents like me!



← **Show image 2A-9: Arctic hare**

6 What animal have you seen before that looks like the arctic hare?

7 When something is exposed, it is out in the open, with nothing covering it. In the Arctic, any part of your body that is exposed would be cold.

The arctic hare's white coat becomes much heavier in the winter.⁶ Its ears are smaller than those of other hares, meaning less of its body is **exposed** to the cold.⁷ In other words, this is no place for critters with long dangly ears, unless they have long dangly earmuffs to keep those ears from freezing!

The hare's white coloring helps it hide in the snow and ice from animals that might want to eat it, and its back feet are very wide and large, like small snowshoes, so it can run fast in the snow. It seems like this hare is adapted to outrun the arctic fox.



← **Show image 2A-10: Rattenborough trying to hide in the seascape**

There are other kinds of habitats in the Arctic besides the tundra, and different kinds of plants and animals live in these other habitats. The Arctic Ocean is a habitat rich in sea life and animals that rely on the sea for their food. We are going to talk about the

Arctic Ocean in the next section, but for now, remember that even a habitat as unfriendly as the Arctic tundra can be full of life. Now, it's not easy for me to stay hidden in all this snow, and I can barely move with all these clothes on, so I'm getting out of here before I'm spotted by that arctic fox. See you next time!

Discussing the Read-Aloud

15 minutes

Comprehension Questions

(10 minutes)

If students have difficulty responding to questions, reread pertinent passages of the read-aloud and/or refer to specific images. If students give one-word answers and/or fail to use read-aloud or domain vocabulary in their responses, acknowledge correct responses by expanding the students' responses using richer and more complex language. It is highly recommended that you ask students to answer in complete sentences by asking them to restate the question in their responses.

1. Describe the weather in the Arctic tundra. What is the temperature like? (The Arctic tundra is very cold and windy.)
2. Describe what the Arctic tundra looks like in the winter. How is it different in the summer? (The ground is frozen and covered with ice during the winter. There is very little sunlight. In the summer, the top layer of ice melts and the ground gets wet and muddy. It has no trees, or is treeless.)
3. What kinds of plants grow in the Arctic tundra? (mosses and grasses)
4. How are the plants you heard about adapted to living in the Arctic tundra? (grow close together, don't grow too tall)



← **Show image 2A-5: Muskox**

5. How is the muskox adapted to the Arctic tundra? (long heavy fur, wide hooves to keep it from slipping on the ice)
6. What is a scavenger? (an animal that eats food that other animals leave behind)



← **Show image 2A-7: Caribou**

7. How is the caribou adapted to living in the Arctic tundra? (fur traps air, which helps keep it warm; hooves change depending on the time of year)
8. What happens to the arctic fox's fur in the winter? Why? (It changes from brown to white so that the fox can blend into the snow.)
9. *What? Pair Share:* Asking questions after a read-aloud is one way to see how much everyone has learned. Think of a question you can ask your neighbor about the read-aloud that starts with the word *what*. For example, you could ask, "What did you learn about in today's read-aloud?" Turn to your neighbor and ask your "what" question. Listen to your neighbor's response. Then your neighbor will ask a new "what" question, and you will get a chance to respond. I will call on several of you to share your questions with the class.

Word Work: Exposed

(5 minutes)

1. In the read-aloud today, we heard that the arctic hare has small ears so that less of its body is *exposed* to the cold weather.
2. Say the word *exposed* with me.
3. When you are exposed, it means you are unprotected or that you are out in the open and can be seen.
4. Since I didn't have my raincoat with me, my clothes got very wet because they were exposed to the rainy weather.
5. What parts of a plant are usually exposed? What parts of a plant are normally not exposed? Try to use the word *exposed* when you talk about it. (Ask two or three students. If necessary, guide and/or rephrase the students' responses: "A part of a plant that is exposed is the ____.")
6. What's the word we've been talking about?

As a follow-up, find various objects in the classroom that you can partially cover with a piece of paper or cloth. Then, ask students to point to and tell you which part of the object is exposed and what part is not. Be sure to have students use the word *exposed* in their answers.



Complete Remainder of the Lesson Later in the Day

2B

The Arctic Tundra



Extensions

20 minutes

What Am I?

Explain to the students that you will read clues to them about animals in the Arctic and how they have adapted. Once they have listened to the clues, they should guess which animal you are describing. After students have guessed, show them the image in the Flip Book and explain how the clues described this animal.

1. I have a long, shaggy coat to keep me warm in freezing temperatures.
I have wide hooves so I don't slip on the snow and ice.
I have sharp hooves to dig in the snow when I'm looking for plants to eat.
What am I?



← Show image 2A-5: Muskox

2. I have a white coat that gets heavier in winter to keep me warm.
I have smaller ears so less of my body is exposed to freezing temperatures.
I have large hind feet that help me outrun other animals.
What am I?



← Show image 2A-9: Arctic hare

3. I travel in herds for protection from wolverines.
My hooves change depending on the time of year so I can walk or run on wet or icy ground.
My hair traps air, which keeps me warm.
What am I?



← Show image 2A-7: Caribou

4. I have a furry coat to keep me warm and large feet to move across the snow when trying to catch food.
I eat birds and caribou.
I am a scavenger and eat food that other animals have left behind.
What am I?



← **Show image 2A-6: Wolverine**

5. My fur is brown in the summer and changes to white in winter.
My white fur helps me blend into the snow in the winter.
I have thick fur that covers my feet to help me walk in snow and ice.
What am I?



← **Show image 2A-8: Arctic fox**

After students have guessed each animal, pass out Image Cards 1 (Arctic hare), 2 (caribou), and 3 (Arctic fox) to either individual students or groups of students. Have each student or group of students come up with their own clues for their classmates to guess what animal is on each image card.

3

The Arctic Ocean



Lesson Objectives

Core Content Objectives

Students will:

- Describe what a habitat is
- Understand that living things live in habitats to which they are particularly suited
- Identify the characteristics of the Arctic Ocean habitat
- Explain how Arctic animals have adapted to the Arctic Ocean habitat

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say “excuse me” or “please,” etc. (L.1.1)
- Carry on and participate in a conversation over at least six turns, staying on topic, initiating comments or responding to a partner’s comments, with either an adult or another child of the same age (L.1.3)
- Prior to listening to a read-aloud, identify (orally or in writing) what they know and have learned that may be related to the specific story or topic to be read aloud (L.1.10)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.1.11)
- Describe illustrations (orally or in writing) (L.1.13)

- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.1.14)
- Learn new words from read-alouds and discussions (L.1.15)
- Answer questions (orally or in writing) requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.1.17)
- Answer questions (orally or in writing) that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering “why” questions that require recognizing cause/effect relationships (L.1.20)
- Draw pictures, dictate, and/or write simple sentences to represent details or information from a read-aloud (L.1.24)
- Share writing with others (L.1.29)

Core Vocabulary

blubber, n. A thick layer of fat on animals, such as polar bears and whales
Example: Arctic sea mammals are able to keep warm because they have blubber.

Variation(s): none

burrow, v. To dig a hole or tunnel

Example: Rabbits burrow underground to make their home.

Variation(s): burrows, burrowed, burrowing

flippers, n. The wide, flat limbs some animals use for swimming

Example: Dolphins’ flippers help them swim in the water.

Variation(s): flipper

tusks, n. Long, pointed teeth that stick out of the mouths of certain animals

Example: Elephants have very long tusks.

Variation(s): tusk

<i>At a Glance</i>	Exercise	Materials	Minutes
<i>Introducing the Read-Aloud</i>	What Have We Already Learned?	Image Cards 1–3	10
	Where Are We?		
	Purpose for Listening		
<i>Presenting the Read-Aloud</i>	The Arctic Ocean		15
<i>Discussing the Read-Aloud</i>	Comprehension Questions		10
	Word Work: Burrow	Habitat Posters	5
 Complete Remainder of the Lesson Later in the Day			
<i>Extensions</i>	Drawing the Read-Aloud	drawing paper, drawing tools	20

3A

The Arctic Ocean



Introducing the Read-Aloud

10 minutes

What Have We Already Learned?

Have students describe the Arctic region and the Arctic tundra. Review the meaning of the word *adapt*. Talk with students about how animals have adapted to live in the Arctic tundra. Use Image Cards 1–3 to review.



Where Are We?

- ◀ Show image 3A-1: World map with the Arctic Ocean and coastline highlighted

Point to the Arctic on the map. Remind students that this is the area they learned about in the last lesson. Point to the highlighted portion of the map. Tell students that today they will learn about animals that live in and/or near the water of the Arctic. Explain that this area of water is called the Arctic Ocean.

Purpose for Listening

Tell students to listen to find out what animals live in and/or near the Arctic Ocean and how they have adapted to living in the cold waters of this particular habitat.



The Arctic Ocean

← Show image 3A-2: Rattenborough standing on ice ¹

1 What do you see in this picture?

Rattenborough here again! Last time, I told you about the Arctic tundra habitat at the very top of the world around the North Pole region. It is a very unfriendly habitat. The temperatures are often below freezing, and ice and snow cover the ground. Well, I've put on an extra pair of socks and brought my whisker warmers, so I'm ready to see some more animals!

Last time we talked about animals that live on the land in the Arctic tundra. There are also animals that live in the water that surrounds the land in the Arctic. This body of water is called the Arctic Ocean.



← Show image 3A-3: Walrus

2 Do you have any idea why walruses can stay in the water longer than people?

Animals such as the walrus call the Arctic Ocean home. These huge creatures just love the icy water!

Did you know that the water is so cold in the Arctic that a person would be able to stay alive only a few minutes if s/he fell through the ice? Well, walruses don't have that problem; they can swim around in the water for a long time. ² Walruses have adapted to life in the Arctic Ocean by storing **blubber** under their skin. ³ Blubber prevents heat from escaping from their bodies.

3 Blubber is fat that some animals have to help stay warm.

Like you, we rats don't have blubber, so I'm going to have to be very careful as I make my way over this ice. I definitely don't want to fall into these freezing waters!



← Show image 3A-4: Walrus colony

4 Would you want to use your teeth to pull yourself around?

Here we've come to a group of walruses. Walruses have long teeth, called **tusks**, which they use almost like arms to pull themselves up out of the water onto the ice. ⁴ Walruses are covered with a tough skin and lots of blubber, and they can also control the temperature of their bodies—all of which helps keep them warm when they dive into those freezing waters.

Look at the size of them. Walruses are absolutely huge! I have to look out so I don't get squished around here. An adult walrus can weigh as much as a car!



← **Show image 3A-5: Seals**⁵

5 What do you see in this picture?

Look at these cute animals. They are seals. Seals have blubber under their skin, just like walruses. Some types of seals are born covered with a layer of white fur to keep them warm until they develop blubber.



← **Show image 3A-6: Seal**

6 (Point to the seal's flippers in the image.)

Now, I'll surely freeze if I hang around here too long, but I just have to show you how seals swim. They are incredible swimmers! Like fish and walruses, seals don't have arms and legs. Instead, seals have **flippers**, and they swim by wiggling their bodies from side to side, using their flippers to steer.⁶ They swim very fast, so they catch plenty of tasty fish. Thankfully, they don't eat rats!

You might be wondering where the penguins are. Well, penguins actually live at the South Pole. So, there aren't any here at the North Pole. There are plenty of other animals.



← **Show image 3A-7: Polar bear**

Here comes a polar bear! Look out! Let's hide behind this rock and I'll tell you all about this amazing creature.

The polar bear is perhaps the best known of all the animals living around the Arctic Ocean. These astonishing animals have adapted incredibly well to the harsh Arctic habitat.

Polar bears are the largest bears in the world. Male polar bears weigh up to 1700 pounds—that's probably heavier than everyone in your class put together, including your teacher. And polar bears grow up to ten feet from head to toe. Yikes! Unfortunately, they can be just as mean as they are big, so I'd better stay out of their way.

Polar bears are covered with a heavy coat made up of two layers of fur, and they have a layer of blubber under their skin.

7 What does *exposed* mean?



← **Show image 3A-8: Polar bear with big paws**

Polar bears have massive sharp claws to keep from slipping around on the ice. Their paws are also webbed, sort of like a duck’s feet, to help them swim. They use those mighty paws to hunt their favorite food—seals.



← **Show image 3A-9: Polar bear with cub**⁸

8 What do you see in this picture?

9 That means that they dig a hole in the snow to make a shelter.

Even though adult polar bears spend most of their time living on sea ice, polar bear babies, or cubs, are born on land. Their mothers, female polar bears, **burrow** in the snow to make a den.⁹ They will then hide in the den while they have their babies. They stay in the dens with their young all winter, and in the spring they finally come out. The cubs stay with their mothers for almost two years to learn hunting and survival skills before leaving home.

10 or extremely cold or frozen

Now, speaking of home, I really must go. It’s absolutely frigid¹⁰ here, and my whisker warmers just aren’t doing the job! We’ve learned a lot about the Arctic Ocean habitat and the animals that have managed to adapt and survive here. I think our next stop should be somewhere warmer, don’t you?

Discussing the Read-Aloud

15 minutes

Comprehension Questions

(10 minutes)

If students have difficulty responding to questions, reread pertinent passages of the read-aloud and/or refer to specific images. If students give one-word answers and/or fail to use read-aloud or domain vocabulary in their responses, acknowledge correct responses by expanding the students' responses using richer and more complex language. It is highly recommended that you ask students to answer in complete sentences by asking them to restate the question in their responses.

1. How have walruses, seals, and polar bears adapted to keep warm? (They have fur coats and a layer of blubber beneath their skin.)
2. How have walruses adapted so that they can move from the water of the Arctic Ocean onto chunks of floating ice in and near the Arctic Ocean? (They have long tusks that they use to pull themselves out of the water onto the ice.)
3. Describe how polar bears have adapted to live near the Arctic Ocean. (layer of blubber, two layers of fur, small ears and tail, sharp claws, webbed paws)
4. Why is it important that the polar bears have webbed paws? (helps them swim to catch seals)
5. Where are polar bear babies born? (in a den that their mother digs in the snow)

I am going to ask a question. I will give you a minute to think about the question, and then I will ask you to turn to your neighbor and discuss the question. Finally, I will call on several of you to share what you discussed with your partner.

6. *Think Pair Share:* Remember that a habitat for an animal or plant must provide food, water and shelter. Is the Arctic a good habitat for the polar bear? (yes) Why or why not? (The polar bear can find food [seals], water [snow], and shelter [dens].)

Word Work: Burrow

(5 minutes)

1. In the story today, we heard that female polar bears *burrow* into the snow to make a den.
2. Say the word *burrow* with me.
3. The word *burrow* can be used in two different ways. When an animal burrows into the ground that means that it digs a hole or tunnel in the ground. A burrow is also a place where an animal lives.
4. Some animals live in burrows, and some animals burrow into the ground to make a home.
5. What animal did you learn about in the read-aloud that burrows into the ground in the winter to make a den? Can you think of other animals that might burrow into the ground for shelter? Try to use the word *burrow* when you tell about it. (Ask two or three students. If necessary, guide and/or rephrase students' responses: "Polar bears burrow into the ground to make a den. Chipmunks and groundhogs live in burrows underground.")
6. What's the word we've been talking about?

For follow-up, explain to students that even though they learned about a polar bear's burrow in the Arctic tundra habitat, many other animals in other habitats have burrows. Show students the Habitat Poster of the temperate deciduous forest. Ask students where burrows could be in this habitat. If time allows, do the same activity with the East African Savanna and the Amazon.



Complete Remainder of the Lesson Later in the Day

3B

The Arctic Ocean



Extensions

20 minutes

Drawing the Read-Aloud

Give the students a few minutes to share what they have learned about the Arctic. Have them fold their paper in half. On one side they should draw a picture of the Arctic tundra with some of the plants and animals about which they learned, and on the other half they should draw the Arctic Ocean. You may wish to ask some questions to help the students brainstorm ideas for their drawings.

1. Will your drawing of the tundra have just a few plants or lots of plants?
2. Will the plants in the tundra be short or tall or both?
3. What colors will the plants be?
4. Will there be animals in your drawing of the tundra? If so, what kinds of animals?

You may wish to ask similar kinds of questions regarding the Arctic Ocean.

After the students have had time to draw, ask them to write one sentence to describe each of their pictures. Tell them to use their sound/letter knowledge to sound out and write out their sentences. Help struggling students by dictating the spelling of difficult words. You may need to do a shared writing activity with some students. (They dictate; you write.)

Conclude by having them share their drawings and sentences with a partner or the class. As the students talk about their drawings, you may repeat and expand upon each response using richer and more complex language, including, if possible, any read-aloud vocabulary.

4

The Sonoran Desert



Lesson Objectives

Core Content Objectives

Students will:

- Describe what a habitat is
- Understand that living things live in habitats to which they are particularly suited
- Identify the characteristics of the desert habitat
- Explain how desert animals have adapted to the desert habitat
- Classify animals on the basis of the types of foods that they eat (herbivore, carnivore, omnivore)

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say “excuse me” or “please,” etc. (L.1.1)
- Ask questions to clarify directions, exercises, and/or classroom routines (L.1.2)
- Carry on and participate in a conversation over at least six turns, staying on topic, initiating comments or responding to a partner’s comments, with either an adult or another child of the same age (L.1.3)
- Give simple directions (L.1.6)
- Prior to listening to a read-aloud, identify (orally or in writing) what they know and have learned that may be related to the specific story or topic to be read aloud (L.1.10)

- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.1.11)
- Make predictions (orally or in writing) prior to and during a read-aloud, based on the title, pictures, and/or text heard thus far, and then compare the actual outcomes to predictions (L.1.12)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.1.14)
- Learn new words from read-alouds and discussions (L.1.15)
- Answer questions (orally or in writing) requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.1.17)
- Ask questions to clarify information or the topic in a read-aloud (L.1.18)
- Answer questions (orally or in writing) that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering “why” questions that require recognizing cause/effect relationships (L.1.20)
- Compare and contrast (orally or in writing) similarities and differences within a single read-aloud or between two or more read-alouds (L.1.21)
- With assistance, categorize and organize facts and information within a given domain (L.1.38)

Core Vocabulary

camouflage, v. To blend in or hide in the natural surroundings

Example: The green color of leaf insects helps to camouflage them, or hide them, in the forest.

Variation(s): camouflages, camouflaged, camouflaging

carnivore, n. An animal that consumes other animals

Example: A polar bear is a carnivore that eats seal and fish.

Variation(s): carnivores

herbivores, n. Animals that eat only plants or plant products

Example: My pet rabbits are herbivores and eat only plants.

Variation(s): herbivore

nocturnal, adj. Active at night

Example: Bats are nocturnal animals that come out at night to hunt.

Variation(s): none

omnivore, n. An animal that eats both plants and other animals

Example: A grizzly bear is an omnivore that eats fish as well as berries.

Variation(s): omnivores

<i>At a Glance</i>	Exercise	Materials	Minutes
<i>Introducing the Read-Aloud</i>	Making Predictions About the Read-Aloud		10
	Where Are We?		
	Purpose for Listening		
<i>Presenting the Read-Aloud</i>	The Sonoran Desert		15
<i>Discussing the Read-Aloud</i>	Comprehension Questions		10
	Word Work: Camouflage		5
 Complete Remainder of the Lesson Later in the Day			
<i>Extensions</i>	Herbivore, Carnivore, Omnivore	Instructional Master 4B-1	20

4A

The Sonoran Desert



Introducing the Read-Aloud

10 minutes

Making Predictions About the Read-Aloud

Review the definition of a habitat with students, emphasizing that it is a place that has food, water, and shelter for the animals and plants that live there. Briefly ask students to characterize the weather and temperature of the Arctic tundra and Arctic Ocean (very cold in the winter, colder than most other places on Earth even during summer, and often windy so that it feels even colder). Remind students that many of the adaptations made by the animals living in both the Arctic tundra and the Arctic Ocean are changes that have come about to help the animals stay warm when it gets very cold (thick fur, blubber, etc.)

Now remind the students that at the end of the last read-aloud, Rattenborough mentioned that he would be taking them to a warmer place. Explain to students that today they will be learning about a habitat called the desert. Tell students that there are deserts all over the world.



← **Show image 4A-1: The desert**

Tell students that this is a picture of a desert. Ask students to describe what they see in the illustration and how it looks different from the pictures they have seen of the Arctic tundra. Explain that the temperature found in a desert is almost exactly opposite that found in the tundra: the tundra is very cold, while deserts are *usually* very hot; the tundra is wet and muddy in the summer, while the desert is very dry and sandy.

Now ask students if they think the same animals that live in the Arctic live in the desert. Why or why not? Then have students predict how the animals that live in the desert might be different from the animals that live in the Arctic tundra.



Where Are We?

- ◀ **Show image 4A-2: World map with the southwest of the U.S. and the northwest of Mexico highlighted**

Show the students a map of North America. Tell students that deserts are located in many different regions of the world, but today they are going to hear about a particular desert that is located in the northwestern part of Mexico and the southwestern part of the United States—in parts of the states of Arizona and California. (Point to this area on the map.) Tell students that the particular desert located here is called the Sonoran Desert.

Purpose for Listening

Tell students to listen to find out more about the Sonoran Desert and how animals have adapted to living there.



The Sonoran Desert

← Show image 4A-3: Rattenborough in desert

After nearly freezing and becoming a polar bear snack in the Arctic, I thought we should go someplace where my whiskers and tail could thaw out and warm up, so I've brought you to the desert. There are many deserts all over the world. You know you're in a desert when it doesn't rain very much. Many deserts can also be very hot. Because it's so hot and dry, not too many plants or animals can live there.



← Show image 4A-4: The Sonoran Desert

Welcome to the Sonoran Desert in the southwestern part of the United States and the northwestern part of Mexico. The temperature is quite hot during the day, and it doesn't rain very much. The heat and lack of rain make it hard for plants and animals to live in the desert. They must all be specially adapted to live in the hot weather and survive with very little rain.

How do they do it? Some plants can save and store water inside their plant parts when it does rain. Other plants grow only in shady areas near mountains or rocks.

Since there are very few plants that can be used as shelter, the animals that have adapted to living in the desert often make their homes underground for shelter.¹ Living underground helps them to stay cool when it gets hot, and keeps them hidden from other animals that may want to eat them for lunch!

1 So the animals burrow into the earth and live under the sandy desert.



← Show image 4A-5: Saguaro cactus²

Ouch! What did I walk into? Aha! Here is one plant that lives in the Sonoran Desert. The saguaro (sa-WAHR-oh) cactus is the world's largest cactus. Cacti don't have leaves; they have prickly spines instead, which is exactly why it hurt so much to touch this one!³ The incredible saguaro lives for up to two hundred years,

2 What do you see in this image?

3 *Cacti* is the plural for *cactus*—one cactus but many cacti.

and in that time can grow as high as a house and can weigh as much as several cars!

The most amazing thing about the saguaro is that it is a habitat in itself. That's right. Not only does it manage to live and thrive in the desert habitat, but just by being there, it provides food, water, and shelter to many different animals. Let me get my climbing gear out—and some gloves to protect me from these sharp spines—and I'll meet you at the top.



← **Show image 4A-6: Cactus**

You already know that it hardly ever rains in the desert, but when it does, the saguaro cactus saves and stores huge quantities of water in its roots and stems.⁴ The cactus saves the extra water and uses it to survive during those times when it is very dry and does not rain.

