



SCIENCE • GRADE 3

California Content Standards

Life Sciences: 3.A

Life Sciences: 3.B

Below Level

# Adapting to Environments

**FOCUS**curriculum

Curriculum materials for **your** content standards

*33 Milford Drive, Suite 1, Hudson, OH 44236*

*(330) 656-9008 • [www.focuscurriculum.com](http://www.focuscurriculum.com)*

LOOK  
INSIDE  
FOR:

California's  
Academic  
Content Standards  
Covered

•  
Reproducible  
Student Book

•  
Reproducible  
English-language  
Arts Activities

# Adapting to Environments

## California's Science Content Standards Met

### GRADE 3 SCIENCE

**LIFE SCIENCES: 3**—Adaptations in physical structure or behavior may improve an organism's chance for survival. As a basis for understanding this concept:

- a. Students know plants and animals have structures that serve different functions in growth, survival, and reproduction.
- b. Students know examples of diverse life forms in different environments, such as oceans, deserts, tundra, forests, grasslands, and wetlands.

### GRADE 3 ENGLISH LANGUAGE ARTS

#### 1.0 WORD ANALYSIS, FLUENCY, AND SYSTEMATIC VOCABULARY DEVELOPMENT

*