4 (Point to the stem of the cactus as you talk about it.)



← **Show image 4A-7: Cactus bloom**

In the spring, white flowers grow on the saguaro. At night, when the desert cools down, these flowers open to show sweet nectar, which butterflies, bats, and birds feed on before the flowers close the next day when it once again becomes very hot. In the summer, red fruit begins to grow on the saguaro. Many animals eat the fruit of the cactus.



← **Show image 4A-8: Gila woodpecker**

Here is an interesting bird called a Gila (HEE-lah) woodpecker. The Gila pecks holes into the soft cactus with its beak to make a nest for its eggs.

The Gila woodpecker is an **omnivore**. An omnivore is an animal that eats plants as well as other animals. Gilas feed on cactus fruit and berries as well as insects that have invaded the saguaro. Thankfully, I brought a sandwich, so I won't have to join these Gilas for a buggy lunch!

It really is way too hot for a regular rat like me to live here. I'm glad I brought my fan with me. Interestingly enough, birds like

this Gila woodpecker can live in the desert habitat because their feathers help protect them from the hot desert sun by trapping cool air next to their skin. Still, most birds only go out to feed in the early morning or evening when it's cooler outside. From noon to late afternoon, many of these birds seek shelter in the holes that they have dug in a cactus or in other shady places.



← **Show image 4A-9: Elf owl**

Here's another bird that makes its home in the saguaro cactus: the elf owl. The elf owl, the world's smallest owl, is only five inches long—that's just a bit bigger than one of your hands. It moves into nests that have been abandoned by Gila woodpeckers.⁵ The elf owl, like most owls, is **nocturnal**, which means that it rests during the day and wakes at night to hunt for food.

The elf owl is also a **carnivore**. A carnivore is an animal that eats only other animals—no plants. It uses its large eyes to hunt in the dark night for bugs that live in the desert. Most owls eat mice and, I'm sad to say, rats. But I think I'm safe from the elf owl since I'm bigger than it is!

5 When something is abandoned that means that it has been left for good.



← **Show image 4A-10: Desert cottontail**

Oh look, here comes a desert cottontail rabbit, another animal that lives in the Sonoran Desert. The desert cottontail looks a little like the arctic hare we saw in the tundra. But, it has larger ears and longer back legs.

Desert cottontail rabbits are **herbivores**. Herbivores are animals that eat only plants—no animals. The desert cottontail eats grass and even cactus.

Smaller animals like the desert cottontail always need to watch out for larger animals in the desert that might eat them. Coyotes, for instance, like to eat rabbits. In fact, there's a coyote coming this way, so let's stay up here and watch it.



← **Show image 4A-11: Coyote**

6 When something is camouflaged, that means it blends in with its surroundings. The color of the coyote's fur blends in with the color of the desert sand so that it is difficult for other animals to see the coyote in the desert background.

7 What are scavengers? Who remembers another animal, one from the Arctic tundra, that is a scavenger?

Coyotes are found all over the United States, including the Sonoran Desert. As you can see, the coyote has a light, tan-colored coat to help reflect the sun's rays and to **camouflage** it.⁶ Coyotes are carnivores like the elf owls. Coyotes have very good senses of smell, hearing, and vision, and they can run very fast, which means they are excellent hunters. They are also scavengers.⁷ Coyotes live in dens, which they make by burrowing into the ground. I think this one has smelled something, because he's just run off.

Now, I'm getting down from this cactus before another coyote comes along to make me its dinner! It seems like rats are on the menu everywhere I go!

Discussing the Read-Aloud

15 minutes

Comprehension Questions

(10 minutes)

If students have difficulty responding to questions, reread pertinent passages of the read-aloud and/or refer to specific images. If students give one-word answers and/or fail to use read-aloud or domain vocabulary in their responses, acknowledge correct responses by expanding the students' responses using richer and more complex language. It is highly recommended that you ask students to answer in complete sentences by asking them to restate the question in their responses.

1. Which of your predictions were correct? Were any of your predictions incorrect? Why? (Answers may vary.)
2. Describe the weather and temperature of the Sonoran Desert. (dry, hot, not much rain)
3. Do many plants and animals live in the desert? (no) Why not? (It is hot and very dry.)
4. If you were to give someone directions on how to prepare for spending time in the desert, what would you tell him or her to take for supplies? (Answers may vary but may include: sunscreen, water, food, sunglasses, a hat, etc.)

5. How are the Arctic and the Sonoran Desert the same? How are they different? (The weather and temperature are very different—the Arctic is very cold; the Sonoran Desert is very hot. Also, the ground in the Arctic is covered with lots of ice, and the desert is covered with sand. One way that the two habitats are similar is that the animals and plants that live in each habitat must adapt to the very difficult conditions of each habitat. So there are not many plants and animals in either the Arctic or the desert.)
6. How do animals find shelter in the desert? (underground, or in holes they make in plants like the saguaro cactus)
7. How is the saguaro cactus adapted to live in the desert? (When it rains, it saves and stores lots of water that it can use during dry weather when it is not raining at all.)
8. How are animals in the desert adapted to live there? (come out at night, make shelters underground, etc.)
9. Which animal that you heard about is nocturnal and what does that mean? (elf owl; sleeps during the day and comes out at night)
10. *Where? Pair Share:* Asking questions after a read-aloud is one way to see how much everyone has learned. Think of a question you can ask your neighbor about the read-aloud that starts with the word *where*. For example, you could ask, “Where does today’s read-aloud take place?” Turn to your neighbor and ask your “where” question. Listen to your neighbor’s response. Then your neighbor will ask a new “where” question, and you will get a chance to respond. I will call on several of you to share your questions with the class.

Word Work: Camouflage

(5 minutes)

1. In the read-aloud today, we heard that the coyote has a light, tan-colored coat to *camouflage* it.
2. Say the word *camouflage* with me.
3. When something is camouflaged, it is hidden against its natural surroundings or background; often the color of the object or animal is similar to the background, which makes it

hard for other animals to see it.

4. If I dropped a green crayon in the grass, it would probably be hard to find because it would be camouflaged in the grass.
5. What else could be camouflaged in the grass? (Ask two or three students. If necessary guide and/or rephrase their answers “A ____ could be camouflaged in the grass.” It may help to point out that since grass is green, objects that might be camouflaged by grass would probably be small, green objects.
6. What’s the word we’ve been talking about?

For follow-up, use a *Making Choices* activity. Tell students that you will read them a few sentences. If the object in the sentence would be camouflaged, they should say, “That is camouflaged.” If the object in the sentence would not be camouflaged, they should say, “That is not camouflaged.”

1. a white piece of paper on a white floor (That is camouflaged.)
2. a red ball in the middle of a blue pool (That is not camouflaged.)
3. a black cat against a black wall (That is camouflaged.)
4. an arctic hare in the snow (That is camouflaged.)
5. an desert cottontail in the snow (That is not camouflaged.)
6. an arctic fox in the desert (That is not camouflaged.)



Complete Remainder of the Lesson Later in the Day

4B

The Sonoran Desert



Extensions

20 minutes

Herbivore, Carnivore, Omnivore (Instructional Master 4B-1)

Remind students that animals that only eat plants are called herbivores. Animals that eat other animals are called carnivores. Animals that eat both plants and other animals are called omnivores.

Have the students examine the pictures on the worksheet. Tell them to figure out, by looking at the animal and the things it eats, whether the animal is a carnivore, herbivore, or omnivore. Then, have students cut out the images of the animals and what they eat. Next, have students sort the images by herbivore, carnivore, and omnivore. Once they have sorted all the animals, have them glue the herbivores on one sheet of paper, the carnivores on another sheet of paper, and the omnivores on a third sheet of paper.

Talk with the students about which animals they grouped together and why. Be sure to use the vocabulary words *herbivore*, *carnivore*, and *omnivore* as you talk to the students about the way they have classified the animals. If time allows, review the facts and information that students have learned about the animals in previous read-alouds.

PP1

Pausing Point 1



Note to Teacher

This is the end of the read-alouds that introduce the concept of a habitat and the Arctic and desert habitats. You may choose to pause here and spend one to two days reviewing, reinforcing, or extending the material taught thus far.

If you do pause, you may have students do any combination of the activities listed below. The activities may be done in any order. You may wish to do one activity on successive days. You may also choose to do an activity with the whole class or with a small group of students who would benefit from the particular activity.

Core Content Objectives Up to This Pausing Point

Students will:

- Describe what a habitat is
- Understand that living things live in habitats to which they are particularly suited
- Identify the characteristics of the Arctic tundra habitat
- Explain how Arctic animals have adapted to the Arctic tundra habitat
- Identify the characteristics of the Arctic Ocean habitat
- Explain how Arctic animals have adapted to the Arctic Ocean habitat
- Identify the characteristics of the desert habitat
- Explain how desert animals have adapted to the desert habitat
- Classify animals on the basis of the types of foods that they eat (herbivore, carnivore, omnivore)

Activities

The Arctic and the Sonoran Desert

Materials: World map or globe

Help students locate and identify the Arctic and the Sonoran Desert. Discuss with students the habitat of each area.

Image Review

Show the images from any read-aloud again and have students discuss the read-aloud using the images.

Image Card Review

Materials: Image Cards 1–7

In your hand, hold Image Cards 1–7 fanned out like a deck of cards. Ask a student to choose a card but to not show it to anyone else in the class. The student must then perform an action or give a clue about the picture s/he is holding. For example, for the desert fox, the student may describe the habitat the fox lives in, what it eats, and what it looks like. The rest of the class will guess what animal or plant is being described. Proceed to another card when the correct answer has been given.

Domain-Related Trade Book or Student Choice

Materials: Trade book

Read an additional trade book to review a particular habitat; refer to the books listed in the domain introduction. You may also choose to have the students select a read-aloud to be heard again.

You Are There: The Arctic and the Sonoran Desert

Have students pretend that they have been transported to the Arctic or the Sonoran Desert. Ask students to describe what they see and hear. What is the weather like? What kinds of plants and animals do they see? Consider also extending this activity by adding group or independent writing opportunities associated with the “You Are There” concept. For example, ask students to pretend they are Rattenborough describing one of the habitats to their classmates and write a group article about the habitat.

Key Vocabulary Brainstorming

Materials: Chart paper

Give the students a key domain concept or vocabulary word such as *shelter* or *camouflage*. Have them brainstorm everything that comes to mind when they hear the word. Record their responses on a piece of chart paper for reference.

Riddles for Core Content

Ask the students riddles such as the following to review core content:

- I live in the Sonoran Desert and I love to eat cactus fruit as well as insects. I make my home by pecking holes into cacti. Who am I? (Gila woodpecker)
- I live in the Arctic and have a long shaggy coat to keep me warm in freezing temperatures. I have wide hooves so I don't slip on the snow and ice. Who am I? (muskox)
- I live in the Sonoran Desert. I look a little like the Arctic hare, but I have longer ears and back legs. I love to eat grass and even cactus. Who am I? (desert cottontail)

You may also wish to make some of your own riddles, depending on your students' needs.

Class Book: Habitats

Materials: Drawing paper and drawing tools for each student

Tell the class or a group of students that they are going to make a class book to help them remember what they have learned thus far in this domain. Have the students brainstorm important information about habitats and specifically the Arctic and Sonoran Desert habitats. Have each student choose one idea to draw a picture of and then write a caption for the picture. Bind the pages to make a book to put in the class library for students to read again and again. You may choose to add more pages in future Pausing Points or upon completion of the entire domain before binding the book.

5

The East African Savanna



Lesson Objectives

Core Content Objectives

Students will:

- Understand that living things live in habitats to which they are particularly suited
- Identify the characteristics of the grassland habitat

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say “excuse me” or “please,” etc. (L.1.1)
- Carry on and participate in a conversation over at least six turns, staying on topic, initiating comments or responding to a partner’s comments, with either an adult or another child of the same age (L.1.3)
- Prior to listening to a read-aloud, identify (orally or in writing) what they know and have learned that may be related to the specific story or topic to be read aloud (L.1.10)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.1.11)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.1.14)
- Learn new words from read-alouds and discussions (L.1.15)
- Answer questions (orally or in writing) requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.1.17)

- Answer questions (orally or in writing) that require making interpretations, judgments, or giving an opinion about what is heard in a read-aloud, including answering “why” questions that require recognizing cause/effect relationships (L.1.20)
- Compare and contrast (orally or in writing) similarities and differences within a single read-aloud or between two or more read-alouds (L.1.21)

Core Vocabulary

- grassland, n.** An area, such as a prairie or meadow, where the plants are primarily different types of grasses
Example: The zebra ran quickly across the open grassland.
Variation(s): grasslands
- hardy, adj.** Able to survive in unfavorable or harsh conditions
Example: Cacti are hardy plants, able to survive the harsh conditions of the desert.
Variation(s): hardier, hardiest
- prickly, adj.** Small and sharp
Example: The cactus’s spines are prickly.
Variation(s): pricklier, prickliest
- savanna, n.** A flat grassland in a warm/hot and sometimes dry place
Example: Many different animals live in the African savanna, which is warm and dry.
Variation(s): savannas

<i>At a Glance</i>	Exercise	Materials	Minutes
Introducing the Read-Aloud	What Have We Already Learned?	chart paper	10
	Where Are We?		
	Purpose for Listening		
Presenting the Read-Aloud	The East African Savanna		15
Discussing the Read-Aloud	Comprehension Questions	Habitat Summary Chart	10
	Word Work: Prickly		5
 Complete Remainder of the Lesson Later in the Day			
Extensions	Domain-Related Trade Book	trade book	20

5A

The East African Savanna



Introducing the Read-Aloud

10 minutes

What Have We Already Learned?

Prior to class, prepare the following Habitat Summary Chart on chart paper:

Feature	Habitat		
	Arctic Tundra	Arctic Ocean	Sonoran Desert
Temperature			
Weather			
Availability of Water			
Ground or Surface			
Few/Many and Types of Plants			
Few/Many and Types of Animals			
Example of Animal Adaptation			

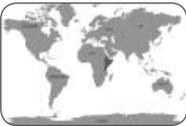
Now use this chart as the basis for a conversation with the students in describing the various habitats. Refer to the illustrations from the Flip Book, as needed, to stimulate responses from the students. Use words and symbols, when possible, to complete the chart. Remind students that they are not expected to read the words on the chart by themselves. Tell them that you are writing what they say so that you can remember their answers, and that you will read the chart to them.

The completed chart may look similar to the chart on the next page, though answers may certainly vary.

Feature	Habitat		
	Arctic Tundra	Arctic Ocean	Sonoran Desert
Temperature	cold	cold	hot
Weather	windy	windy	sunny
Availability of Water	some water in spring and summer as the top layer of ice melts	lots of salt water in the ocean (but animals need fresh water to drink)	very dry; not much rain
Ground or Surface	winter: ice and frozen ground summer: wet and muddy ground with some ice	lots of salt water and chunks of sea ice	lots of sand
Few/Many and Types of Plants	few plants moss and grasses	few plants	few plants cactus/cacti
Few/Many and Types of Animals	few animals muskox, wolverine, caribou, arctic fox, arctic hare	few animals walrus, seal, polar bear	few animals Gila woodpecker, elf owl, desert cottontail, coyote
Example of Animal Adaptation	heavy fur, special feet or hooves for walking on ice, fur color	blubber under skin to keep warm	being nocturnal, seeking shelter/shade when it is hot during the day; awake at night when it is cooler to look for food

Where Are We?

Tell students that today they will be learning about another type of habitat called a grassland habitat. Explain that there are lots of grassland habitats in the world, but that they will be learning about the East African Savanna. Explain to students that the word *savanna* is another word for *grassland*.



- ← **Show image 5A-1: Map of the world with the East African savannas highlighted**

Point to the East African Savanna on the map. Remind students where the Arctic tundra, the Arctic Ocean, and the Sonoran Desert are located as well. Show the students where they live in relation to the East African Savanna.

Purpose for Listening

Tell students to listen to find out how the East African Savanna may be the same and/or different from the Arctic and the Sonoran Desert.



1 or fearless

The East African Savanna

← Show image 5A-2: Rattenborough in savanna

Rattenborough, your intrepid¹ adventurer here, to show you something a little different. We've been talking about habitats—the places where plants and animals live—and we've spent time in three of the most unfriendly habitats in the world: the freezing Arctic tundra, the Arctic Ocean, and the scorching Sonoran Desert. Now, I've come to a habitat that should be of great interest to you. Some of the most famous animals in the world live here.



2 What do you see in this image?

← Show image 5A-3: African savanna²

Welcome to the East African **Savanna**. A savanna is another name for **grassland**, a wide-open, vast stretch of grass-covered land. You know you're in a grassland when there is a lot of grass around you, but not many trees or bushes.

The East African Savanna has very warm weather all year round. However, it only has two seasons: the very rainy summer and the very dry winter. The plants and animals that live here have had to adapt to these two very different kinds of weather in the summer and winter. Luckily, I brought my umbrella in case it starts to pour!



← Show image 5A-4: African savanna grasses

Boy, I can barely see a thing in all this grass—there's so much of it. As the name *grassland* suggests, grass is the most important plant growing in the savannas. The grasses are very **hardy**, which means they can survive the tough conditions of their habitat—long spells of dry, hot weather as well as heavy rainfall and flooding. The grass has adapted to these conditions by growing very deep roots. Even if the grass above ground is destroyed, the roots underground survive and the grass can grow back. This grass grows very quickly, as much as an inch per day!³ The grass in your backyard might take a whole week to grow an inch.⁴

3 (Show students an example of an inch.)

4 So, which grows faster—the grass in the savanna or the grass in your backyard?



← **Show image 5A-5: Zebras**

Yikes, I'm surrounded by hooves! A rat could get squashed if he's not careful around here. That's because grass is food for many of the larger animals, like elephants, zebras, gazelles, and antelope. They chew on grass all day long.

I don't think grass is all that tasty, to tell the truth, but these animals depend on the nutrients in the grass to survive. It's all they need to eat.⁵ It would seem that because so many animals eat the grass in the savanna every day, there wouldn't be very much grass left after a while. But, remember that this grass grows back very quickly, so there's usually plenty for the different herbivores, like zebras and antelopes, to eat!

Plus, different animals are adapted to eat different parts of the grass. For example, zebras eat the tops of the grasses while the small antelopes eat the tufts of grass that grow at the base of plants.

- 5 (Review the words *omnivore*, *carnivore*, and *herbivore*, and tell students to use one of these words to answer the following question.) What do we call all of these animals that eat only grass?



← **Show image 5A-6: Giraffe eating from acacia tree**

Grass is not the only important source of food in the savanna. Many animals get their meals from the acacia [uh-KEY-shuh] tree. Giraffes, with their long necks and tongues, are able to eat twigs and leaves from the top of the acacia. Not only are giraffes' tongues long, they are also very tough. It is a good thing, too, because the twigs of the acacia tree are covered with sharp thorns that the giraffes eat along with the twigs and leaves! Besides eating the different parts of the acacia tree, giraffes also eat many of the insects that live on the tree as well.⁶

- 6 (Review the words *omnivore*, *carnivore*, and *herbivore* and tell students to use one of these words to answer the following question.) Which word best describes giraffes since they eat plants like the acacia tree, as well as insects?



← **Show image 5A-7: Elephant**

Elephants like acacias, too. They rest in the acacia's shade and eat the acacia leaves, branches, and seeds. They even like to strip off the bark and chew on it.⁷

- 7 Elephants eat grass and parts of the acacia tree. Are elephants carnivores, herbivores, or omnivores?



← **Show image 5A-8: Acacia tree**⁸

8 What do you see in this picture?

9 The thorns on the acacia tree are small and very sharp.

I think this acacia tree might be great to climb and get a better look at the savanna, but don't forget that it's covered in **prickly** thorns—ouch!⁹ Acacias have adapted well to their habitat. Acacias have small leaves that don't dry out as quickly as larger leaves would in the dry, hot months. The roots of an acacia grow very deep into the ground, which allows them to collect water from far underground when there is not much rainfall. And, as we already know, their branches are covered by sharp thorns. These help keep some animals from eating too many of them. These trees are right at home in this habitat.

All in all, this tree sounds like a dangerous place for a rat. I'm going to get down before I get bitten by insects or shaken out by an elephant or giraffe. See you at the bottom!



← **Show image 5A-9: Savanna landscape at sunset**

We've already learned a lot about the savanna. Next time we'll learn even more about the East African savannas and the animals that live there. It's getting late, so I'd better find a nice, soft, grassy spot to lie down and rest for the night.

Discussing the Read-Aloud

15 minutes

Comprehension Questions

(10 minutes)

If students have difficulty responding to questions, re-read pertinent passages of the read-aloud and/or refer to specific images. If students give one-word answers and/or fail to use read-aloud or domain vocabulary in their responses, acknowledge correct responses by expanding the students' responses using richer and more complex language. It is highly recommended that you ask students to answer in complete sentences by asking them to restate the question in their responses.

1. Describe the East African savanna. [Prompt students as necessary to talk about the temperature, weather, availability of water, vegetation, etc.] (two seasons—a dry season and a rainy season; lots of grass, not many trees)
2. How is the savanna the same and/or different from the Arctic tundra and the desert? [Read and refer to the parts of the chart you completed in the beginning of this lesson as an aid to student recall.] (Answers may vary.)
3. What are some of the plants that live in the savanna? (grass, acacia tree)
4. Both the grasses of the savannas and the acacia trees have deep root systems. How do you think having deep roots helps these plants survive in the savannas? (During the hot and dry summer season when there is very little rain, the roots of these plants can reach far underground where the soil is wetter and dries out less quickly.)
5. Which of these animals living in the savannas—giraffes, elephants, and zebras—are herbivores and eat just plants? (elephants and zebras) Do you remember one animal that lives in the savannas that is an omnivore, eating both plants and animals? (giraffe)

I am going to ask a question. I will give you a minute to think about the question, and then I will ask you to turn to your neighbor and discuss the question. Finally, I will call on several of you to share what you discussed with your partner.

6. *Think Pair Share:* Would you want to live in the savanna? Why or why not? (Answers may vary.)

Word Work: Prickly

(5 minutes)

1. In the read-aloud today, we heard that the acacia tree is covered in *prickly* thorns.
2. Say the word *prickly* with me.
3. When something is prickly, that means it has lots of sharp points on it.
4. Pine trees can be very prickly, so be careful not to prick yourself.
5. The cactus you learned about in the desert might be prickly. Can you think of anything else that might be prickly? (Ask two or three students. If necessary guide and/or rephrase students' answers, "A ____ might be prickly.")
6. What's the word we've been talking about?

For follow-up, use a *Making Choices* activity. Tell students you are going to name several items. If the item would be prickly, they should say, "That would be prickly!" If the item would not be prickly, they should say, "That would not be prickly!"

1. a pillow (That would not be prickly!)
2. a rosebush (That would be prickly!)
3. a beard (That would be prickly!)
4. a blanket (That would not be prickly!)
5. a brush (That would be prickly!)
6. a chalkboard (That would not be prickly!)
7. a porcupine (That would be prickly!)



Complete Remainder of the Lesson Later in the Day

5B

The East African Savanna



Extensions

20 minutes

Domain-Related Trade Book

Refer to the list of recommended trade books in the domain introduction at the front of this teacher's guide and choose one to read aloud to the class. As you read, use the same strategies that you use when reading the read-aloud selections in this anthology—pause and ask occasional questions; rapidly clarify critical vocabulary within the context of the read-aloud; etc. After you finish reading the trade book aloud, lead students in a discussion as to how the story or information in this book relates to the read-alouds in this domain.

6

Animals of the East African Savanna



Lesson Objectives

Core Content Objectives

Students will:

- Understand that living things live in habitats to which they are particularly suited
- Identify the characteristics of the grassland habitat
- Explain how grassland animals have adapted to the grassland habitat
- Match specific plants and animals to their habitats
- Classify animals on the basis of the types of foods that they eat (herbivore, carnivore, omnivore)

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say “excuse me” or “please,” etc. (L.1.1)
- Ask questions to clarify directions, exercises, and/or classroom routines (L.1.2)
- Carry on and participate in a conversation over at least six turns, staying on topic, initiating comments or responding to a partner’s comments, with either an adult or another child of the same age (L.1.3)
- Prior to listening to a read-aloud, identify (orally or in writing) what they know and have learned that may be related to the specific story or topic to be read aloud (L.1.10)

- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.1.11)
- Make predictions (orally or in writing) prior to and during a read-aloud, based on the title, pictures, and/or text heard thus far and then compare the actual outcomes to predictions (L.1.12)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.1.14)
- Learn new words from read-alouds and discussions (L.1.15)
- Answer questions (orally or in writing) requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.1.17)
- Answer questions (orally or in writing) that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering “why” questions that require recognizing cause/effect relationships (L.1.20)
- Compare and contrast (orally or in writing) similarities and differences within a single read-aloud or between two or more read-alouds (L.1.21)
- Make personal connections (orally or in writing) to events or experiences in a read-aloud, and/or make connections among several read-alouds (L.1.22)
- With assistance, categorize and organize facts and information within a given domain (L.1.38)

Core Vocabulary

coexist, v. To live peacefully together at the same time or in the same place

Example: The cat and dog were able to coexist.

Variation(s): coexists, coexisted, coexisting

explore, v. To search and look carefully at something to discover more about it

Example: The children spent the afternoon in the backyard of their new home so they could explore the new swings and slide!

Variation(s): explores, explored, exploring

food chain, n. The relationship of living things as food sources for other living things

Example: In one food chain, caterpillars eat leaves and birds eat the caterpillars.

Variation(s): food chains

predators, n. Animals that hunt and eat other animals

Example: Lions are large predators that hunt other animals living in the savanna.

Variation(s): predator

prey, n. An animal that is hunted by other animals

Example: Many grasshoppers hide in the grass of the savanna so they do not become prey to the birds flying overhead.

Variation(s): none

trunk, n. The long nose of an elephant

Example: He saw the elephant use its trunk to pick up peanuts at the zoo.

Variation(s): trunks

<i>At a Glance</i>	Exercise	Materials	Minutes
<i>Introducing the Read-Aloud</i>	Making Predictions About the Read-Aloud		10
	Purpose for Listening		
<i>Presenting the Read-Aloud</i>	Animals of the East African Savanna		15
<i>Discussing the Read-Aloud</i>	Comprehension Questions		10
	Word Work: Explore		5
 Complete Remainder of the Lesson Later in the Day			
<i>Extensions</i>	Food Chain Game	Image Cards 8, 10, 11	20
	Habitat Review	Image Cards 1–11 Habitat Posters	
	Animals and Their Habitats Assessment	Instructional Master 6B-1 three pieces of paper per student, scissors, glue, drawing tools	

6A

Animals of the East African Savanna



Introducing the Read-Aloud

10 minutes



Making Predictions About the Read-Aloud

← Show image 6A-1: Savanna landscape

Review with students the climate of the East African Savanna. Is it hot or cold? Does it rain a lot, a little, or both?

Ask students if they think the same animals that lived in the Arctic tundra could live in the East African Savanna. Why or why not?

Repeat using the Sonoran Desert.

Remind the students about the giraffe's long, tough tongue and ask if they remember from the last read-aloud how the giraffe's tongue helps it survive in the savanna. Then ask if they can think of other ways animals might have to adapt to the conditions of the savanna.

Purpose for Listening

Tell students to listen to find out more about the animals of the East African Savanna.

Animals of the East African Savanna



← Show image 6A-1: Savanna landscape

Hi folks, Rattenborough back to help you **explore** the next stop on our world tour of habitats—the wildlife of the East African Savanna.¹

- 1 When you explore, you search and look carefully to find out more about a place. Rattenborough is going to help us find out more about the savanna.

The plants and animals of the savanna have had to adapt to the conditions of their habitat. Yesterday, you learned how the grasses and acacia tree have adapted to the savanna by growing deep roots.



← Show image 6A-2 Giraffe near a tree²

We also learned yesterday that the giraffe's favorite food is twigs and leaves from the acacia tree. Do you remember that a giraffe has a very long, tough tongue which it stretches out to reach the leaves among all these sharp thorns? As you can see, the leaves of the acacia are also very high up off the ground. Of course, that's no trouble for the giraffe either, since its neck is really long and so are its legs!

- 2 Do you remember the name of this animal?

Many animals in the savanna have long, powerful legs so that they can quickly run away from **predators**, animals that hunt and kill other animals. Their long legs also help them travel long distances searching for food. Can you imagine a rat like me keeping up with a giraffe or zebra? Not a chance!



← Show image 6A-3: Oxpecker on giraffe³

Now, there's a funny little bird that's been sitting on this giraffe the whole time I've been watching. This is the oxpecker. Oxpeckers perch on the backs of large animals. This oxpecker will use its sharp claws to hold on to the giraffe, who will hardly even know it's there. The giraffe and the oxpecker **coexist**.⁴ The oxpecker feeds on the fleas and ticks living on the giraffe's body and warns the giraffe of any predators that might be trying to

- 3 What do you see in this image?

- 4 When two animals coexist, it means that they live together peacefully.

sneak up on it. In turn, the giraffe will let the oxpecker live on its back and provide the oxpecker food (fleas and ticks), shelter, and protection from predators. The oxpecker will spend most of its life on the giraffe's back—what a partnership!



5 What do you see in this picture?

← **Show image 6A-4: Zebra**⁵

So, here I am, back in all this tall grass to see what other savanna animals I can find. Oh, here are some legs. Let's see who I've managed to bump into. I'm sure you'll recognize the black and white stripes of the zebra. Zebras eat the grass on the savanna.

Zebras are specially adapted to living in the savanna. They have strong, long legs that make them very good at outrunning lions and other predators. And the stripes on the zebra's legs and body don't just make it look pretty—they camouflage the zebra against the grass so that predators can't see it, making it easier for the zebra to hide and then get away.



← **Show image 6A-5: Elephant**

Over there I can see the largest land animal in the world. Can you guess what it is? This African elephant is very big. Can you imagine how much an animal this size eats? Elephants eat parts of trees and grass, and lots of it—up to 400 pounds per day! That's about the same amount as the weight of nine first graders!

African elephants are adapted to the hot weather in the savanna. They have huge ears that they flap to keep away bugs and to stay cool. They have thick skin, which protects them from branches and thorns.

6 (Point to the trunk of the elephant.)

Do you see the **trunk** on that elephant?⁶ An elephant uses its trunk for all sorts of things. The trunk is, of course, the elephant's nose for breathing and smelling, but the trunk is also used like a hand for lifting things, gathering food, and even holding onto other elephants' tails. Baby elephants, or calves, use their trunks to grasp other elephants' tails to keep them from wandering away from the rest of the herd and getting lost. The trunk can also be used like a straw to suck up water for drinking, or like a hose for showers and play time!



← **Show image 6A-6: Lions**

The savanna can be a dangerous place. It's safer for me up here in this spiky acacia tree with my trusty binoculars. I bet you know what these animals are called.

Lions live in groups. The females, or lionesses, do most of the hunting. They are carnivores that hunt zebras, elephants, and all kinds of other savanna animals.⁷ Most groups of lions, called prides, have just one or two male lions. The male lion is huge and incredibly strong. It has a furry mane, powerful jaws, and fearsome claws.⁸ Lions are strong predators that hunt and eat many of the other animals that live in the savanna. Unless this lion meets a stronger lion, no other animal in the savanna habitat can match the lion's strength and power.

The animals that are hunted by predators are called the **prey**. One of lions' favorite prey to hunt and eat are zebras. The zebras try to use the camouflage of their stripes to hide in the grasses of the savanna so that the lions do not see them.⁹

7 What do carnivores eat?

8 (Point to the parts of the lion as you talk about them.)

9 (Teach students this hint for remembering the difference between predators and prey: predators hunt and prey hide to avoid being eaten.)

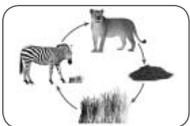


← **Show image 6A-7: Vultures**

Up at the top of this tree I can see and hear a bird that is waiting for the lions to finish eating so it can have its dinner. That is a vulture. A vulture is a scavenger, which, as you have learned, is an animal that eats leftovers.¹⁰

Rats like me are scavengers, too, but I wouldn't go near a lot of the things vultures like to eat!

10 Do you remember what other animals are scavengers? Hint: One lives in the Arctic tundra and one lives in the Sonoran Desert.



← **Show image 6A-8: Food chain**

All of the animals and plants you've learned about so far are part of something we call the **food chain**, which is illustrated in this image. What do you see at the bottom of the picture? It is the savanna grass. The arrow points from the savanna grass to the zebra because the zebra eats the grass. The next arrow points from the zebra to the lion, because . . . You guessed it: the lion eats the zebra. The next picture after the lion is a picture of the dirt, because eventually the lion dies and its body becomes a part

of the dirt, or soil. Then more grass grows out of that soil, and that starts the chain all over again.

Next, I think we should head to a habitat that's a bit closer to home and explore some plants and animals that might look quite familiar to us. But for now, I'm going to go check out more wildlife. I'll see you later.

Discussing the Read-Aloud

15 minutes

Comprehension Questions

(10 minutes)

1. Were your predictions about how animals would have to adapt to the savanna correct? What was incorrect and why? (Answers may vary.)



← Show image 6A-4: Zebra

2. What animal is this? (zebra) How are zebras adapted to living on the savanna? (stripes that camouflage, long legs for running fast from predators) Are zebras herbivores, carnivores, or omnivores? (herbivores)



← Show image 6A-6: Lions

3. What animal is this? (lion) Are lions herbivores, carnivores, or omnivores? (carnivores)



← Show image 6A-5: Elephant

4. What animal is this? (elephant) How are elephants adapted to living on the savanna? (thick skin protects from sun and heat, flap ears as fans) Are elephants herbivores, carnivores, or omnivores? (herbivores)



← Show image 6A-2: Giraffe

5. What animal is this? (giraffe) How are giraffes adapted to living in the savanna? (long necks; long tongues; long legs) Are giraffes herbivores, carnivores, or omnivores? (herbivores)



← Show image 6A-3: Oxpecker on giraffe

6. How do the oxpecker and the giraffe coexist? (The oxpecker eats the bugs that irritate the giraffe. The giraffe provides food and protection for the oxpecker.)

7. How are the lion, elephant, giraffe, and zebra the same? (They all live in the East African Savanna. They all need food, water, and shelter.) How are they different? (They all have different adaptations. Some are predators and some are prey. They may be herbivores, omnivores, or carnivores.)
8. *What? Pair Share:* Asking questions after a read-aloud is one way to see how much everyone has learned. Think of a question you can ask your neighbor about the read-aloud that starts with the word *what*. For example, you could ask, “What did you hear about in today’s read-aloud?” Turn to your neighbor and ask your “what” question. Listen to your neighbor’s response. Then your neighbor will ask a new “what” question, and you will get a chance to respond. I will call on several of you to share your questions with the class.

Word Work: Explore

(5 minutes)

1. In the read-aloud today, Rattenborough said that he would help us *explore* the savanna.
2. Say the word *explore* with me.
3. When you explore, you look around carefully and search to discover and learn more about a place.
4. Ellie couldn’t wait to explore the new house they had just moved into.
5. Where would you like to explore? Tell me about a habitat that you would like to explore and why. Try to use the word *explore* when you tell about it. (Ask two or three students. If necessary guide and/or rephrase students responses, “I would like to explore ___, because . . . ”)
6. What’s the word we’ve been talking about?

For follow-up, allow the rest of the class to share where they would like to explore. Be sure they use the word *explore*.



Complete Remainder of the Lesson Later in the Day

6B

Animals of the East African Savanna



Extensions

20 minutes

Food Chain Game

Help the students use Image Cards 8 (acacia tree and savanna grass), 10 (lion), and 11 (zebra) to create a food chain of the East African savanna. Once students have created the food chain, remove one of the cards and discuss what they think will happen to the rest of the plants and animals in the image card food chain. Will all of them die or could they find another source of food? What else do they think those animals could eat? For example, if the zebra is removed, what else do they think the lion could eat? (giraffe) Expand on the food chain by talking about possible replacements. What happens if there are no replacements? Can the animals survive without anything to eat?

Tell students that this is just one possible food chain on the East African Savanna. Guide students in creating other food chains. For example, a food chain for the Arctic Tundra might include plants, hare, and arctic fox. A food chain for the desert might include cacti, insects, and elf owl.

Habitat Review

Use the Habitat Posters to review each of the habitats that the students have learned about thus far. Compare and contrast the weather and climate of each habitat. If time allows, use Image Cards 1–11 to name each animal and review how the animals are adapted to the conditions in their own habitat.

Note: These Habitat Posters and image cards may also be used in small groups or placed in centers for sorting.



Animals and Their Habitats Assessment (Instructional Master 6B-1)

Note: You may choose to have students do this assessment in a separate sitting.

Give each student three sheets of paper and drawing utensils. On one sheet of paper, have them draw the Arctic tundra habitat; on the second sheet of paper, have them draw the desert habitat; and on the last sheet of paper have them draw the savanna or grassland habitat. Tell students to be sure to include plants that might live in each habitat.

Next, hand out Instructional Master 6B-1. Have students first name and then cut out the animals and place them in the correct habitat. If time allows, talk with each student about their work and why they placed certain animals in certain habitats.

7

The Temperate Deciduous Forest



Lesson Objectives

Core Content Objectives

Students will:

- Understand that living things live in habitats to which they are particularly suited
- Identify the characteristics of the temperate deciduous forest habitat

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say “excuse me” or “please,” etc. (L.1.1)
- Carry on and participate in a conversation over at least six turns, staying on topic, initiating comments or responding to a partner’s comments, with either an adult or another child of the same age (L.1.3)
- Prior to listening to a read-aloud, identify (orally or in writing) what they know and have learned that may be related to the specific story or topic to be read aloud (L.1.10)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.1.11)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.1.14)
- Learn new words from read-alouds and discussions (L.1.15)

- Answer questions (orally or in writing) requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.1.17)
- Answer questions (orally or in writing) that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering “why” questions that require recognizing cause/effect relationships (L.1.20)
- Compare and contrast (orally or in writing) similarities and differences within a single read-aloud or between two or more read-alouds (L.1.21)
- Evaluate and select read-alouds, books, or poems on the basis of personal choice for rereading (L.1.27)

Core Vocabulary

broadleaf, *adj.* A type of tree that has wide leaves to collect sunlight

Example: The forest has several different kinds of broadleaf trees.

Variation(s): none

climate, *n.* The type of weather that a place has over a long period of time

Example: The climate in the desert is very different from the climate in the tropical rainforest.

Variation(s): climates

deciduous, *adj.* Losing leaves every year

Example: Maple and oak trees are deciduous trees and lose their leaves in the fall.

Variation(s): none

species, *n.* A group of animals or plants that are alike in specific ways and have similar characteristics or features

Example: There are about seventy species of whales.

Variation(s): none

temperate, *adj.* Not extremely hot or cold; a “middle” or moderate temperature

Example: Many places in the United States have a temperate climate.

Variation(s): none

<i>At a Glance</i>	Exercise	Materials	Minutes
<i>Introducing the Read-Aloud</i>	What Do We Know?		10
	Where Are We?		
	Purpose for Listening		
<i>Presenting the Read-Aloud</i>	The Temperate Deciduous Forest		15
<i>Discussing the Read-Aloud</i>	Comprehension Questions		10
	Word Work: Deciduous		5
 Complete Remainder of the Lesson Later in the Day			
<i>Extensions</i>	Student Choice		20
<i>Take-Home Material</i>	Parent Letter	Instructional Master 7B-1	

7A

The Temperate Deciduous Forest



Introducing the Read-Aloud

10 minutes

What Do We Know?

Ask the students what they know about forests. You may prompt discussion with the following questions:

- What is a forest? (You may need to explain that a forest is a large area of trees.)
- Have you ever seen or been in a forest? If so, where?
- What things are found in a forest?
- Are all forests the same, or are there different kinds of forests?

Where Are We?

Tell students that not all forests are the same. Share that the forest they are going to learn about today is a temperate deciduous forest.



- ← **Show image 7A-1: Map of the world with temperate deciduous forests around the world highlighted**

Point to the highlighted portions of the map. Explain to students that all of these highlighted areas have temperate deciduous forests and that these kinds of forests exist all around the world. Tell students that they are going to hear about a temperate deciduous forest today in the United States, one that is part of the states of Tennessee and North Carolina.



- ← **Show image 7A-2: Great Smoky Mountains**

This forest is also a national park called Great Smoky Mountains National Park and is the most visited national park in the United States. The mountains are named for the blue-gray mist that surrounds the mountain peaks.

Purpose for Listening

Tell the students that the forest they are going to learn about today is a temperate deciduous forest. Tell the students to listen carefully to learn what a temperate deciduous forest is.



1 or strange and fascinating

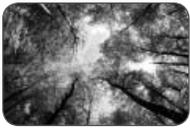
The Temperate Deciduous Forest

← Show image 7A-3: Rattenborough in an oak tree

Rattenborough here with the next thrilling chapter in our habitat read-alouds. After looking at some very exotic¹ faraway places, I thought we could visit a habitat that is quite common in many parts of the United States. This is a forest habitat. You know you're in a forest habitat when everywhere you look there are trees all around you!

You may be wondering why I'm up a tree. Well, I'm enjoying the wonderful view of a forest in North America! There are over 500,000 acres of forest in this national park.² Many of you may have seen forests like this before, either in real life or in books. You may be familiar with some of the plants and animals that live here in the Smoky Mountains—a lot of them live in many other places all over the United States.

2 One acre is about as big as an American football field!



← Show image 7A-4: View through the trees

There are many different kinds of forests in the world. The forests of the Smoky Mountains are called **temperate** forests. A temperate forest grows in an area that has four seasons, including a warm summer and a cold winter, and receives steady rainfall throughout the year.³

3 Even though these forests have a warm summer and a cold winter, temperate means it's not extremely hot or extremely cold like in other areas.

4 The climate of a habitat is what the weather is usually like over a long period of time.

This forest is also called a **deciduous** forest because it is full of deciduous plants—trees, bushes, and shrubs that lose their leaves every fall, and grow leaves again when the temperatures start to rise in the spring. The temperate deciduous forest has a much friendlier **climate** than the other habitats we've learned about, and it can support many different kinds of plant and animal life.⁴



← Show image 7A-5: Forest

A temperate deciduous forest is made up of **broadleaf** trees like oak, maple, beech, and elm.⁵ These trees grow very tall and are thickly covered with wide leaves that are better at collecting

5 Broadleaf trees have broad leaves, or wide leaves.

sunlight than trees like pine trees that have needles instead of leaves. Under these taller trees, there are saplings (young trees), as well as shrubs and bushes such as azaleas and rhododendrons, and plants that bear fruit like juniper and wild raspberry. Closer to the ground grow shorter plants like grasses and wildflowers, and on the forest floor, mosses and lichens grow.



← **Show image 7A-6: Oak tree**

I'm going to start at the top, and work my way down so I can show you this wonderful habitat. The tree I am standing in now is an oak tree. This oak is very tall—almost eighty feet—and I bet it is well over a hundred years old. It is covered with leaves and nuts called acorns. An acorn is a seed. If it gets planted in the forest soil, it can grow roots and a shoot which will eventually turn into an oak sapling.

Like the saguaro cactus in the desert and the acacia tree in the savanna, oak trees provide shelter and food for many animals. Owls, woodpeckers, mice, and foxes make their homes in the branches or around the roots of the oak tree, and acorns are food for squirrels, birds, deer, and other animals.



← **Show image 7A-7: Insect**

Look at that tasty insect! Well, the oak tree is home for hundreds of different kinds of insects. Some insects, like the stink bug and the weevil, eat its leaves and acorns. Moths and butterflies lay their eggs in the tree. Other insects, like ants and timber beetles, live under the bark of the oak or in dead and fallen trees.

Just as insects are drawn to the oak as a source of food, so are animals that feed on insects. Spiders and all kinds of birds hunt for tasty bugs among the branches of the oak tree. Bears and other animals find food here, too. The oak tree is an amazing habitat in itself!



← **Show image 7A-8: Berry bushes**

Down on the forest floor there are all kinds of shrubs, including flowering plants like rhododendrons, and plants that grow fruit, like these delicious wild blueberry plants. The fruits of these shrubs are food to many **species** of animals including rabbits, chipmunks, deer, and omnivores like bears.⁶ Mmm, some of these blueberries are perfectly ripe, and they taste delicious. What a tasty treat!

6 A species is a group of plants or animals that are similar or alike.

Down here on the ground I can see wildflowers, grasses, and clover. These plants, which cover the forest floor, are home to many types of insects and are food to grazing animals such as deer and mice.



← **Show image 7A-9: Plants leaning toward light**

One interesting thing about the plants in the forest is that they are all leaning in the same direction. Isn't that strange!⁷ Well, they have to do that because they are looking for sunlight. The leaves of the big trees get all the sun; only a small amount of sunlight gets through to the forest floor—that's why it's so shady in here. The plants down here have to grow toward the sun so they can get enough light to make the food they need to survive.

7 Why do you think the plants might be leaning in one direction?



← **Show image 7A-10: Moss**

You may have seen this fuzzy green stuff growing on rocks, trees, and the ground in the forest or countryside.⁸ Mosses are small green plants which grow in clumps in damp and shaded places. They cover parts of the forest floor like a carpet, and are home to many small animals and insects. It feels really soft to walk on—thick and spongy—and it tickles a bit!

8 (Point to the moss in the picture.)



← **Show image 7A-11: Great Smoky Mountains**

The deciduous forests are so rich in plant life that I could go on for days showing you all of it. But for now, remember that the different parts of the forest contain their own kinds of plants, which in turn are shelter and food to many different animals. Next, we're going to look at some of those animals, but for now, let's take a break. I'm going to the top of that oak tree to enjoy the amazing

view of the Smoky Mountains before I camp for the night. I'll see you next time!

Discussing the Read-Aloud

15 minutes

Comprehension Questions

(10 minutes)

1. Are all forests the same, or are there different kinds of forests? (different kinds)
2. Does a temperate deciduous forest generally stay cold all of the time like the Arctic, or does it have cold and warm seasons? (It has cold and warm seasons; in winter and summer.)
3. Is a temperate deciduous forest, like the forests of the Great Smoky Mountains National Park, very dry like the desert, or does it get a steady amount of rainfall? (It gets a steady amount of rainfall throughout the year—not too much, not too little.)
4. Describe what happens to the trees in different seasons in a deciduous forest. (The plants lose their leaves in the fall and grow more in the spring.)
5. What kinds of plants might you see in a temperate deciduous forest? (broadleaf trees, bushes, shrubs, mosses, etc.)
6. How are the plants of a temperate deciduous forest important to animals? (They provide food and shelter.)
7. How is the temperate deciduous forest habitat of the Great Smoky Mountains like the other habitats that you have learned about? (Plants and animals live in all of them.) How is it different? (The climate is different, different plants and animals are found in each one, etc.)

I am going to ask a question. I will give you a minute to think about the question, and then I will ask you to turn to your neighbor and discuss the question. Finally, I will call on several of you to share what you discussed with your partner.

8. *Think Pair Share:* Would you like to spend time in a temperate deciduous forest? Why or why not? (Answers may vary.)

Word Work: Deciduous

(5 minutes)

1. The read-aloud said, “This forest is also called a *deciduous* forest because it is full of *deciduous* plants—trees, bushes, and shrubs that lose their leaves every fall, and grow leaves again when the temperatures start to rise in the spring.”
2. Say the word *deciduous* with me.
3. Deciduous plants generally lose all of their leaves in the fall and grow new leaves in the spring.
4. In the winter, you can usually tell which plants are deciduous, because their branches are bare.
5. Have you seen any deciduous plants? How do you know if a plant is deciduous? Try to use the word *deciduous* when you tell about it. (Ask two or three students. If necessary, guide and/or rephrase the students’ responses: “The tree in my yard is deciduous, because . . .”)
6. What’s the word we’ve been talking about?

Use a *Making Choices* activity for follow-up. Directions: I will describe a plant. If I describe a deciduous plant, you will say, “That’s a deciduous plant.” If I describe a plant that is not deciduous, you will say, “That’s not a deciduous plant.”

1. The pine tree in our backyard stays green and keeps its needles all year long. (That’s not a deciduous plant.)
2. I love to watch the yellow leaves falling from the maple tree each fall. (That’s a deciduous plant.)
3. It’s spring, and that bush is just starting to get its new leaves. (That’s a deciduous plant.)
4. We bought this plant for our yard because it will have green leaves even in the winter. (That’s not a deciduous plant.)
5. It’s winter, and the branches of the oak tree have no leaves. (That’s a deciduous plant.)



Complete Remainder of the Lesson Later in the Day

7B

The Temperate Deciduous Forest



Extensions

20 minutes

Student Choice

Ask the students which read-aloud they have heard recently that they would like to hear again. If necessary, reread the titles of recent read-alouds to refresh the students' memories. You may also want to choose one yourself.

Reread the text that is selected. Feel free to pause at different places in the read-aloud this time and talk about vocabulary and information that you did not discuss during the read-aloud previously.

After the read-aloud, ask students if they noticed anything new or different during the second reading that they did not notice during the first reading. Also, ask them to try to express why they like this read-aloud. Remember to repeat and expand upon each response using richer and more complex language, including, if possible any read-aloud vocabulary.

Parent Letter

Send home Instructional Master 7B-1.

8

Animals of the Temperate Deciduous Forest



Lesson Objectives

Core Content Objectives

Students will:

- Understand that living things live in habitats to which they are particularly suited
- Identify the characteristics of the temperate deciduous forest habitat
- Explain how temperate deciduous forest animals have adapted to the temperate deciduous forest habitat
- Classify animals on the basis of the types of foods that they eat (herbivore, carnivore, omnivore)

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say “excuse me” or “please,” etc. (L.1.1)
- Ask questions to clarify directions, exercises, and/or classroom routines (L.1.2)
- Carry on and participate in a conversation over at least six turns, staying on topic, initiating comments or responding to a partner’s comments, with either an adult or another child of the same age (L.1.3)
- Prior to listening to a read-aloud, identify (orally or in writing) what they know and have learned that may be related to the specific story or topic to be read aloud (L.1.10)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.1.11)

- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.1.14)
- Learn new words from read-alouds and discussions (L.1.15)
- Answer questions (orally or in writing) requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.1.17)
- Ask questions to clarify information or the topic in a read-aloud (L.1.18)
- Answer questions (orally or in writing) that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering “why” questions that require recognizing cause/effect relationships (L.1.20)
- Draw pictures, dictate, and/or write simple sentences to represent details or information from a read-aloud (L.1.24)
- Share writing with others (L.1.29)
- With assistance, categorize and organize facts and information within a given domain (L.1.38)

Core Vocabulary

antlers, n. A pair of bony, branched growths on the head of a male member of the deer family

Example: The deer rubbed its antlers against the oak tree.

Variation(s): antler

claws, n. The long, curved, pointed nails that birds and many other animals have on their feet

Example: Eagles use their sharp claws to help them catch their prey.

Variation(s): claw

hibernate, v. To sleep during the winter season for periods of time that are longer than just one night

Example: Some animals hibernate in the winter, while others remain active.

Variation(s): hibernates, hibernated, hibernating

store, v. To save and put something away to be used later

Example: To prepare for the winter, some animals store food.

Variation(s): stores, stored, storing

territory, n. A space or an area in which an animal or group of animals live(s) and in which they often will not permit other animals to enter or live

Example: Many animals protect their territory.

Variation(s): territories

<i>At a Glance</i>	Exercise	Materials	Minutes
<i>Introducing the Read-Aloud</i>	What Have We Already Learned?		10
	Purpose for Listening		
<i>Presenting the Read-Aloud</i>	Animals of the Temperate Deciduous Forest		15
<i>Discussing the Read-Aloud</i>	Comprehension Questions		10
	Word Work: Store		5
 Complete Remainder of the Lesson Later in the Day			
<i>Extensions</i>	Image Card Sort	Image Cards 1–15 Habitat Posters	20

8A

Animals of the Temperate Deciduous Forest



Introducing the Read-Aloud

10 minutes

What Have We Already Learned?

Ask the students what they have already learned about the temperate deciduous forest. You may prompt discussion with the following questions:

- Does the temperate deciduous forest stay the same year-round or does it change during the different seasons? How does it change?
- Is the temperate deciduous forest dry like the desert, or does it get steady rainfall throughout the year?
- What kinds of plants live in the temperate deciduous forest?
- What kinds of foods are eaten by herbivores, carnivores, and omnivores?

Purpose for Listening

Tell the students that the next read-aloud is about some of the animals that live in the temperate deciduous forest. Tell them to listen carefully to learn about these animals and how they find the food, water, and shelter that they need.



Animals of the Temperate Deciduous Forest

← Show image 8A-1: Rattenborough in a tree

Last time we started to learn about the temperate deciduous forest here in Great Smoky Mountains National Park. The climate here is temperate, which means there's a warm summer and a cold winter; steady, regular rainfall all year long; and trees that are mostly deciduous broadleaf. Deciduous broadleaf trees drop their wide leaves in the cooler fall season and grow them again when the warmer temperatures of spring come. We learned about the other kinds of plants, in addition to the broadleaf trees, that call this habitat home, and now we're going to take a look at some of the animals that live here. Great Smoky Mountains National Park is home to almost four hundred different kinds of animals. Animals that live in the temperate deciduous forest are adapted to living in a habitat with four seasons.¹

- 1 Name the four seasons and tell me what the weather is like in each one.



← Show image 8A-2: Squirrel eating an acorn

As you can see, I'm up in the mighty oak tree again. This amazing tree is home to many animals, and I'm standing at the nest of one of them—the gray squirrel. This little animal is covered in warm, gray-brown fur with a white chest and a long, bushy tail. Squirrels live in holes in the trunks of trees or in nests high up in trees like this one. Their nests are built from twigs, leaves, moss, and grass. Squirrels use their strong back legs and sharp **claws** to help them leap from tree to tree and to run up and down tree trunks, and they use their tails to help them balance.² Squirrels are omnivores and spend most of their time looking for food. Omnivores are animals that eat both plants and other animals. The squirrel eats mostly acorns from the oak tree, but it also eats nuts, mushrooms, berries, seeds, and even bird eggs and insects. This squirrel might nibble on an acorn or two now, but it will also bury and **store** many acorns underground so it will have them in the winter when other food is hard to find.³

- 2 Claws are like toenails, but long and pointed.

- 3 Why do you think food is hard to find in the winter?



← **Show image 8A-3: Barred owl**

A barred owl lives in a hole in this oak tree. I have to be careful, because owls are carnivores. Carnivores are animals that eat other animals, and, unlike the elf owl in the desert, this owl happens to enjoy eating rats! This owl also eats other small animals like mice, insects, and even other birds. Owls have very good hearing and excellent eyesight, which allows them to find their prey easily in the thick forest.

Owls are nocturnal, which means they only come out at night, so I have some time before this one is ready for a late-night snack.



← **Show image 8A-4: Black bear**

Hold on, what's that scratching sound coming from below? Look down the tree—it's a black bear! Black bears are common in North American temperate deciduous forests, and there are more than a thousand in this national park. They are large animals—they weigh as much as fourteen first-graders would weigh all together—and when they stand on their hind legs, they can be taller than a person.

Bears are omnivores and like to eat lots of different plants, like herbs, nuts, and berries, as well as animals such as fish and insects. Black bears **hibernate**, or sleep, during the winter in hollowed-out trees or caves. When they are hibernating, bears use less energy and do not need to eat any food for many, many days. This is a good thing, because during the winter the foods that bears eat are scarce and hard to find.

I'm going to take a closer look at this bear. Bears are covered in thick black or brown fur. This bear uses its sharp claws to strip the bark off this tree to uncover the insects that live there. It will use its long, sticky tongue to get into every crack to hunt out the insects, and they'll make a delicious meal for him, I'm sure.



← **Show image 8A-5: Buck**

4 Antlers are bony, branched growths on the head of the deer.

5 A territory is an area of land where an animal lives and which it protects from other animals.

I just saw a deer through the trees. Deer often live in the temperate deciduous forest because it is such a good place to stay hidden, but they often hunt for food in neighboring meadows. Quick—let’s go and see if we can find it. Phew—they move fast, but here it is. This is a buck. A buck is a male deer, and we can tell because male deer have **antlers**.⁴

Did you know that a buck’s antlers fall off every year and will grow back again? Bucks mark their **territory** by stripping the bark off trees with their antlers. This is a sign or warning to others that a buck already lives in this area and doesn’t want any visitors!⁵ Bucks also use their antlers for fighting with other male deer. This deer is a white-tailed deer. Its coat is tan right now, but in the winter it will change to gray-brown, and it has patches of white on its underside. This helps the deer to be camouflaged or hidden in the environment. How do you think the change in color from tan to gray brown with patches of white in winter helps to camouflage the deer?



← **Show image 8A-6: Doe running away**

6 What do we call an animal that eats only plants?

7 or to avoid being hunted and killed

Deer graze on grasses and eat tree leaves, berries, and acorns, among other things.⁶ They mostly come out to feed at night when the light is low, and they rest during the day. Deer are hunted by animals such as the wolf and the coyote, and are also hunted by people, so they have had to adapt to avoid being prey.⁷ This white-tailed deer has strong, long legs which are good for running and jumping and for escaping from predators like wolves, coyotes, and people.

The temperate deciduous forest’s climate can support many different plants and animals because it has four seasons. It is called temperate because it never gets too cold, like the Arctic, or too hot, like the Sonoran Desert. There is a steady rate of rainfall throughout the year, so plants can grow and animals have food and water to keep them alive. This is just one of the many kinds of

forests in the world, and next we're going to take a look at another kind. It's going to be very different in a lot of ways. I'll see you on our next adventure.

Discussing the Read-Aloud

15 minutes

Comprehension Questions

(10 minutes)



← Show image 8A-2: Squirrel eating an acorn

1. What animal is this? (gray squirrel) Where does the gray squirrel find shelter in the temperate deciduous forest? (either in a hole or a nest in an oak tree) What food does the gray squirrel in a temperate deciduous forest eat? (It eats acorns, other small plants, and insects.) Is the gray squirrel a carnivore, herbivore, or omnivore? (omnivore)



← Show image 8A-3: Barred owl

2. What animal is this? (barred owl) Where does the barred owl find shelter in the temperate deciduous forest? (usually in a hole in an oak tree) What food does the barred owl in a temperate deciduous forest eat? (It eats small animals.) Is the barred owl a carnivore, herbivore, or omnivore? (carnivore)
3. The read-aloud said that the barred owl is nocturnal. What does that mean? (It rests and sleeps during the day and is active at night.)



← Show image 8A-4: Black bear

4. What animal is this? (black bear) Where does the black bear find shelter in the temperate deciduous forest? (in hollowed-out trees or caves) In a temperate deciduous forest, what food does the black bear eat? (It eats plants and small animals.) Is the black bear a carnivore, herbivore, or omnivore? (omnivore) During the winter, the black bear hibernates. What does that mean? (sleeps during the winter)



← Show image 8A-5: Buck

5. What animal is this? (deer or buck) What food does the deer in a temperate deciduous forest eat? (It eats plants.) Is the deer a carnivore, herbivore, or omnivore? (herbivore)

6. What adaptations do the gray squirrel, barred owl, black bear, and deer have in order to live in the temperate deciduous forest? (The gray squirrel has strong back legs, sharp claws, and a long tail to quickly climb trees and balance on branches. The barred owl has good hearing and excellent eyesight to hunt for food. The black bear has sharp claws and a long, sticky tongue that help it find food, and it hibernates during the winter so it doesn't have to eat. The deer has antlers and strong legs, and camouflages itself by changing the color of its fur in the winter.)
7. How are the gray squirrel, barred owl, black bear, and deer alike? (They all live in the temperate deciduous forest; they all need food, water, and shelter, etc.) How are they different? (They may be carnivores, herbivores, or omnivores; they have different adaptations, etc.)
8. *What? Pair Share:* Asking questions after a read-aloud is one way to see how much everyone has learned. Think of a question you can ask your neighbor about the read-aloud that starts with the word *what*. For example, you could ask, "What did you hear about in today's read-aloud?" Turn to your neighbor and ask your "what" question. Listen to your neighbor's response. Then your neighbor will ask a new "what" question, and you will get a chance to respond. I will call on several of you to share your questions with the class.

Word Work: Store

(5 minutes)

1. The read-aloud said, "This squirrel might nibble on an acorn or two now, but it will also bury and *store* many acorns underground so it will have them in the winter when other food is hard to find."
2. Say the word *store* with me.
3. *Store* means to save and put away for future use.
4. When warm weather arrives, I store my winter hat and gloves in a box in the closet.
5. Do you sometimes store food? Do you store other things? Try to use the word *store* when you tell about it. (Ask two or three

students. If necessary, guide and/or rephrase the students' responses: "I store ____."

6. What's the word we've been talking about?

Use a *Making Choices* activity for follow-up. Directions: I will name a place. I want you to think about what you might store in that place. For example, if I say, "kitchen cabinet," you might say, "I store peanut butter in the kitchen cabinet." Remember to use the word *store* when you answer. (Answers may vary for all examples.)

1. the refrigerator
2. your desk (or wherever your students store supplies)
3. your pockets
4. under your bed
5. your backpack



Complete Remainder of the Lesson Later in the Day

8B

Animals of the Temperate Deciduous Forest



Extensions

20 minutes

Image Card Sort

Display the Habitat Posters to quickly discuss the various habitats that have been studied. Then, place the Habitat Posters in different locations around the room.

Now pass out Image Cards 1–15 to students—either one card per student or one card per pair of students, depending upon the number of students in your class. As you pass out each card, ask the entire class to name the animal or plant depicted. Tell each student to stand next to the Habitat Poster that depicts the habitat of the plant or animal card that s/he is holding.

Proceeding from one habitat to another, quickly ask each student to identify each plant or animal and name the habitat it lives in. For example, “A gray squirrel lives in the temperate deciduous forest.” Ask the rest of the class if they agree or disagree with each student’s answer.

If time permits, conclude the extension by asking students to return to their desks and to get out a piece of paper or their writing journals. Have them think of one sentence about the plant or animal on their card. Tell them to use their sound/letter knowledge to sound out and write their sentences. Help struggling students by dictating the spelling of difficult words. You may need to use a shared writing activity with some students. (They dictate; you write.) Students may be asked to share their writing.

9

The Tropical Rainforest



Lesson Objectives

Core Content Objectives

Students will:

- Understand that living things live in habitats to which they are particularly suited
- Identify the characteristics of the tropical rainforest habitat

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say “excuse me” or “please,” etc. (L.1.1)
- Carry on and participate in a conversation over at least six turns, staying on topic, initiating comments or responding to a partner’s comments, with either an adult or another child of the same age (L.1.3)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.1.11)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.1.14)
- Learn new words from read-alouds and discussions (L.1.15)
- Answer questions (orally or in writing) requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.1.17)

- Answer questions (orally or in writing) that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering “why” questions that require recognizing cause/effect relationships (L.1.20)
- Evaluate and select read-alouds, books, or poems on the basis of personal choice for rereading (L.1.27)

Core Vocabulary

canopy, n. The top layer of the forest formed by the branches and leaves at the tops of the trees

Example: The canopy of the forest shades the plants and animals below.

Variation(s): canopies

dense, adj. Thick

Example: The rainforest is very dense because of the many plants that grow and live close together there.

Variation(s): denser, densest

evergreen, adj. Having green leaves all year round

Example: Pine trees are evergreens.

Variation(s): none

humid, adj. Wet and damp; containing a high amount of water or water vapor

Example: The air is often sticky and humid on a hot summer day.

Variation(s): none

tropical rainforest, n. A dense, hot, wet evergreen forest Note: Most tropical rainforest plants are evergreens, in the sense that the overall appearance of the plant remains green throughout the year. They replace their leaves gradually throughout the year as the leaves age and fall so that, unlike deciduous trees, there are very few bare branches.

Example: The Amazon Rainforest is the world’s largest tropical rainforest.

Variation(s): tropical rainforests

<i>At a Glance</i>	Exercise	Materials	Minutes
<i>Introducing the Read-Aloud</i>	Essential Background Information or Terms	globe	10
	Purpose for Listening		
<i>Presenting the Read-Aloud</i>	The Tropical Rainforest		15
<i>Discussing the Read-Aloud</i>	Comprehension Questions		10
	Word Work: Canopy		5
 Complete Remainder of the Lesson Later in the Day			
<i>Extensions</i>	Domain-Related Trade Book	<i>The Great Kapok Tree: A Tale of the Amazon Rainforest</i> , by Lynne Cherry or another book from the Recommended Trade Book List	20

9A

The Tropical Rainforest



Introducing the Read-Aloud

10 minutes

Essential Background Information or Terms

Using a globe, point to and use your finger to trace around the equator. As you do this, tell the students that the equator is an imaginary line around the middle or center of the earth. Explain that the land and water near the equator stay very warm year-round. Ask the students if a temperate deciduous forest would be found near the equator and have them explain why not. (No, because it gets cold during the winter in temperate deciduous forests.)

Tell the students that the next read-aloud is about a different kind of forest that is located near the equator where it stays warm and wet all year long. This type of forest is called the tropical rainforest. The particular rainforest that Rattenborough will visit today is called the Amazon Rainforest and is located on the continent of South America. Point to South America and the approximate location of the Amazon Rainforest; it covers more than 1.4 billion acres in the following countries—Brazil (with sixty percent of the rainforest), Peru (with thirteen percent of the rainforest, second after Brazil), Colombia, Venezuela, Ecuador, Bolivia, Guyana, Suriname, and French Guiana.

Purpose for Listening

Tell the students to listen carefully to learn about one example of a tropical forest, the Amazon Rainforest.



The Tropical Rainforest

← Show image 9A-1: Rattenborough swinging through rainforest

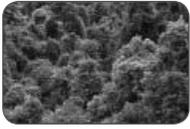
Hello there. Rattenborough reporting from a fascinating habitat—a habitat that has the greatest variety of plants and animals of any habitat on Earth. Welcome to the **tropical rainforest**. Tropical places are warm and wet. A rainforest is a thick forest of plants that stay green year-round. So, a tropical rainforest is a warm, wet, thick forest of plants that stays green year-round. There are tropical rainforests in many places around the world close to the equator, but the one we are visiting is called the Amazon Rainforest. It is in South America, and is the largest tropical rainforest on Earth. The Amazon Rainforest is so **dense** that a rat like me could easily get lost.¹ It's hot and very **humid** here—the temperature is always very warm, and it rains heavily all year long.² My fur is feeling very wet and sticky, and it's a good thing that I brought my umbrella—there are between 80 and 240 inches of rainfall here every year. That makes this one of the wettest places you can find on land.³

- 1 *Dense* means thick. The plants in the tropical rainforest are thick because there are so many growing closely together.
- 2 Because of the warm temperature and rain, the air feels wet or humid.
- 3 (Provide the students with an idea of the number of inches of rainfall yearly where you live—demonstrate the amount with your hands—to put the amount of rainfall in the Amazon in context.)



← Show image 9A-2: Dense jungle

Temperate deciduous forests, which we learned about last time, have broadleaf trees that lose all of their leaves in the fall. The Amazon Rainforest also has broadleaf trees, but the main difference is that most of the trees here stay green all year long. The **evergreen** trees in this tropical rainforest replace their leaves gradually throughout the year as the leaves age and fall, so that the trees always look green and never have bare branches like the trees in a temperate deciduous forest. Because the climate here is the same all year round, plants do not need to slow down for cold winter weather, and the animals that live here always have a good supply of food all year, too.



← **Show image 9A-3: Rainforest canopy**

- 4 or as tall as very, very tall buildings or skyscrapers in large cities
- 5 A canopy is something that blocks out the sunlight. In a tropical rainforest, the canopy is the highest layer of plants formed by the tallest trees' leaves.

Take a look around. The trees in the rainforest are incredibly tall. They are so enormous, they grow as tall as thirteen-story buildings,⁴ and some grow much taller than that! I'm standing in a tree right now, and as you can see, the trees grow so thickly and so close together here that from above, you can see only a **canopy** of thick green leaves. You can't see the forest floor at all.⁵

Because the sun's light can't get through this canopy of leaves, everything under them is really dark. I've brought a flashlight to help me see down there.



← **Show image 9A-4: Rain drop**

The plants in the Amazon Rainforest have adapted to this climate in many ways. Because it's so dark in the rainforest underneath the canopy, most plants have large leaves so they can catch as much light as possible. Many of the plants have waxy leaves with ends that are tapered to help the water drip off them, like the water running off my umbrella.



← **Show image 9A-5: Tree with buttress roots**

- 6 (Point to the buttress roots in the picture.)

Because the trees are so tall, they often have large roots called *buttress roots* that help hold them up.⁶ Also, their trunks are covered in smooth, thin bark. The trees don't need thick bark to protect them from cold weather, in the same way that I don't need a coat and hat out here. There are even some plants that grow high up on tree trunks and branches so that they can get to the sunlight that doesn't reach the forest floor!



← **Show image 9A-6: Vines in the rainforest**

Many types of vines grow in the rainforest. Vines are climbing plants that grow on trees or wind themselves around tree trunks. Many animals use the vines growing among the trees almost like sidewalks and ladders to cross from one tree to another. I think they are pretty handy too—scurrying about on the vines is a quick and easy way for me to get from place to place.

The rainforest floor is a very shady place, which means it is a good habitat for mosses and fungi that don't need much sunlight. If you can believe it, there are even some plants that don't need any light at all to grow! They grow on the forest floor and get their energy from the rotting leaves instead of sunlight.



← **Show image 9A-7: Kapok tree**

I'm way up in a particular type of tree found in the Amazon Rainforest called a kapok tree, so high that you won't be able to see me! If I look down, I get a little dizzy, and I don't want to fall—it's a very long way down. The kapok tree is one of the tallest trees around. The kapok has a very long trunk, and its branches and leaves form a canopy over the plants and animals below. The top of the tree is so spread out that it covers everything below it from the sun, making it a good shelter for animals like birds, snakes, and monkeys.



← **Show image 9A-8: Bromeliad**

Plants, like some kinds of bromeliads, also make their home in the kapok. As you can see, bromeliads are flowering plants with long, waxy leaves. They store water in their leaves, making them a great place for tree frogs and insects to lay their eggs, or for birds to drink or take a bath. It's very handy to have these around when you are thirsty, like I am. It's so hot here, I need to stop for a little sip before I go on.



← **Show image 9A-9: Hairy Amazonian spider**

There are also many different kinds of animals that call the Amazon Rainforest home, and we're going to learn about those next time. For now, remember that tropical rainforests are always very warm and humid with lots of rainfall. The tropical rainforest is a dense, dark, and exciting place. But now I'm off—there's a huge, hairy spider on this branch, and I'm not too keen on spiders. See you later!

Discussing the Read-Aloud

15 minutes

Comprehension Questions

(10 minutes)

1. What is a tropical rainforest? (a forest that stays warm, wet and green all of the time and has many different types of plants and animals)
2. What are evergreens? (plants that appear green all year long because they only replace their leaves gradually throughout the year as the leaves age and fall, so that the trees always look green and never bare)
3. Why is it dark on the ground or floor of a tropical rainforest? (The canopy made by the leaves of the tall trees blocks the sunlight.)
4. What are some of the plants that live in the tropical rainforest? [Note: You may want to show some of the images again for a visual clue.] (kapok trees, vines, mosses, fungi, bromeliads)
5. How have the plants adapted to live in the tropical rainforest? (They reach for the sunlight or need little sunlight; they have large leaves to collect the sunlight; they have waxy leaves to allow runoff of water; the trees have large roots.)
6. How are the plants of the tropical rainforest important to the animals that live there? (They provide food, water, and shelter.)
7. How is a tropical rainforest like a temperate deciduous forest? (They both have trees; are home to many plants and animals; etc.) How is it different? (A tropical rainforest stays warm, wet, and green all year.)

I am going to ask a question. I will give you a minute to think about the question, and then I will ask you to turn to your neighbor and discuss the question. Finally, I will call on several of you to share what you discussed with your partner.

8. *Think Pair Share:* Would you like to spend time in a tropical rainforest? Why or why not? (Answers may vary.)

Word Work: Canopy

(5 minutes)

1. The read-aloud said, “The kapok has a very long trunk, and its branches and leaves form a *canopy* over the plants and animals below.”
2. Say the word *canopy* with me.
3. A canopy is a covering above an object that blocks out sunlight.
4. There is a canopy over the front doors of the store.
5. Have you ever seen a canopy? If so, where? What did the canopy cover? Can you think of times that it might be helpful to have a canopy? Try to use the word *canopy* when you tell about it. (Ask two or three students. If necessary, guide and/or rephrase the students’ responses: “I saw a canopy at . . .”)
6. What’s the word we’ve been talking about?

Use a *Making Choices* activity for follow-up. Directions: I will name two things. You will decide which one is similar to a canopy. Remember, a canopy is above a person or an object in order to cover it. Remember to use the word *canopy* when you answer.

1. the roof of a house or the floor of a house (The roof is like a canopy.)
2. a tent or a door mat (A tent is like a canopy.)
3. a tree’s roots or a tree’s branches and leaves (A tree’s branches and leaves are like a canopy.)
4. an umbrella or rain boots (An umbrella is like a canopy.)



Complete Remainder of the Lesson Later in the Day

9B

The Tropical Rainforest



Extensions

20 minutes

Domain-Related Trade Book

Refer to the list of recommended trade books in the domain introduction at the front of this teacher's guide, and choose an additional book to read aloud to the class. *The Great Kapok Tree: A Tale of the Amazon Rainforest*, by Lynne Cherry is an excellent choice if you want to learn more about tropical rainforests. As you read, use the same strategies that you have been using when reading the read-alouds in this anthology—pause and ask occasional questions; rapidly clarify critical vocabulary within the context of the read-aloud; etc.

After you finish reading the trade book read-aloud, lead students in a discussion as to how the story or information in this book relates to the read-alouds in this domain.

10

Animals of the Tropical Rainforest



Lesson Objectives

Core Content Objectives

Students will:

- Understand that living things live in habitats to which they are particularly suited
- Identify the characteristics of the tropical rainforest habitat
- Explain how tropical rainforest animals have adapted to the tropical rainforest habitat
- Classify animals on the basis of the types of foods that they eat (herbivore, carnivore, omnivore)

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say “excuse me” or “please,” etc. (L.1.1)
- Ask questions to clarify directions, exercises, and/or classroom routines (L.1.2)
- Carry on and participate in a conversation over at least six turns, staying on topic, initiating comments or responding to a partner’s comments, with either an adult or another child of the same age (L.1.3)
- Prior to listening to a read-aloud, identify (orally or in writing) what they know and have learned that may be related to the specific story or topic to be read aloud (L.1.10)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.1.11)

- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.1.14)
- Learn new words from read-alouds and discussions (L.1.15)
- Answer questions (orally or in writing) requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.1.17)
- Ask questions to clarify information or the topic in a read-aloud (L.1.18)
- Answer questions (orally or in writing) that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering “why” questions that require recognizing cause/effect relationships (L.1.20)

Core Vocabulary

colonies, n. A group of the same kind of animals or plants living and growing together

Example: There were several ant colonies in his backyard.

Variation(s): colony

jaws, n. The bony parts at the bottom of the face that can move up or down to open or close the mouth

Example: The alligator moved its jaws to show its teeth.

Variation(s): jaw

patterns, n. Repeated shapes or designs

Example: It is fun to find patterns in artwork.

Variation(s): pattern

pouncing, v. Springing forward suddenly and grabbing hold of something

Example: The cat is pouncing on the mouse.

Variation(s): pounce, pounces, pounced

stalk, v. To track or follow prey

Example: The large cat moved silently in order to stalk its prey.

Variation(s): stalks, stalked, stalking

<i>At a Glance</i>	Exercise	Materials	Minutes
<i>Introducing the Read-Aloud</i>	What Have We Already Learned?		10
	Purpose for Listening		
<i>Presenting the Read-Aloud</i>	Animals of the Tropical Rainforest		15
<i>Discussing the Read-Aloud</i>	Comprehension Questions		10
	Word Work: Jaws		5
 Complete Remainder of the Lesson Later in the Day			
<i>Extensions</i>	Drawing the Read-Aloud	drawing paper, drawing tools	20

10A

Animals of the Tropical Rainforest



Introducing the Read-Aloud

10 minutes

What Have We Already Learned?

Remind the students that in the last read-aloud they learned about a tropical rainforest, called the Amazon Rainforest, located on the continent of South America. Ask the students what they have already learned about the tropical rainforest. You may prompt discussion with the following questions:

- Does the tropical rainforest stay warm or cold year-round?
- Is the tropical rainforest dry like the desert, or does it get a lot of rainfall?
- Does a tropical rainforest have just a few varieties of plants, or many varieties of plants?
- What kinds of plants live in the tropical rainforest?
- Are the plants mostly evergreen or deciduous?

Purpose for Listening

Tell the students that the next read-aloud is about some of the animals that live in the Amazon Rainforest, which is a tropical rainforest. Tell them to listen carefully to learn about these animals and how they find the food, water, and shelter that they need.



Animals of the Tropical Rainforest

← **Show image 10A-1: Rattenborough in a rainforest tree**

1 Remember, the Amazon Rainforest is in South America.

Rattenborough here, back in the depths of the Amazon Rainforest to show you the animals that live in this amazing habitat.¹ Last time we talked about the climate—how it's hot, humid, and rainy all year long. We also talked about some of the plants that live in the rainforest and how they are mostly evergreens that always look green and have leaves.



← **Show image 10A-2: Toucan, macaw, poison arrow frog**

2 (Point to the toucan in the illustration.)

3 (Point to the macaw.)

Many types of interesting and colorful birds, frogs, insects, reptiles, and other animals live in the trees and other plants of the tropical rainforest. These huge toucans use their large beaks to cut fruit from branches and to eat lizards, as well as other birds.² Macaws, which are a kind of parrot, travel in groups and use their hooked beaks to break into hard nuts and fruits.³ And you don't want to get too close to the poison arrow frog. It has poisonous skin which protects it from being eaten by predators. It lays its eggs in pools on the wet forest floor.⁴

4 (Point to the poison arrow frog.)



← **Show image 10A-3: Squirrel monkey on branch**

5 What is a habitat?

I'm back in the kapok tree, one of the very tallest trees in the forest, to see what kinds of animals call this habitat home.⁵

Over there I can see a squirrel monkey. The squirrel monkey is a very friendly little animal, and it shares a lot of things in common with the squirrels that live in the temperate deciduous forests. As you can see, the monkey is very small and has a very long, thin tail that it uses to help with balance. It has strong legs that it uses to jump and run, and claws which help it climb up and down trees and vines. In fact, squirrel monkeys are so good at traveling by leaping and running along branches, that they hardly ever touch the forest floor.



← **Show image 10A-4: Squirrel monkey eating**

The squirrel monkey is an omnivore. It eats insects, fruits, and flowers, and spends most of its time during the day moving around the forest to find food. The squirrel monkey has excellent eyesight, which is useful for finding small insects, fruit, and berries growing among the green leaves of the tropical rainforest trees—they are really hard to find! Squirrel monkeys live in large groups, making it harder for their predators to get them.⁶ Squirrel monkeys are hunted by two predators—eagles and snakes. Now, this monkey is acting a little strange, and experience has told me that usually means there’s trouble on the way. Aha, yes, look who’s coming—some kind of snake. Snakes also tend to eat rats, so I’m going to climb a bit higher and take a look from a distance.

6 Remember, a predator is an animal that hunts and kills other animals. So squirrel monkeys live in groups to try to protect themselves from predators that might hunt them.



← **Show image 10A-5: Boa constrictor**

Wow, look at the size of this snake! It’s a boa constrictor. A boa is one of many kinds of snakes that live in the Amazon Rainforest. It’s a pretty big snake; this one is about thirteen feet long!⁷ Boas can have slightly different coloring and **patterns** on their skin,⁸ but they are well camouflaged in the trees, plants, and vines of the forest.⁹

7 (Give the students an example in your classroom of something that is thirteen feet long.)

8 Patterns are repeated shapes or designs.

9 Who remembers what the word *camouflaged* means? (Remind the students that *camouflage* means to blend in with the surroundings.)



← **Show image 10A-6: Boa constrictor showing jawline**

This boa constrictor, like all snakes, is a carnivore. It eats other animals such as bats, which are its favorite food, rodents (yes, rats included!), lizards, birds, and even the small squirrel monkeys. The boa constrictor is mostly nocturnal, so it comes out to hunt when it’s getting dark, like now.

Snakes can eat animals that are much bigger than they are. This boa’s **jaws** open very, very wide, so that when it finds an animal to eat, no matter how big it is, it will be able to swallow it whole.¹⁰ The good news for me is that if this snake has eaten a big meal recently, it may not have to eat again for two more weeks!

10 The jaws are the part of the face that allow you to open and close your mouth. Where is your jaw? (Have the students put their hands on their jaws.)



← **Show image 10A-7: Jaguar**

The boa constrictor is not the only carnivore in the rainforest. In fact, it will have to watch out that it doesn't become dinner for a hungry jaguar. Like the lion and other big cats, the jaguar is a cat that I don't think you'd like to have as a pet! They look a lot like leopards—they have tan fur with dark spots—but they are bigger than leopards, with shorter tails and legs, and bigger heads and paws. This jaguar is about seven feet long and probably weighs around two hundred pounds.



← **Show image 10A-8: Jaguar hunting**

Jaguars, like this one, are very well adapted to living in the rainforest. They have very sensitive hearing and an excellent sense of smell.¹¹ A jaguar can see very well during the day and at night. All these things make it easier for it to find, **stalk**, and catch its prey.¹²

I can barely hear the jaguar moving through the forest. That's because its paws are covered with very thick fur with pads on the bottom. Because they can travel so quietly, jaguars don't have to run far to catch their prey. So, instead of having long legs for running, they have short, strong legs that are good for **pouncing** on other animals from the ground, from trees, or in the water.¹³

As I mentioned before, the jaguar is a carnivore. It will hunt any kind of animal, big or small, that it comes across in the forest, including deer, birds, snakes, monkeys, iguanas, and fish. A jaguar spends most of the day resting and goes out to hunt at night.¹⁴ It's also very good at climbing trees, which means I should get out of here before it's able to sniff me out!

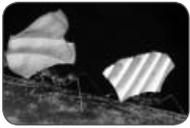
I've moved to the bottom of the kapok tree onto the forest floor, because there's one last, very interesting animal I want to show you. We'd better hurry—it's getting dark, and I may have to use my flashlight to show you.

11 When something has sensitive hearing, that means it can hear well.

12 *Stalk* means to follow. So the jaguar's excellent eyesight and hearing make it easier for the jaguar to find, stalk, and catch other animals for food.

13 *Pouncing* means moving forward suddenly to grab something.

14 So, are jaguars nocturnal?



← **Show image 10A-9: Leafcutter ants**

These are leafcutter ants. These ants burrow underground and make nests in groups called **colonies**. Different ants in the colony have different responsibilities: There are worker ants, soldier ants, and their queen. The worker ants are traveling to the kapok tree nearby where they will use their sharp jaws to bite off pieces of the leaves to bring back to the nest.

Did you know that ants can carry up to ten times their own body weight? ¹⁵ That's pretty amazing, isn't it? The soldier ants are there to protect the worker ants on their way to and from the nest. These ants spend most of their lives working for food! Nature is amazing, isn't it?

Well, it's really quite dark here now, and my fur has been sticking to me since we got here, so I think it's time to leave the hot and humid Amazon Rainforest. We've learned a lot about this exotic habitat, its climate, and the plants and animals that have their homes here. Now for somewhere really different. ¹⁶

15 Can you imagine trying to carry ten of your friends?

16 Where do you think the next habitat will be?

Discussing the Read-Aloud

15 minutes

Comprehension Questions

(10 minutes)



← **Show image 10A-3: Squirrel monkey**

1. What animal is this? (squirrel monkey) What food does a squirrel monkey eat in the tropical rainforest? (It eats insects, fruits, and flowers.) Is the squirrel monkey a carnivore, herbivore, or omnivore? (omnivore)
2. Where do you think the squirrel monkey might find shelter in the tropical rainforest? (in the trees)



← **Show image 10A-5: Boa constrictor**

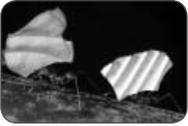
3. What animal is this? (boa constrictor) What food does a boa constrictor eat in the tropical rainforest? (It eats small animals.) Is the boa constrictor a carnivore, herbivore, or omnivore? (carnivore)

4. Where do you think the boa constrictor might find shelter in the tropical rainforest? (in the trees, under plants on the forest floor)



← **Show image 10A-8: Jaguar Hunting**

5. What animal is this? (jaguar) What food does a jaguar eat in the tropical rainforest? (It eats small animals.) Is the jaguar a carnivore, herbivore, or omnivore? (carnivore)



← **Show image 10A-9: Leafcutter ants**

6. What animal is this? (leafcutter ant) Where do leafcutter ants find shelter in the tropical rainforest? (They burrow underground.) What food do leafcutter ants eat in the tropical rainforest? (They eat parts of leaves.)
7. What adaptations do the squirrel monkey, boa constrictor, jaguar, and leafcutter ants have in order to live in the tropical rainforest? (The squirrel monkey has strong back legs to run and jump, sharp claws to quickly climb trees, and a long tail to help it balance as it runs along branches. The boa constrictor has jaws that open wide so it can eat its prey whole and is able to camouflage itself so it can sneak up on its prey. The jaguar has sensitive hearing and an excellent sense of smell, and its paws are covered with thick fur so that it can effectively and quietly hunt its prey. Leafcutter ants can carry up to ten times their weight so they can bring food back to the colony.)
8. *Where? Pair Share:* Asking questions after a read-aloud is one way to see how much everyone has learned. Think of a question you can ask your neighbor about the read-aloud that starts with the word *where*. For example, you could ask, “Where does today’s read-aloud take place?” Turn to your neighbor and ask your “where” question. Listen to your neighbor’s response. Then your neighbor will ask a new “where” question, and you will get a chance to respond. I will call on several of you to share your questions with the class.

Word Work: Jaws

(5 minutes)

1. The read-aloud said, “This boa’s *jaws* open very, very wide, so that when it finds an animal to eat, no matter how big it is, it will be able to swallow it whole.”
2. Say the word *jaws* with me.
3. The jaws are the part of the mouth that can move up and down to open and close it. (Have the students point to their jaws.)
4. I chewed the bubble gum until my jaws got tired.
5. What do you use your jaws for? Try to use the word *jaws* when you tell about it. (Ask two or three students. If necessary, guide and/or rephrase the students’ responses: I use my jaws to . . .)
6. What’s the word we’ve been talking about?

Use a *Making Choices* activity for follow-up. Directions: I will name two actions or things you might do. Jaws are needed to do one of the actions but not the other. You will decide which requires the use of the jaws. Remember to use the word *jaws* when you answer.

1. drawing a picture or eating an apple (I use my jaws when I eat an apple.)
2. singing a song or clapping your hands (I use my jaws when I sing a song.)
3. brushing your teeth or combing your hair (I use my jaws when I brush my teeth.)
4. waving to a friend or talking to a friend (I use my jaws when I talk to a friend.)
5. reading a book to your teacher or looking at pictures in a book (I use my jaws when I read a book to my teacher.)



Complete Remainder of the Lesson Later in the Day

10B

Animals of the Tropical Rainforest



Extensions

20 minutes

Drawing the Read-Aloud

Ask students to think about the read aloud that they listened to earlier in the day. Give each student a piece of paper and ask each to draw a picture of an animal from the tropical rainforest s/he remembers. You may need to review some of the Flip Book images with students before they begin drawing. Direct each student to write a sentence with one important fact about the animal in their drawing. As you circulate, be sure each student is representing an animal from the day's read-aloud, and encourage students to represent the sounds they hear in words on their paper. You may also want to take dictation for any student who is unable to use plausible spelling to represent his or her ideas.

When the students have completed their drawings and sentences, tell the students that they are going to group the animals in their drawings as herbivores, carnivores, or omnivores. As the students group their drawings, encourage the use of increasingly complex sentences and domain-related vocabulary.

PP2

Pausing Point 2



Note to Teacher

This is the end of the read-alouds that introduce the East African Savanna, the temperate deciduous forest, and the tropical rainforest habitats. You may choose to pause here and spend one to two days reviewing, reinforcing, or extending the material taught thus far.

If you do pause, you may have students do any combination of the activities listed below. The activities may be done in any order. You may wish to do one activity on successive days. You may also choose to do an activity with the whole class or with a small group of students who would benefit from the particular activity.

Core Content Objectives Up to This Pausing Point

Students will:

- Understand that living things live in habitats to which they are specifically suited
- Identify the characteristics of the grassland habitat
- Explain how grassland animals have adapted to the grassland habitat
- Identify the characteristics of the temperate deciduous forest habitat
- Explain how temperate deciduous forest animals have adapted to the temperate deciduous forest habitat
- Identify the characteristics of the tropical rainforest habitat
- Explain how tropical rainforest animals have adapted to the tropical rainforest habitat
- Match specific plants and animals to their habitat
- Classify animals on the basis of the types of food they eat (herbivore, carnivore, omnivore)

Activities

The East African Savanna, Great Smoky Mountains, and the Amazon Rainforest

Materials: World map or globe

Help students locate and identify the East African Savanna, the Great Smoky Mountains deciduous forest, and the Amazon Rainforest. Discuss with students the habitat of each area.

Image Review

Show the images from any read-aloud again and have students discuss the read-aloud using the images.

Image Card Review

Materials: Image Cards 8–18

In your hand, hold Image Cards 8–18 fanned out like a deck of cards. Ask a student to choose a card but to not show it to anyone else in the class. The student must then perform an action or give a clue about the picture s/he is holding. For example, for the zebra, the student may describe the habitat the zebra lives in, what it eats, and what it looks like. The rest of the class will guess what animal or plant is being described. Proceed to another card when the correct answer has been given.

Domain-Related Trade Book or Student Choice

Materials: Trade book

Read an additional trade book to review a particular concept; refer to the books listed in the domain introduction. You may also choose to have the student select a read-aloud to be heard again.

You Are There: The East African Savanna, Great Smoky Mountains, and the Amazon Rainforest

Have students pretend that they have been transported to the East African Savanna, the deciduous forests of the Great Smoky Mountains, or the Amazon Rainforest. Ask students to describe what they see and hear. What is the weather like? What kinds of

plants and animals do they see? Consider also extending this activity by adding group or independent writing opportunities associated with the “You Are There” concept. For example, ask students to pretend they are Rattenborough describing one of the habitats to their classmates and write a group article about the habitat.

Key Vocabulary Brainstorming

Materials: Chart paper

Give the students a key domain concept or vocabulary word such as *deciduous*. Have them brainstorm everything that comes to mind when they hear the word. Record their responses on a piece of chart paper for reference.

Riddles for Core Content

Ask the students riddles such as the following to review core content:

- I live in the East African Savanna, and I am a carnivore. I have a furry mane, powerful jaws, and claws. What am I? (lion)
- I live in Great Smoky Mountains National Park and make my home in a nest high up in the trees. My favorite food is acorns. What am I? (squirrel)
- We live in the Amazon. We burrow underground to make our homes and live in groups called colonies. We can carry up to ten times our own body weight. What are we? (leafcutter ants)

You may also wish to make some of your own riddles, depending on your students' needs.

Class Book: Habitats

Materials: Drawing paper and drawing tools for each student

Tell the class or a group of students that they are going to make a class book to help them remember what they have learned thus far in this domain. Have the students brainstorm important information about the three habitats they have just learned about. (the East African Savanna, the deciduous forests of the Great Smoky Mountains National Park, and the Amazon Rainforest)

Have each student choose one idea to draw a picture of and then write a caption for the picture. Bind the pages to make a book to put in the class library for students to read again and again. You may choose to add more pages in future Pausing Points or upon completion of the entire domain before binding the book.

Herbivore, Carnivore, and Omnivore

Review with students the concepts herbivore, carnivore, and omnivore. You may wish to use Image Cards 1–18 to review. Make a chart with three columns labeled “Herbivore,” “Carnivore,” and “Omnivore.” Brainstorm a list with students to get them thinking about categorizing animals. Make sure they include humans on the list.

Then, instruct students to write or dictate a word or sentence describing the characteristics of herbivore, carnivore, and omnivore. You may also have students illustrate their writing pieces.

Habitats

Show students the Habitat Posters for each of the habitats they have learned about thus far and ask students to describe the characteristics of animals that live there. Extend this by asking students what would happen if a specific animal then had to move to another environment.

As a challenge, you may wish to do the same activity with examples of other habitats not included in the domain.

Food Chains

Using a variety of pictures from magazines or other print sources that illustrate parts of several food chains, ask students to work in groups to see if they can construct food chains from the pictures provided. Remind them of the characteristics of a herbivore, omnivore, and carnivore.

Once the students have constructed their food chain, have the groups share them with the class and check each other’s work.

11

The Freshwater Habitat



Lesson Objectives

Core Content Objectives

Students will:

- Understand that living things live in habitats to which they are particularly suited
- Classify water habitats as either freshwater or saltwater habitats
- Identify the characteristics of the freshwater habitat
- Classify animals on the basis of the types of foods that they eat (herbivore, carnivore, omnivore)

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say “excuse me” or “please,” etc. (L.1.1)
- Carry on and participate in a conversation over at least six turns, staying on topic, initiating comments or responding to a partner’s comments, with either an adult or another child of the same age (L.1.3)
- Learn common sayings and phrases such as “a fish out of water” (L.1.9)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.1.11)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.1.14)
- Learn new words from read-alouds and discussions (L.1.15)

- Answer questions (orally or in writing) requiring literal recall and understanding of the details, and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.1.17)
- Answer questions (orally or in writing) that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering “why” questions that require recognizing cause/effect relationships (L.1.20)
- Draw pictures, dictate, and/or write simple sentences to represent details or information from a read-aloud (L.1.24)
- With assistance, categorize and organize facts and information within a given domain (L.1.38)

Core Vocabulary

amphibious, *adj.* Able to live both on land and in water

Example: Our frog tank has areas of dry land and water for swimming because frogs are amphibious.

Variation(s): none

float, *v.* To stay or move slowly on top of the water without sinking underwater

Example: The children watched their toy boats float in the bathtub.

Variation(s): floats, floated, floating

freshwater, *adj.* Water that is not salty

Example: Every summer our family goes to a freshwater pond to swim.

Variation(s): none

gills, *n.* The part of the body that fish and other animals who live under water use to breathe

Example: When we went to the aquarium, we saw the large gills on the side of the trout’s body as it swam by.

Variation(s): gill

<i>At a Glance</i>	Exercise	Materials	Minutes
<i>Introducing the Read-Aloud</i>	Essential Background Information or Terms	globe chart paper, chalkboard, or whiteboard black, brown, and blue markers	10
	Purpose for Listening		
<i>Presenting the Read-Aloud</i>	The Freshwater Habitat		15
<i>Discussing the Read-Aloud</i>	Comprehension Questions		10
	Word Work: Float		5
 Complete Remainder of the Lesson Later in the Day			
<i>Extensions</i>	Sayings and Phrases: A Fish Out of Water	paper or writing journals crayons	20
	Brainstorming Links	chart paper, chalkboard, or whiteboard drawing paper, drawing tools	

11A *The Freshwater Habitat*



Introducing the Read-Aloud

10 minutes

Essential Background Information or Terms

Show students the globe and remind them that the globe shows both the land and water that make up our planet Earth. Remind them that on the globe, large bodies of water are shown in blue. Ask several students to point to areas of land and areas of water on the globe.

Ask the students to try to remember and name all of the different habitats that they have learned about so far, and record their responses on either the chart paper or whiteboard using the black marker. Remind students that they may not be able to read all these words by themselves, but you are writing them down so you don't forget. Prompt the students as necessary until you have a complete list of all the habitats studied: Arctic tundra, Arctic Ocean, Sonoran Desert, East African Savanna, temperate deciduous forest, and tropical rainforest.

Tell the students that you are going to review/reread the name of each habitat, and as you do so, ask them to tell you whether the habitat is primarily a land habitat or a water habitat. If it is a land habitat, use the brown marker to circle the name of the habitat; if it is a water habitat, use the blue marker to circle the name of the habitat. Call the students' attention to the fact that all of the habitats discussed so far, with the exception of one, the Arctic Ocean, have been land habitats. Only the Arctic Ocean is a water habitat.

Tell students that they are going to learn about another water habitat today, called a freshwater habitat. Explain that freshwater is water that does not have very much salt in it; it is water that people can often drink. A freshwater habitat is different from the water habitat found in the Arctic Ocean, which is called a saltwater habitat. The water that is found in oceans is salty. Tell the students that they will learn more about other saltwater habitats in several



days, but today, they are going to learn about freshwater habitats.

← **Show image 11A-1: Examples of freshwater**

Tell students that this illustration shows different kinds of freshwater habitats, such as rivers, streams, lakes, and ponds. Show students the globe and point out some examples of freshwater habitats, such as major rivers and lakes. Ask students if they can think of any examples of freshwater habitats in their area. Tell students that they are going to learn about some of the plants and animals that live in and around freshwater.

Purpose for Listening

Tell students to listen for the different kinds of plants and animals in a freshwater habitat.



The Freshwater Habitat

← Show image 11A-2: Rattenborough fishing off a dock

Hello again! Glad you could join me. I thought that we needed a real change, so I've come off dry land to a place where it's wet all the time—a lake. A lake is an area of water that is surrounded by land.¹ There is a lot of water in the world; in fact, water covers most of the earth's surface. But, only a tiny part of the world's water is **freshwater**, the kind of water you and I can drink.

1 If something is surrounded by land, it has land all around it.



← Show image 11A-3: Examples of freshwater

Freshwater is found in streams, rivers, lakes, and ponds. The water in these streams, rivers, lakes, and ponds comes from rain and from melting ice and snow. Isn't it amazing to think that the water from the drinking fountain at school or from the faucets in your house all comes from rain?



← Show image 11A-4: Edge of lake with water lilies

I'm here at the water's edge² to explore this lake and the plants and animals that call this freshwater habitat home. Freshwater habitats have many kinds of fish, birds, insects, and other animals. Standing here, I can see an enormous³ leaf in the water. Let me climb onto it so we can get a closer look.

2 or the water's side

3 or very big

4 (Point to the water lilies in the picture.)

This is a water lily leaf.⁴ A water lily is a plant that lives in water near the edges of ponds and lakes. Plants are important in freshwater habitats because they make oxygen for animals to breathe; plants are also food for the animals to eat, and they can provide shelter to protect animals from their predators.⁵ The leaves of the water lily are very large, round, and green, and they **float** on the surface of the water.⁶

5 Remember, a predator is an animal that hunts other animals.

6 If they float on the surface of the water, that means they stay on top of the water; they don't sink.



← **Show image 11A-5: Water lilies, deer, porcupine, beaver, turtle, ducks, and geese**

The water lily is well adapted for living in this habitat. Like the kapok trees in the rainforest, the lily's large leaves let it get as much sunlight as it needs for food and energy.

Lilies are also food for many animals, believe it or not. Animals—like deer, porcupines, beavers, and turtles—all eat the leaves, while ducks and geese like to eat their roots. Some animals, like fish and frogs, use the lily leaves as hiding places, and the flowers bring bees and other insects. I am going to float around the edge of the lake on this water lily leaf, but I'm going to have to leave soon because this pesky turtle will not leave my leaf alone!



← **Show image 11A-6: Cattails, muskrats, geese, moose, elk**

I've pushed out from the edge of the lake a little and already I can see another kind of plant that lives here. It's called a cattail, and it gets its name from the unusual way it looks. Thankfully for me, it doesn't have much to do with real cats! Cattails have long, thin stems with foot-long furry flower spikes at the top that turn from green in the early summer to brown in the fall. The flower spike feels soft and furry and looks a little like a cat's tail, but I think it looks more like a hotdog!⁷ The plants can reach up to nine feet in height, which lets them get as much sunlight as they need.

Just like the water lilies, some animals use cattails for food and shelter.⁸ Muskrats and geese like to eat the roots of the cattail, and the juicy green shoots are a favorite for moose and elk.⁹ Many kinds of birds make their homes among the cattails. It's very hard to see anything in there because cattails grow so thickly, so it's a good place for birds to build their nests and to lay and hatch their eggs. Predators like snakes and frogs also live among the cattails and search for animals like birds and insects for food. I think I'm going to move on now, since you know I'm not very good with snakes!

7 Does it look like a cat's tail to you?

8 (Point to each animal as you talk about it.)

9 Moose and elk, like caribou, are part of the deer family.



← **Show image 11A-7: Rainbow trout**

Come with me beneath the water and let's take a look at what's under there. Here are some nice looking rainbow trout. Fish can only live in water, and they breathe under water using **gills** on the sides of their bodies. Gills take in oxygen from the water around them. Fish have strong tails that they use for swimming and fins that they use for steering and balance.

10 Remember, a carnivore is an animal that eats other animals.

The rainbow trout is a carnivore.¹⁰ It eats other water animals like insects, other fish, and sometimes shellfish. It even eats some small land animals like mice if it gets the chance, so I'm sure it wouldn't mind a nibble of rat! Rainbow trout like to live in rivers, but some prefer the deeper water of big lakes.



← **Show image 11A-8: Bullfrog**¹¹

11 What do you see in this image?

I enjoyed snorkeling, and now I'm going to rest on a lily pad again. While I'm drying off a bit, let me show you a kind of frog called a bullfrog that I can see sitting at the water's edge. Frogs are **amphibious**, which means they live both in the water and on land. Bullfrogs are the largest kind of frog found in Northern America, and they can grow more than half a foot long and can weigh more than a pound. That's a really big frog!

12 A male cow is called a bull. What sound does a cow make?

The bullfrog gets its name from the loud cow-like noise it makes.¹² I bet birds and turtles would be pretty surprised to know that a frog can make such a loud sound! Pretty neat, huh? This bullfrog is resting now, but it will come out to hunt when it gets dark. Bullfrogs eat a lot of different kinds of food. They are carnivores, so they eat small fish, snakes, birds, and insects like this dragonfly that's buzzing about my head.



← **Show image 11A-9: Adult dragonfly**¹³

13 This is an adult dragonfly. *Adult* means grown-up.

Adult dragonflies are flying insects with long bodies and wings. Dragonflies live around lakes, streams, and other freshwater habitats because they lay their eggs in water. Adult dragonflies eat other insects like mosquitoes, flies, and bees.

14 or stay in one place while flying

The dragonfly uses its long wings to hover¹⁴ around in the air where it catches its food. It has to be careful because the bullfrog isn't the only one that likes to eat dragonflies. Birds and turtles like to eat them, too.



← **Show image 11A-10: Ducks**

The water is getting a little rough out here. Ah, that's why. Here come some birds that like to eat insects. These are a kind of duck called mallards. Ducks are birds and can live both in and out of water, but it's the water where they spend most of their time. Like all birds, ducks, like these mallards, are covered in feathers.

15 When something is waterproof, it keeps water out.

Did you know that ducks' feathers are waterproof?¹⁵ Ducks rub special oil from their tails all over their feathers. Because oil and water don't mix, water drips right off the ducks without getting their feathers wet.



← **Show image 11A-11: Duck looking for food**

Ducks float on the surface of the water and have large, webbed feet to help them paddle. They dip their heads under the water and use their beaks, which are called bills, to search for food at the bottom of the lake. Mallards eat grasses and seeds from plants, and small animals like insects, worms, snails, frogs, and small fish.

Well, we've had a good look around this freshwater habitat, but I have to get off this lily leaf before these ducks knock me off! There's another kind of water habitat, and we're going to have a look at it next time. I hope you'll join me. Now, if you'll excuse me, I have to start my long trip back to shore!

Discussing the Read-Aloud

15 minutes

Comprehension Questions

(10 minutes)

1. Describe a freshwater habitat. (Answers may vary.)
2. What are some examples of freshwater habitats? (rivers, streams, lakes, and ponds)
3. Is most of the earth's water freshwater or saltwater? (saltwater)
4. What are some plants that live in freshwater habitats? (water lilies, cattails)
5. What animals live in freshwater habitats? (fish, including rainbow trout; birds, including ducks; insects, including dragonflies, bees, mosquitoes, and flies; frogs, including bullfrogs; deer; porcupines; beavers; turtles; muskrats; geese; moose)
6. How are dragonflies adapted to live in a freshwater habitat? (Dragonflies lay their eggs in water. They eat insects that live in freshwater habitats, like mosquitoes, flies, and bees.)
7. What carnivores did you learn about today that live in freshwater habitats? (rainbow trout, bullfrogs) What is the omnivore that you learned about today? (mallard ducks) What is a nocturnal animal that lives in freshwater habitats? (bullfrog)

I am going to ask a question. I will give you a minute to think about the question, and then I will ask you to turn to your neighbor and discuss the question. Finally, I will call on several of you to share what you discussed with your partner.

8. *Think Pair Share:* Why are water lilies so important in freshwater habitats? (They provide oxygen for animals to breathe, and food for them to eat. The leaves are hiding places for animals, like fish and frogs, and the flowers attract bees and other insects.)

Word Work: Float

(5 minutes)

1. The read-aloud said, “The leaves of the water lily are very large, round, and green, and they *float* on the surface of the water.”
2. Say the word *float* with me.
3. If things float on water, that means they stay on top of the water and do not sink.
4. In the summer, I like to float in the pool.
5. What other things float in water? Try to use the word *float* when you tell about it. (Ask two or three students. If necessary, guide and/or rephrase the students’ responses: “My bath toys float in the bathtub.”)
6. What’s the word we’ve been talking about?

Use a *Making Choices* activity for follow-up. Say: I am going to describe a situation. If it is an example of something that does float, say, “That does float.” If it is an example of something that does not float, say, “That does not float.”

1. The leaf fell from the tree and landed on the surface of the water. (That does float.)
2. Harry threw the rock and it sank to the bottom of the pond. (That does not float.)
3. The boat rocked gently back and forth on top of the waves. (That does float.)
4. The dolphin dove deep into the ocean. (That does not float.)
5. There are many pennies under the water at the bottom of the water fountain. (That does not float.)



Complete Remainder of the Lesson Later in the Day

11B

The Freshwater Habitat



Extensions

20 minutes

Sayings and Phrases: A Fish Out of Water

(5 minutes)

Ask students if they have ever heard the saying, “a fish out of water.” Have the students repeat the saying. Ask the students what would happen to a fish that was out of water. (The fish would not be in its usual environment or place. It would be very uncomfortable, and it would be difficult for the fish to survive very long out of water.)

Explain to the students that this saying is used to talk about people. People would survive if they weren’t in their usual place, but they just might feel a little uncomfortable or strange. Give the students an example, such as how strange they would feel if they were the only person who forgot to wear shoes to school, or if they started attending a new school and didn’t know anyone else in their class. Ask the students if they can think of other times that people might feel uncomfortable in a new or different environment.

Try to find opportunities to use this saying when it applies to situations in the classroom.

If time permits, you may also have students illustrate either the literal or figurative meanings of this saying or just the figurative meaning. Also ask them to write in their writing journals about a personal experience when they felt like a fish out of water.

Brainstorming Links

Write *Freshwater* in the middle of the board or on a piece of chart paper. Have students brainstorm a list of words describing a freshwater habitat and the animals that live in it. Write their responses around the central word *Freshwater*. Encourage the students to discuss each word or concept as you write it down, and remember to repeat and expand upon each response using richer and more complex language, including any read-aloud

vocabulary. When students name a plant or animal, be sure to emphasize how it is adapted to living in the freshwater habitat.

If time allows, give students a piece of paper and have them draw a picture that represents one of the plants or animals from the brainstorming session. Have students dictate a few words or short sentences that define or describe their picture.

12

The Saltwater Habitat



Lesson Objectives

Core Content Objectives

Students will:

- Understand that living things live in habitats to which they are particularly suited
- Understand that saltwater covers most of Earth and is found in several oceans
- Identify and locate the oceans of the world on a globe: Arctic, Pacific, Atlantic, Indian, Southern
- Describe the landscape of the ocean floor
- Understand that ocean life is very diverse
- Classify water habitats as either freshwater or saltwater habitats

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say “excuse me” or “please,” etc. (L.1.1)
- Ask questions to clarify directions, exercises, and/or classroom routines (L.1.2)
- Carry on and participate in a conversation over at least six turns, staying on topic, initiating comments or responding to a partner’s comments, with either an adult or another child of the same age (L.1.3)
- Prior to listening to a read-aloud, identify (orally or in writing) what they know and have learned that may be related to the specific story or topic to be read aloud (L.1.10)

- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.1.11)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.1.14)
- Learn new words from read-alouds and discussions (L.1.15)
- Learn synonyms and antonyms (L.1.16)
- Answer questions (orally or in writing) requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.1.17)
- Answer questions (orally or in writing) that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering “why” questions that require recognizing cause/effect relationships (L.1.20)
- Evaluate and select read-alouds, books, or poems on the basis of personal choice for rereading (L.1.27)

Core Vocabulary

coastline, n. The part or edge of land next to the ocean; also called the shoreline

Example: There were many hotels and shops along the coastline.

Variation(s): coastlines

saltwater, adj. Containing water with salt

Example: The octopus lives in a saltwater habitat.

Variation(s): none

shallow, adj. Not deep

Example: He swam in the shallow end of the pool because he was just learning how to swim.

Variation(s): shallower, shallowest

slopes, v. Inclines or is at an angle

Example: A hill that slopes downward is good for sledding.

Variation(s): slope, sloped, sloping

valleys, n. Lowlands between two areas of highland

Example: The river flowed in the valley between the two mountains.

Variation(s): valley

<i>At a Glance</i>	Exercise	Materials	Minutes
<i>Introducing the Read-Aloud</i>	What Have We Already Learned?		10
	Essential Background Information or Terms	globe	
	Purpose for Listening		
<i>Presenting the Read-Aloud</i>	The Saltwater Habitat	world map or globe	15
<i>Discussing the Read-Aloud</i>	Comprehension Questions		10
	Word Work: Shallow		5
 Complete Remainder of the Lesson Later in the Day			
<i>Extensions</i>	Domain-Related Trade Book or Student Choice	trade book	20

12A *The Saltwater Habitat*



Introducing the Read-Aloud

10 minutes

What Have We Already Learned?

Ask students to share what they have learned about a freshwater habitat.

- Why is it called “freshwater”? (no salt)
- What are some of the plants that live in a freshwater habitat? (cattails, water lilies)
- What are some of the animals that live there? (frogs, ducks, fish)

Essential Background Information or Terms

Tell students that they are now going to learn about the other water habitat called a saltwater habitat. Remind them that they have already learned about one particular saltwater habitat when they studied the Arctic Ocean habitat. Help the students locate the Arctic Ocean on the globe.

Explain that for many years, only four oceans were recognized—the Arctic, Pacific, Atlantic, and Indian—all saltwater habitats. Some years ago, however, the Southern Ocean, which lies along the coastline of Antarctica, was designated as the fifth ocean. Show and name these oceans on the globe. Point out where you live in comparison with the oceans. Which ocean is the closest? Which ocean is the farthest away?

Purpose for Listening

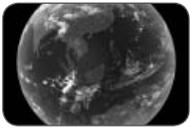
Explain that the one thing all saltwater habitats have in common is that the water is salty. Tell the students to listen carefully to find out more about oceans and saltwater habitats.



The Saltwater Habitat

← Show image 12A-1: Rattenborough in a boat

Welcome to the last habitat that we are going to explore. In the last read-aloud, we explored freshwater habitats. Now, we're going to learn about another kind of water habitat—a **saltwater** habitat. Saltwater habitats, as you could guess from their name, contain lots of salt. This means that we can't use saltwater for drinking. Would you like to drink a cup of salty water? No thanks!



← Show image 12A-2: Planet Earth

It's hard to imagine, but more of the earth is covered in water than is covered with land. Most of that water is saltwater in oceans and seas. Oceans are huge areas of saltwater that stretch all around our planet, and they are home to almost half of the world's species of animals and millions of different plants. The water in the ocean comes from rain and from rivers and streams that flow into it. Seas are smaller areas of saltwater that have land around them or around part of them.



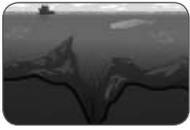
← Show image 12A-3: Coastline

I've come to the largest ocean, the Pacific, to show you a bit more about ocean habitats and the plants and animals that live in them.¹ I'm standing on a beach looking out at the water. You can see that the waves are crashing into the beach. This beach, and any land that runs alongside the ocean, is called the **coastline** or shoreline. Now, you may think that when you are standing on the land looking at the water that the land stops where the water starts—it certainly looks that way. But let me get my trusty snorkeling gear out and walk into the water.

Now that I'm in here, I'm still standing on land; it's just that the land is under the water. The land **slopes** downward the farther I go out into the water, which means the water is getting deeper and deeper.²

1 (Point to the Pacific Ocean on a world map or globe.)

2 (Visually demonstrate with an object, such as a wooden incline block or wedge, or illustrate on the chalkboard, what the word *slopes* means.)



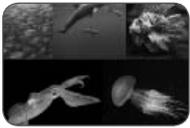
← **Show image 12A-4: Ocean floor**

3 Mountains are areas of land that are very high where the land peaks. Valleys are areas of land that are low and that are in between two high areas, like mountains.

4 *Shallow* is the antonym or opposite of *deep*—not deep.

The interesting thing about the ocean floor, which is the land under the ocean water, is that it isn't flat. As on land, the earth beneath the ocean waters has both mountains and **valleys**.³ This makes some areas of water in the ocean deeper than others.

The Pacific Ocean is full of both plant and animal life, but not all of them share the same space. The conditions under the water are very different in various places. Some parts are deep and some are **shallow**;⁴ there are cool parts and there are warm parts; some are dark and some are full of light.



← **Show image 12A-5: Sealife**

There are plants and animals in nearly every part of the ocean. Some live way out in the deep, open waters far from the land, and some live in the shallow waters closer to the shore. Some animals, like turtles, jellyfish, and crabs, live closer to the shore where it's shallower and warmer. If you have ever been to the beach and walked in the water splashing on the sand, you've been in this shallow part of the ocean.

Some animals like it better near the surface of the water, and others prefer to live down at the very bottom of the ocean on the deep ocean floor. They have all had to adapt to the conditions of their habitats. For instance, the animals that live in the deeper parts of the ocean have had to adapt to total darkness, because the sun's light just can't reach that deep.

Some fish, like the devilfish, have very large mouths and sharp teeth so that they can catch their prey as easily as possible. Other sea creatures have feelers on their bodies that help them to feel where their food is. And some animals make their own light with special chemicals in their bodies, like when you carry a flashlight in the dark!



← **Show image 12A-6: Coral reef**

5 What is a coral reef made up of?

I have now arrived at a special part of a saltwater habitat called a coral reef. A coral reef is made up of many tiny animals called corals.⁵ Corals stay in one place in their adult lives. They have stomachs and mouths and even skeletons! These skeletons can be on the inside or outside of the coral animals and are also called coral. When the coral animal dies, their skeletons remain in place and other coral animals will come and live on top of the old skeletons.⁶

6 So the coral reef has both coral animals and the skeletons of those animals.

There are many different types of coral. Some look like leaves, some look like feathers, some are stony, and some are soft. Some types of coral are solitary, or live alone, while others live in colonies. Sometimes many different types of coral will live in the same colony. We call these colonies coral reefs.⁷

7 So what is a coral reef? Right, it's just many different types of coral animals and skeletons in the same place.

It's amazing to think that this rocky reef was made entirely by small animals, isn't it? What's more amazing is that many sea animals live in and around coral reefs. In the next read-aloud we're going to explore this coral reef more closely. Until then, think about oceans and saltwater habitats and any kinds of plants and animals you know that might live there. You may be surprised by how many you can think of.

Discussing the Read-Aloud

15 minutes

Comprehension Questions

(10 minutes)

1. What makes a water habitat a saltwater habitat? (The water contains lots of salt.)
2. Name the five oceans on Earth. (Arctic, Atlantic, Pacific, Indian, Southern)
3. Are oceans freshwater or saltwater habitats? (saltwater)
4. How are various parts of the ocean different? Hint: think about pairs of words that are opposites, i.e., shallow, warm, dark. (Some parts are shallow and some parts are deep; some parts are warm and some parts are cool; some parts are dark and some parts have a great deal of light.)
5. How would you describe the ocean floor? Is it flat and level, or does it go up and down? (It goes up and down, or slopes, just like land outside of the oceans; it has mountains and valleys.)
6. What are some of the ways that animals have adapted to the saltwater habitat? (large mouths and sharp teeth to catch prey, feelers to find food in the dark, chemicals to make light)
7. How would you describe a saltwater habitat to someone who has never heard of it? (salty; lots of plants and animals; etc.)
8. *What? Pair Share:* Asking questions after a read-aloud is one way to see how much everyone has learned. Think of a question you can ask your neighbor about the read-aloud that starts with the word *what*. For example, you could ask, “What did you learn about in today’s read-aloud?” Turn to your neighbor and ask your “what” question. Listen to your neighbor’s response. Then your neighbor will ask a new “what” question, and you will get a chance to respond. I will call on several of you to share your questions with the class.

Word Work: Shallow

(5 minutes)

1. The read-aloud said, “The conditions under the water are very different in various places. Some parts are deep and some *shallow*; there are cool parts and there are warm parts; some are dark and some are full of light.”
2. Say the word *shallow* with me.
3. If something is shallow, it is not deep.
4. The water in the mud puddle is shallow.
5. Can you think of places where you have seen shallow water? Try to use the word *shallow* when you tell about it. (Ask two or three students. If necessary, guide and/or rephrase the students’ responses: “The water in the bathtub is shallow.”)
6. What’s the word we’ve been talking about?

Talk more about antonyms for follow-up. Remind the students that the read-aloud said, “Some parts [of the ocean] are deep and some shallow; there are cool parts and there are warm parts; some are dark and some are full of light.” We call the words *shallow* and *deep* antonyms because they have opposite meanings. Ask the students if there are other pairs of words in the sentence that have opposite meanings. (cool and warm; dark and light)

If time permits, you may ask the students if they know of other words that are antonyms, or have them illustrate a pair of antonyms.



Complete Remainder of the Lesson Later in the Day

12B

The Saltwater Habitat



Extensions

20 minutes

Domain-Related Trade Book or Student Choice

Domain-Related Trade Book

Refer to the list of recommended trade books in the domain introduction at the front of this teacher's guide, and choose one to read aloud to the class. As you read, use the same strategies that you have been using when reading the read-aloud selections in this anthology—pause and ask occasional questions; rapidly clarify critical vocabulary within the context of the read-aloud; etc.

After you finish reading the trade book aloud, lead students in a discussion as to how the story or information in this book relates to the read-alouds that they have heard in this domain.

Student Choice

Ask the students which read-aloud they have heard recently that they would like to hear again. If necessary, reread the titles of recent read-alouds to refresh the students' memories. You may also want to choose one yourself.

Reread the selected text. Feel free to pause at different places in the read-aloud this time and talk about vocabulary and information that you did not discuss previously during the read-aloud.

After the read-aloud, ask students if they noticed anything new or different during the second reading that they did not notice during the first reading. Also, ask them to try to express why they like this read-aloud. Remember to repeat and expand upon each response using richer and more complex language, including, if possible any read-aloud vocabulary.

13

Animals of the Saltwater Habitat



Lesson Objectives

Core Content Objectives

Students will:

- Understand that living things live in habitats to which they are particularly suited
- Understand that ocean life is very diverse
- Match saltwater plants and animals to the saltwater habitat
- Classify animals on the basis of the types of foods that they eat (herbivore, carnivore, omnivore)

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say “excuse me” or “please,” etc. (L.1.1)
- Carry on and participate in a conversation over at least six turns, staying on topic, initiating comments or responding to a partner’s comments, with either an adult or another child of the same age (L.1.3)
- Prior to listening to a read-aloud, identify (orally or in writing) what they know and have learned that may be related to the specific story or topic to be read aloud (L.1.10)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.1.11)
- Make predictions (orally or in writing) prior to and during a read-aloud, based on the title, pictures, and/or text heard thus far, and then compare the actual outcomes to predictions (L.1.12)

- Describe illustrations (orally or in writing) (L.1.13)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.1.14)
- Learn new words from read-alouds and discussions (L.1.15)
- Answer questions (orally or in writing) requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.1.17)
- Answer questions (orally or in writing) that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering “why” questions that require recognizing cause/effect relationships (L.1.20)
- Make personal connections (orally or in writing) to events or experiences in a read-aloud, and/or make connections among several read-alouds (L.1.22)

Core Vocabulary

blowholes, n. Holes on the top of some underwater animals’ heads that are used for breathing

Example: When dolphins come up for air, they use their blowholes to breathe.

Variation(s): blowhole

plankton, n. Very small animals or plants that drift in salt or fresh water

Example: The blue whale eats a type of animal plankton called krill.

Variation(s): none

regeneration, n. The process of regrowing a body part, such as a limb or an organ

Example: If one of the starfish’s arms is cut off, the starfish grows a new arm through a process called regeneration.

Variation(s): none

shellfish, n. A water animal that has a shell

Example: Lobsters and clams are both shellfish.

Variation(s): none

<i>At a Glance</i>	Exercise	Materials	Minutes
<i>Introducing the Read-Aloud</i>	What Have We Already Learned?	globe	10
	Purpose for Listening		
<i>Presenting the Read-Aloud</i>	Animals of the Saltwater Habitat	globe	15
<i>Discussing the Read-Aloud</i>	Comprehension Questions		10
	Word Work: Plankton		5
 Complete Remainder of the Lesson Later in the Day			
<i>Extensions</i>	Habitat Review	Image Cards 1–26 Habitat Posters	20

13A *Animals of the Saltwater Habitat*



Introducing the Read-Aloud

10 minutes

What Have We Already Learned?

Remind students that in the last read-aloud they learned about saltwater habitats. Ask students what they remember about the saltwater habitat. You may wish to prompt them with the following questions:

- What makes a water habitat a saltwater habitat? (The water contains a lot of salt.)
- Where do saltwater habitats exist? (in oceans)
- What does the ocean floor look like? (It has mountains and valleys.)

Using a globe, help the students review, locating and identifying the five oceans of the world—the Arctic, Pacific, Atlantic, Indian, and Southern Oceans. Remind students that the one thing the different oceans have in common as saltwater habitats is that they all have salty water.

However, not all oceans have exactly the same kinds of plants and animals. Remind the students that plants and animals adapt to the specific conditions of their habitat, such as the climate. Ask students how they would describe the climate of the Arctic Ocean; if necessary, remind them that it is very cold. The plants and animals that live in the Arctic Ocean have adapted to this cold weather; mention the blubber found under the skin of walruses and seals to keep them warm as one example. Prompt the students to also talk about the other animal that makes the Arctic Ocean its home (the polar bear) and how it has also adapted to the cold. Now, tell students that the climates of some of the other oceans are different than the climate found in the Arctic Ocean.

Purpose for Listening

Tell students to listen carefully to learn about the animals that live in the Pacific Ocean, a saltwater habitat that is different from the Arctic Ocean. Ask them to pay special attention to whether the animals that live in the Pacific Ocean are the same animals that live in the Arctic Ocean.



Animals of the Saltwater Habitat

← Show image 13A-1: Rattenborough snorkeling

- 1 (Point to the Pacific Ocean on the globe.) Can you tell me what a coral reef is?
- 2 Shellfish are water animals that have shells like lobsters, oysters, and clams.
- 3 *Octopi* is the plural for *octopus*—one octopus, but many octopi, just like *cacti* is the plural for *cactus*.

Hello there! It's me, your explorer friend Rattenborough. I'm ready to show you around a part of the saltwater habitat you learned about last time. I'm here in the Pacific Ocean at a coral reef.¹ Remember, a coral reef is actually a colony of many different kinds of coral animals and the skeletons of those animals. There are many other kinds of animals around a reef, too! I have found everything from fish and **shellfish**,² to octopi³ and sharks, to snails and turtles. This habitat is so rich in life that I don't know quite where to start. So let's take a look around and just see what we can see.



← Show image 13A-2: Starfish

- 4 Can you guess the name of this animal?
- 5 Have you ever seen a starfish?
- 6 Remember that predators are animals that kill and eat other animals. How do you think the starfish's hard spiny body might protect it from predators that want to kill and eat it?

Here is an animal that lies in and around this coral reef and whose name most of you can probably guess based on its shape.⁴ It's a starfish!⁵ This starfish, also known as a seastar, has five arms, which make it look like a star. You'll probably be surprised to learn that, even though it is called a starfish, it's not actually a fish. It belongs to a group of animals that have a spiny skin all over their bodies. If I touch the starfish, I can feel that its body is covered with tiny, hard bumps that help protect it from predators, such as sharks, manta rays, and other fish.⁶ Starfish are also able to protect themselves in another amazing way from their predators. If another animal actually catches and bites off one of the starfish's arms, the starfish will not die and can still escape! In time, a new arm will grow back to replace the missing arm! When an animal regrows a missing body part, it's called **regeneration**. Can you believe it?



← Show image 13A-3: Starfish on ocean floor

The starfish doesn't swim. It crawls very slowly along the ocean floor using hundreds of tiny tube feet. These feet attach to

whatever the starfish is crawling over. As it crawls along the floor, the starfish is always on the lookout for food. This starfish's prey includes fish, snails, clams, oysters, and crabs.



← **Show image 13A-4: Lobster**⁷

7 Does anyone know what animal this is?

Now that I'm down here on the ocean floor, I can see another animal that lives in saltwater. This shellfish is called a lobster. Lobsters live on the ocean floor in openings between rocks. Their hard shell stops most other animals from trying to eat them. Lobsters have many legs that they use for crawling about, and they use antennae on their head to feel their way along the murky ocean floor.⁸ I have to watch out for that lobster's claws! They are called pincers, and they are very strong! The lobster uses them to defend itself against its prey, and to catch and crush its own food.

8 (Point to antennae and other body parts as they are mentioned.)

Lobsters are carnivores; they eat fish, worms, and other shellfish. I'm going to move out of the way of this lobster before I get squeezed!



← **Show image 13A-5: Hammerhead shark**

9 Why do you think this shark is called a *hammerhead shark*?

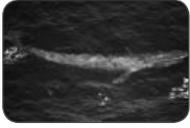
Looks like I moved right into the path of another predator. This is a hammerhead shark.⁹ If you take a look, you can see how the hammerhead got its name. Its head is very thick, and it looks like a hammer from above, with eyes and nostrils on each end. The hammerhead shark is a large fish. It grows up to twenty feet long and can weigh over five hundred pounds—that's about the same weight as ten first-graders! Hammerheads like to live in warm waters, so they are mostly found near the coast where the waters are shallow and warmer.



← **Show image 13A-6: Shark swimming near reef**

Sharks, as most of you know, are carnivores. The hammerhead's favorite food is a fish called a ray, but it also likes to eat octopus, lobster, crab, and fish, including other sharks! Most sharks have smooth and slender bodies, which help them to swim fast. Their mouths are full of sharp teeth to help them catch

their prey. This one is swimming near the coral reef and will eat almost anything it catches!



← **Show image 13A-7: Blue whale**

Let's go back up to the surface. There's a sea animal I'm sure you'll want to see, but we have to travel farther out to sea away from the coral reef and into deeper water to see it. I had to take this boat out to see the next animal. This amazing creature is the biggest animal in the world. It's a blue whale! Blue whales have blue-grey skin and are covered in a layer of blubber that helps keep them warm in the frigid ocean depths.¹⁰ Blue whales are so big that they can weigh as much as twenty-five elephants! In fact, blue whales are the biggest animals known to have lived on earth—even bigger than dinosaurs!

10 Who remembers what blubber is? So is the deep, deep ocean water warm or cold?



← **Show image 13A-8: Blue whale blow hole**

The blue whale spends all its time living in deep water, but unlike fish, it can't breathe underwater because it does not have gills. But it still needs to breathe air just like we do. How long can you hold your breath under water? Maybe a few seconds?¹¹ Well, the blue whale can hold its breath and stay under the water for as long as thirty minutes before eventually coming up for air. It breathes using **blowholes** on the top of its head.¹² Sometimes, when it does come up for air, it breathes out a huge fountain of water from the blowholes.

11 (Have students try to hold their breath while you count.)

12 A blowhole is the hole on the top of the whale's head that it uses to breathe.



← **Show image 13A-9: Blue whale eating**

Blue whales are carnivores. They eat lots of food to build up their blubber during the summer months when food is easy to find. Blue whales eat teeny, tiny sea creatures called **plankton**. The plankton that blue whales eat are small shrimp-like shellfish that are about the size of your little finger.¹³ It's incredible to think that the biggest animal on earth eats one of the smallest animals on earth.

13 (Have students hold up their little fingers to see how small plankton are.)

The ocean is so huge and deep that we could spend all year looking at the plants and animals that live there and still not see

them all. In fact, there are still many living things in the ocean that people—and adventurous rats—have not even discovered yet. I hope you’ve enjoyed learning about the animals in this saltwater habitat in the Pacific Ocean. We still have one more stop to make on our worldwide tour of habitats. I’ll see you next time!

Discussing the Read-Aloud

15 minutes

Comprehension Questions

(10 minutes)

1. Describe the types of animals that live in this saltwater habitat called the Pacific Ocean. (starfish: shaped like a star; hammerhead shark: head shaped like a hammer; lobster: lives on the ocean floor, etc.) Do the animals that you learned about in the Arctic Ocean—walruses and polar bears—also live in the Pacific Ocean? (no) Why not? (The climate and other conditions are different.)



← Show image 13A-3: Starfish on the ocean floor

2. What animal is this? (starfish) Starfish eat fish, snails, clams, oysters, and crabs. Is the starfish a carnivore, omnivore, or herbivore? (carnivore) How does a starfish get around? (It crawls on the ocean floor, using its tube-like feet.) We heard about starfish and regeneration. What does that mean? (It can regrow parts of its body.) Do you think there are lots of other animals that can do this? (Answers may vary.) What about dogs and cats? (no)



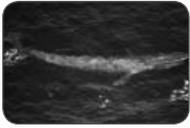
← Show image 13A-4: Lobster

3. What animal is this? (lobster) Lobsters eat fish, worms, and other shellfish. Is the lobster a carnivore, omnivore, or herbivore? (carnivore) Where does the lobster find shelter? (under and around rocks and coral reefs)



← Show image 13A-5: Hammerhead shark

4. What animal is this? (hammerhead shark) Hammerhead sharks eat lobsters, crabs, fish, and other sharks. Is the hammerhead shark a carnivore, omnivore, or herbivore? (carnivore)



← **Show image 13A-7: Blue whale**

5. What animal is this? (blue whale) Blue whales eat teeny, tiny shrimp-like animals called plankton. Is the blue whale a carnivore, omnivore, or herbivore? (carnivore) Do blue whales have gills to breathe underwater? (no) How do blue whales breathe? (through blowholes on the top of their head)

I am going to ask a question. I will give you a minute to think about the question, and then I will ask you to turn to your neighbor and discuss the question. Finally, I will call on several of you to share what you discussed with your partners.

6. *Think Pair Share:* If you could be any animal from a saltwater habitat, which animal would you be and why? (Answers may vary.)

Word Work: Plankton

(5 minutes)

1. In the read-aloud today we heard that blue whales eat teeny, tiny sea creatures called *plankton*.
2. Say the word *plankton* with me.
3. Plankton are small animals or plants that float in salt or fresh water. There are many different kinds of plankton.
4. The blue whale swam through the water eating the plankton.
5. Why do you think plankton is important? Try to use the word *plankton* when you tell about it. (Ask two or three students. If necessary guide and/or rephrase their answers, “Plankton is important because . . .”)
6. What’s the word we’ve been talking about?

For follow-up use a *Making Choices* activity. Tell students that you are going to say two characteristics and they should choose the characteristic that describes plankton. They should use the word *plankton* in their answers.

1. big or small? (Plankton are small.)
2. plant or animal? (Plankton can be plants or animals.)
3. saltwater habitat or freshwater habitat? (Plankton live in the saltwater habitat *and* the freshwater habitat.)
4. predator or prey of the blue whale? (Plankton are the prey of the blue whale.)



Complete Remainder of the Lesson Later in the Day

13B

Animals of the Saltwater Habitat



Extensions

20 minutes

Habitat Review

Go through all of the Habitat Posters and review with students the characteristics of each habitat (dry, wet, hot, cold, etc.) Discuss with the students which animals and plants live in each habitat and how they adapt in order to survive.

Hand out Image Cards 1–26 to the students. Go through the cards, habitat by habitat, and have the students match each image card, one at a time, to the correct habitat. Briefly discuss with students each of the animals and their characteristics, and how the plant or animal is adapted to its environment.

14

Habitat Destruction and Endangered Species



Lesson Objectives

Core Content Objectives

Students will:

- Understand that living things live in habitats to which they are particularly suited
- Identify the characteristics of the bald eagles' habitat
- Understand why and how habitat destruction can cause extinction

Language Arts Objectives

Students will:

- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say “excuse me” or “please,” etc. (L.1.1)
- Ask questions to clarify directions, exercises, and/or classroom routines (L.1.2)
- Carry on and participate in a conversation over at least six turns, staying on topic, initiating comments or responding to a partner’s comments, with either an adult or another child of the same age (L.1.3)
- Prior to listening to a read-aloud, identify (orally or in writing) what they know and have learned that may be related to the specific story or topic to be read aloud (L.1.10)
- Listen to and understand a variety of texts, including fictional stories, fairy tales, fables, historical narratives, informational text, nursery rhymes, and poems (L.1.11)

- Make predictions (orally or in writing) prior to and during a read-aloud, based on the title, pictures, and/or text heard thus far, and then compare the actual outcomes to predictions (L.1.12)
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud (L.1.14)
- Learn new words from read-alouds and discussions (L.1.15)
- Answer questions (orally or in writing) requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc. (L.1.17)
- Ask questions to clarify information or the topic in a read-aloud (L.1.18)
- Answer questions (orally or in writing) that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering “why” questions that require recognizing cause/effect relationships (L.1.20)
- Make personal connections (orally or in writing) to events or experiences in a read-aloud, and/or make connections among several read-alouds (L.1.22)
- With assistance, categorize and organize facts and information within a given domain (L.1.38)

Core Vocabulary

destroy, v. To completely ruin something

Example: If you cut down all of the trees, you will destroy the forest.

Variation(s): destroys, destroyed, destroying

endanger, v. To put in danger’s or harm’s way; to create a dangerous situation

Example: A forest fire could endanger all of the animals who make the forest their home.

Variation(s): endangers, endangered, endangering

endangered species, n. A species present in such small numbers that in the future it may no longer exist

Example: The bald eagle used to be an endangered species because there were very few alive and people were destroying their habitat.

Variation(s): none

extinction, n. The end of a species because of the death of all its members

Example: Dinosaurs once lived on earth but faced extinction because of changes to their habitat.

Variation(s): none

<i>At a Glance</i>	Exercise	Materials	Minutes
<i>Introducing the Read-Aloud</i>	What Have We Already Learned?		10
	Purpose for Listening		
<i>Presenting the Read-Aloud</i>	Habitat Destruction and Endangered Species		15
<i>Discussing the Read-Aloud</i>	Comprehension Questions		10
	Word Work: Destroy		5
 Complete Remainder of the Lesson Later in the Day			
<i>Extensions</i>	Brainstorming Links	chart paper, chalkboard, or whiteboard	20

14A

Habitat Destruction and Endangered Species



Introducing the Read-Aloud

10 minutes

What Have We Already Learned?

Ask students to remind you what it means if an animal or plant is *adapted* to its habitat. Tell students that it takes plants and animals a long time to adapt to their environment. Have them name several animals or plants they have learned about in the read-alouds and describe how they are well adapted to their habitat and surroundings.

Tell students that the next read-aloud is about what happens to living things when their habitats change. Ask them what they think would happen to an animal or plant if its surroundings changed. Tell them to imagine, for example, what would happen if it got hot in the Arctic and all the snow and ice melted:

- Would the musk ox's heavy fur coat help it in the hot weather?
- Would the arctic hare's white coat still help it blend in?
- Would walruses and seals still have a use for all that blubber?
- Blubber, heavy fur, and camouflage are all ways that Arctic animals have adapted to cold weather. Could any of these adaptations make it hard to live in the new, hot weather? Why or why not?

Purpose for Listening

Tell students to listen carefully to find out how habitat changes have affected the bald eagle.



Habitat Destruction and Endangered Species

← Show image 14A-1: Rattenborough in astronaut suit

Rattenborough here, delivering the final installment of our exciting habitats adventure. We have traveled all around the world looking at some of the different habitats where plants and animals live. A lot of those habitats, such as the Arctic and the Sonoran Desert, have climates to which you and I would have a tough time adapting.¹ As we've seen, however, there are different living things in each habitat we have visited.

Because some living things are so well adapted to the specific conditions of their specific habitats, any large change in their surroundings could make it hard for them to survive. Just think what would happen if it got even a little colder in the desert: some of those animals who are so good at keeping cool wouldn't know how to stay warm. Or what if it stopped raining in the rainforest? What would happen to all of those plants that need lots of water?

Sometimes habitats change because the temperature or the weather changes, but unfortunately, people often affect habitats as well. Whether they realize it or not, people can make it very difficult for plants and animals to survive.

← Show image 14A-2: Humans harming the earth

From cutting down trees or starting forest fires, to dumping dangerous waste and chemicals into our rivers—people's actions can **endanger** lots of species of plants and animals.²

Sometimes people's actions **destroy** entire habitats.³ For example, someone walking in a forest might light a match and drop it, and then the whole forest might burn. Even if they were not killed by the fire itself, many animals that used to live in trees would no longer have a place to live. When they lose their homes, animals find it much harder to continue to live in a particular habitat. If they can't find new places to live, the animals will

1 Remember that *climate* means the kind of weather a place normally has. How would you have a tough time adapting to the Arctic? To the desert?



2 To *endanger* plants and animals means to put them in danger's way. So, people's actions can harm or even kill lots of plants and animals.

3 To *destroy* something means to ruin or break it.

4 Do you remember what a species is? It's a name for a group of living things that are all similar. So an endangered species is a group of living things that could die out completely.

5 *Extinction* means dying out forever.



← **Show image 14A-3: Bald eagle in tree**

I'm on a mission to tell you about one animal that can teach

us a lot about endangered species and how to save them. I have

come here to Washington State, in the northwestern part of the

United States, to show you an amazing bird called a bald eagle.

Look up at that tree there and you will see one of these eagles

perched on the very top branch.⁶ You may recognize the bald

eagle because it is one of the national symbols of our country.

Drawings of the eagle appear as a symbol on American money

and in many other places. Believe it or not, the bald eagle was

almost extinct in the United States several years ago! If that had

happened, there would be no bald eagles still living. So, we're

grateful to be able to spot this bald eagle today.

6 Have you ever heard of this bird before?



← **Show image 14A-4: Bald eagle in flight**

Bald eagles are scavengers, but they also eat rats and other small

animals, so I'd better stay out of the way.⁷ I think that the bald eagle

looks very grand, don't you? It is covered with dark brown feathers,

and its head and tail are both white. Bald eagles are some of the

largest birds living in this country. They can grow up to three feet tall,

which is almost as tall as a first-grader! Wow—this one has just taken

off into the air, and you can see that it has huge wings. In fact, their

wings can spread to about eight feet in length. While this eagle is

flying around, let me tell you more about these special birds.

7 Can anyone tell me what a scavenger is?



← **Show image 14A-5: Housing development**

There used to be thousands of bald eagles in the United States.

But farmers started to hunt them because they thought the eagles

8 Do you think it caused problems when people cut down trees that the eagles used to build their nests? Why or why not?

9 Why do you think the eagles were dying out?

10 When scientists discover things, they learn new information.

were killing their farm animals. Then, later, people started to cut down the trees that the eagles built their nests in to make way for roads, houses, and shopping malls.⁸ With fewer places for them to make their homes, eagles found it harder and harder to survive, and they started to die out. Soon, there weren't very many bald eagles left in the whole United States. People started to notice that there were fewer and fewer bald eagles, and they decided to find out why.⁹

Scientists began to study the eagles, and they discovered two things.¹⁰ The first was that a lot of eagles didn't have enough room to build their nests. Eagles do not like to live in the same area as other eagles, so they build their nests far away from each other. They like places that are very peaceful and they need huge, strong trees that can hold nests big enough for the adults and their babies to live in.

The scientists discovered that the eagles didn't have enough room in the areas where they had been living because people were chopping down trees in order to build more roads and buildings. People were destroying the bald eagles' habitat.



← **Show image 14A-6: Farmers spraying pesticide**

The other thing that scientists found out was that something bad was getting into the bald eagles' food supply. Farmers sometimes use chemicals to keep bugs from eating their crops. One chemical, though, made the eggs that the eagles laid much thinner and easier to break. Because of this, many eagle eggs were breaking before they could hatch. No one knew before then that the chemical was hurting the eagles, but it was.



← **Show image 14A-7: Bald eagle eggs**

Luckily, the scientists found out which chemical was harming the eagles' eggs. Using the scientists' information, the United States government made laws to protect the bald eagle and its habitat so that the eagles food no longer contained the harmful chemical. Thanks to these laws, more eagles were born, and the

11 What two things were hurting bald eagles?



← **Show image 14A-8: Bald eagle nest**

numbers of eagles started to rise again.¹¹ Now, bald eagles have made an amazing comeback, but people must always be careful to protect their habitat.

Now, this bald eagle has returned to its nest up in that tree. Maybe it has some chicks up there that it needs to feed, or maybe it's just trying to keep warm—it is pretty chilly.

And speaking of returning to the nest, I'm afraid it's time for me to go home now. I've really enjoyed our trip around the world's habitats, and I hope that you have too! Mrs. Rattenborough and my kids miss me, and to tell the truth, it's been a dangerous expedition for me. I'll be glad to get out of danger and into the safety of my lovely home under the steps. Home, sweet home—or maybe I should say, "Habitat, sweet habitat!"

Discussing the Read-Aloud

15 minutes

Comprehension Questions

(10 minutes)

1. What is an endangered species? (a species that could die out because there are so few still living)
2. What is extinction? (when an animal or plant dies out completely)
3. Why do changes in an animal's habitat make it hard for it to survive? (Animals are already so well-adapted to the habitat they live in. They can't adapt or make changes to the new conditions of their habitat.)
4. What can cause a habitat to change? (changes in temperature, changes in weather, people's actions)
5. How do people affect habitats? (They can hurt them by building cities and roads, cutting down trees, etc. They can protect them by making careful laws about where to build, and by avoiding chemicals that harm animals like the bald eagle.)
6. Why were bald eagles disappearing from the United States? (They didn't have enough space to build their nests, and a chemical in their food supply was making their eggs very breakable.)

7. Why do you think it is important to protect animals' habitats? (Answers may vary.)
8. *When? Pair Share:* Asking questions after a read-aloud is one way to see how much everyone has learned. In a moment you are going to ask your neighbor a question about the read-aloud that starts with the word *when*. For example, you could ask, "When is an animal considered extinct?" Turn to your neighbor and ask your "when" question. Listen to your neighbor's response. Then your neighbor will ask a new "when" question, and you will get a chance to respond. I will call on several of you to share your questions with the class.

Word Work: Destroy

(5 minutes)

1. In the read-aloud today we heard that people's actions can sometimes *destroy* animals' habitats.
2. Say the word *destroy* with me.
3. To *destroy* something means to ruin, break, or end it.
4. If I built a big tower of blocks, I could destroy it by knocking it over.
5. Tell me about a time when you saw something destroyed. Try to use the word *destroy* when you talk about it. You could start by saying something like, "Once I saw someone destroy a ____." Then describe how it happened. (Ask two or three students.)
6. What's the word we've been talking about?

Use a *Making Choices* activity for follow-up. Tell students to listen to the following examples. If the action describes someone destroying something, have the students say, "destroy." If it does not, tell them to say nothing.

1. tearing up your homework (destroy)
2. coloring in a coloring book
3. shaking hands with a new friend
4. throwing a glass on the floor (destroy)
5. throwing a sandwich into a puddle (destroy)



Complete Remainder of the Lesson Later in the Day

14B

Habitat Destruction and Endangered Species



Extensions

20 minutes

Brainstorming Links

Remind students that the read-aloud showed how people's actions have an effect on animals' habitats. Explain that you are going to talk about the read-aloud and that you are going to write down what they say, but that they are not expected to be able to read what you write because they are still learning all the rules for decoding. Emphasize that you are writing what they say so that you don't forget, and tell them that that you will read the words to them.

Draw a large circle on the whiteboard or on a sheet of chart paper. Label the circle "Eagles." Read the label to the students and tell them you want them to think of words that relate to the eagles from the read-aloud.

Ask: "What sort of things do eagles need to survive?" To start them off, you may want to say something like, "The eagles like to build nests for their young." Write the word *nests* inside its own circle on the whiteboard or sheet of chart paper and draw a line from the "Eagles" circle to the "Nests" circle. Ask: "What else was important to the eagles?" (eggs, food, land, large numbers, etc.) As the students respond, write each of their answers in its own circle surrounding the main "Eagles" circle, and draw a line to connect the two.

When the class has created a substantial word map, reread the words that students brainstormed. Discuss both negative and positive ways in which people can affect these aspects of the eagles' lives. Feel free to encourage speculation, but also review the explanations provided in the read-aloud, emphasizing the impact of habitat destruction.

PP3

Pausing Point 3



Note to Teacher

This is the end of the read-alouds for this domain. You may choose to pause here and spend one to two days reviewing, reinforcing, or extending the material of the domain.

If you do pause, you may have students do any combination of the activities listed below. The activities may be done in any order. You may wish to do one activity on successive days. You may also choose to do an activity with the whole class or with a small group of students who would benefit from the particular activity.

Core Content Objectives Up to This Pausing Point

Students will:

- Understand that living things live in habitats to which they are specifically suited
- Classify water habitats as either freshwater or saltwater habitats
- Identify the characteristics of the freshwater habitat
- Classify animals on the basis of the types of food they eat (herbivore, carnivore, omnivore)
- Understand that saltwater covers most of Earth and is found in several oceans
- Identify and locate the oceans of the world on a globe: Arctic, Pacific, Atlantic, Indian, Southern
- Describe the landscape of the ocean floor
- Understand that ocean life is very diverse
- Match saltwater plants and animals to the saltwater habitat
- Identify the characteristics of the bald eagles' habitat
- Understand why and how habitat destruction can cause extinction

Activities

The Oceans

Materials: World map or globe

Help students locate and identify the Arctic, Pacific, Atlantic, Indian, and Southern Oceans. Remind students that water covers most of Earth.

Image Review

Show the images from any read-aloud again and have students discuss the read-aloud using the images.

Image Card Review

Materials: Image Cards 19–26

In your hand, hold Image Cards 19–26 fanned out like a deck of cards. Ask a student to choose a card but to not show it to anyone else in the class. The student must then perform an action or give a clue about the picture s/he is holding. For example, for the hammerhead shark, the student may describe the habitat the hammerhead shark lives in, what it eats, and what it looks like. The rest of the class will guess what animal or plant is being described. Proceed to another card when the correct answer has been given.

Domain-Related Trade Book or Student Choice

Materials: Trade book

Read an additional trade book to review a particular habitat; refer to the books listed in the domain introduction. You may also choose to have the students select a read-aloud to be heard again.

Key Vocabulary Brainstorming

Materials: Chart paper

Give the students a key domain concept or vocabulary word such as *destroy*. Have them brainstorm everything that comes to mind when they hear the word. Record their responses on a piece of chart paper for reference.

Class Book: Habitats

Materials: Drawing paper and drawing tools for each student

Tell the class or a group of students that they are going to make a class book to help them remember what they have learned in this domain. Have the students brainstorm important information about the last two habitats they have just learned about (freshwater habitat and saltwater habitat). Then have them brainstorm important information about habitat destruction. Have each student choose one idea to draw a picture of and then write a caption for the picture. Bind the pages to make a book to put in the class library for students to read again and again.

Habitats

Show students the Habitat Posters for each of the habitats they have learned about thus far and ask students to describe the characteristics of animals that live there. Extend this by asking students what would happen if a specific animal then had to move to another environment.

As a challenge, you may wish to do the same activity with examples of other habitats not included in the domain.

Freshwater vs. Saltwater

Bring to class a clear container of water scooped from a pond, or other water that has been sitting outdoors in the open for at least two weeks. Use magnifying glasses, microscopes, or an overhead projector to allow students to observe some aquatic organisms.

Then, mix a half-teaspoon of salt with one cup of water to simulate the salinity of ocean water. Pour out very small portions so students may taste the difference between salt water and fresh water. (NOTE: Do not allow students to drink the freshwater you have brought in. Instead have them drink from a water fountain.) Explain that drinking large amounts of salt water is dangerous to the human body.

Oceans: Both Fun and Useful

Have students identify the oceans on a world map, and then brainstorm ways that we use the ocean for fun and how we use it to help us get work done.

Ocean Habitat Mural

Have students make an ocean habitat mural using resources available in the classroom, such as ocean pictures from magazines, paints, and other art supplies. Using a long piece of blue paper, students may draw, paint, or color their part of the ocean to create a class mural. Instruct the students to write or dictate a sentence under their section describing their part of the ocean. After it is finished, post the mural on the wall and have students act as docents to explain the ocean picture.

Share this picture with other Grade 1 classrooms or with other classes in the school. Extend this activity by drawing other habitats and placing pictures of animals in the correct habitat.

Habitat Destruction

As a writing activity, ask students to think about what happens when a habitat is destroyed. What can they do to help protect the environment and the habitat of animals? You may wish to review the Brainstorming Links extension from Lesson 14 to give students a concrete example.



This domain assessment evaluates each student's retention of the core content objectives targeted in *Animals and Habitats*.



Domain Assessment (Instructional Master DA-1)

Directions: I am going to read a sentence about animals and their habitats. First, you will listen to the sentence that I read. Next, you will look at the pictures in the row and circle the correct answer(s).

1. Circle the three items that animals need in a habitat.
2. Circle the foods that omnivores eat.
3. Circle the animal that is a predator. Put a check mark next to its prey.
4. Circle the animal or animals that are carnivores.
5. Circle the animal or animals that are herbivores.
6. Circle the rainforest habitat.
7. Circle the desert habitat.
8. Circle the savanna habitat.

Directions: Now I am going to read you a series of statements. If the statement is true, circle the letter 'T.' If the statement is false, circle the letter 'F.'

9. When an animal is extinct, that means there are lots of them all over the world. (F)
10. The animals and plants that live in a saltwater habitat could not survive in a freshwater habitat. (T)
11. When an animal's habitat is destroyed, it is possible that that animal could become extinct. (T)

For Teacher Reference Only:
Copies of *Tell It Again! Workbook*





Dear Parent or Guardian,

Over the next several days, your child will be learning about many different types of habitats including the desert habitat, the rainforest habitat, and several others. Your child will learn that an animal's habitat provides food, water, and shelter for that specific animal. Your child will also learn about the adaptations that plants and animals have made in order to survive in specific environments.

Below are some suggestions for activities that you may do at home to continue to enjoy learning about animals and their habitats.

1. Safari

In class, your child went on a safari to look for plant and animal life around the school. Go on a safari with your child around your neighborhood. Point out the different types of plant and animal life. Discuss with your child how the plants and animals meet their basic needs in your neighborhood. Point out examples of food and shelter for different animals.

2. Habitat Terrarium

Simulate a small habitat at home by making a small terrarium. Use a small fish tank or some other clear container (plastic containers used for food would work well also). Add one or two inches of soil, sprinkle grass seed, and water when needed. Cover the container with something that will allow the air to flow. (Cheesecloth works well.)

Once the grass has started growing, add small animals like grasshoppers. Observe the habitat for a few days and talk with your child about how the animals' needs are being met or are not being met in the mini-habitat.

3. Words to Use

Below are several of the words that your child has been learning about and using. Try to use these words as they come up in everyday speech with your child.

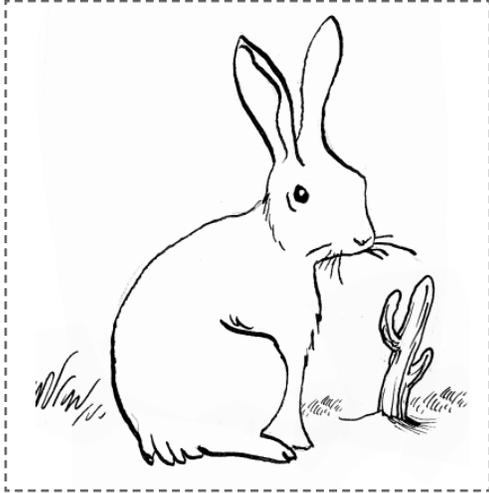
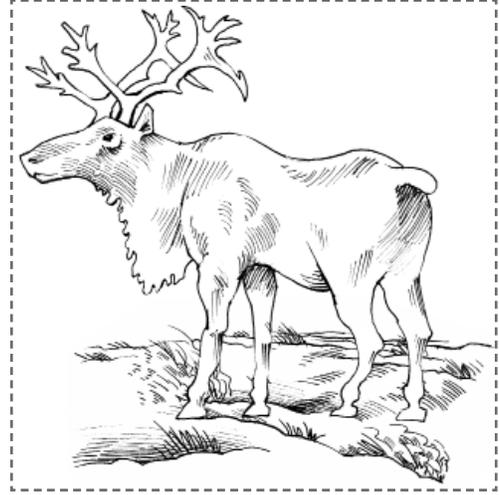
- *habitat*—What kind of habitat do we live in?
- *shelter*—We need to find some shelter so we can get out of the rain!
- *herbivore*—A rabbit is an herbivore, because it only eats plants.
- *carnivore*—A lion is a carnivore, because it hunts and eats other animals.
- *omnivore*—A person is an omnivore if they eat both plants and animals.

4. Read Aloud Each Day

It is very important that you read to your child each day. The local library has many nonfiction books on habitats and the plants and animals that live in them.

Be sure to praise your child whenever s/he shares what has been learned at school.

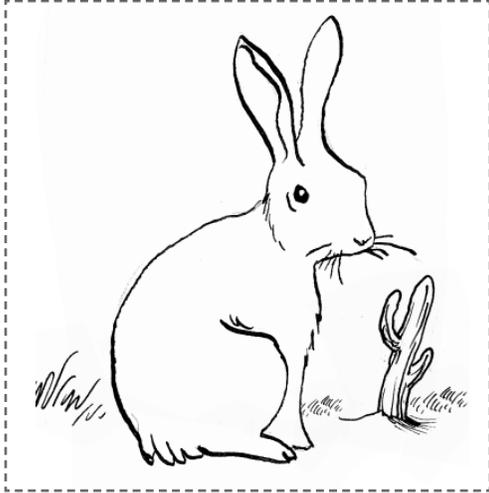
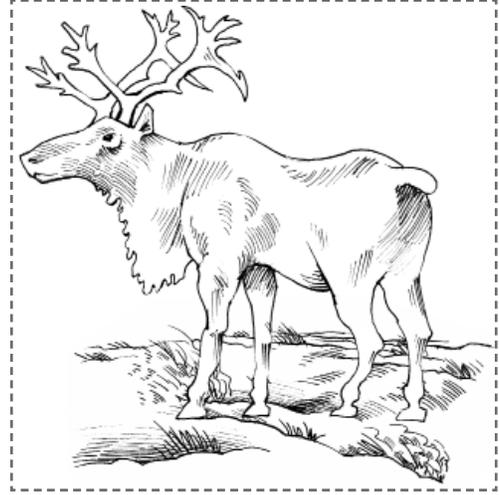
Directions: Examine the pictures on the worksheet. Decide whether the animal is a carnivore, herbivore, or omnivore. Cut out the images and sort them. Glue each category on a separate piece of paper.



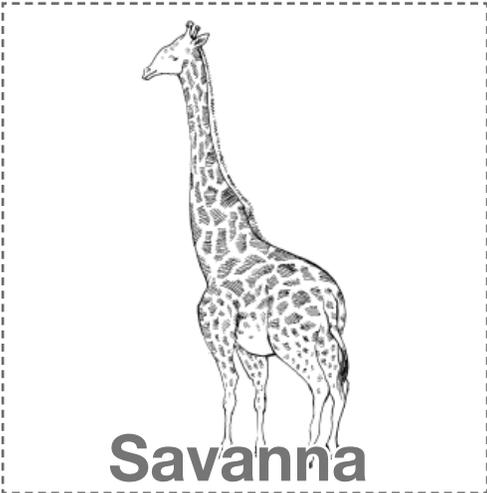
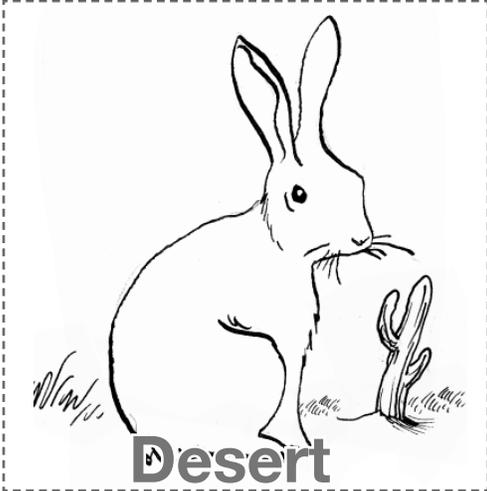
Directions: Examine the pictures on the worksheet. Decide whether the animal is a carnivore, herbivore, or omnivore. Cut out the images and sort them. Glue each category on a separate piece of paper.



Directions: On one sheet of paper draw the Arctic habitat, on the second piece of paper draw the desert habitat, and on the third sheet of paper draw the savanna habitat. Cut out the animals and place them on the correct habitat.



Directions: On one sheet of paper draw the Arctic habitat, on the second piece of paper draw the desert habitat, and on the third sheet of paper draw the savanna habitat. Cut out the animals and place them on the correct habitat.





Dear Parent or Guardian,

Over the past several days, your child has learned about the Arctic tundra and ocean, the desert habitat, and the savanna habitat. S/he is beginning to learn about the temperate deciduous forest habitat. In the next few days, s/he will learn about the rainforest habitat, the freshwater habitat, and the saltwater habitat. Your child will continue to learn about adaptations that plants and animals have made in order to survive in the specific habitats mentioned above. Your child will also learn about endangered species and the causes of extinction.

Below are some suggestions for activities that you may do at home to continue to enjoy learning about animals and habitats.

1. Habitats

Ask your child which of the habitats s/he likes best and why. Discuss with your child what types of plants and animals live there and how those plants and animals are adapted to that habitat.

2. Animals and Habitats Drawing

Have your child draw a picture of one or several of the habitats s/he has learned about thus far. Talk with your child about the weather and climate of the habitat. Be sure s/he includes the plants and animals that live in that habitat. Have your child think about what s/he would have to do to adapt to the climate, and then draw himself/herself in the picture with his/her adaptations.

3. Where in the World?

Use a world map or globe to locate each of the habitats your child has learned about thus far. [Arctic (tundra and ocean), Sonoran Desert, East African Savanna] Show your child where you live in relation to each of these habitats.

4. Saltwater

In a few days, your child will be learning about the saltwater habitat. As preparation, you may want to help your child differentiate between saltwater and freshwater. Mix a half-teaspoon of salt with one cup of water. Have your child sip a tiny bit of the salt water and then sip some drinking water. Discuss the difference in taste between the two.

Be sure to explain that people should not drink a lot of saltwater because it is not good for their health.

5. Ocean or Saltwater Habitat Collage

Have your child make an ocean or saltwater collage. Have your child paint or color blue a piece of paper. Next, have his/her look through magazines or journals to find pictures of animals that live in the ocean. If no magazines or journals are available, have your child draw and cut out the animals from construction paper and glue them onto the blue paper.

6. Pollution and Habitat Destruction

Your child will be learning about how pollution can cause animals' habitats to be destroyed. The next time you are out with your child, point out examples of pollution. Have your child also look for examples of pollution.

Be sure to praise your child whenever s/he shares what has been learned at school.

1.



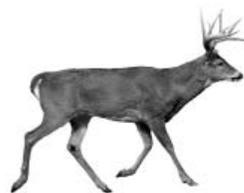
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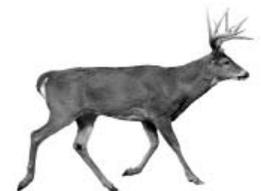
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Directions: Listen to the teacher's directions and answer each question.

6.



7.



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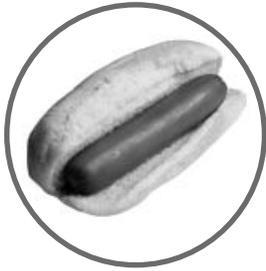
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Directions: Listen to the teacher's directions and answer each question.

1.



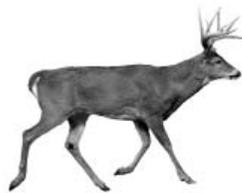
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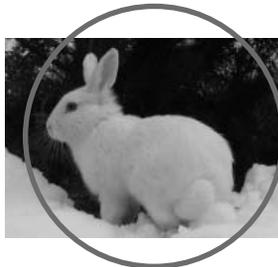
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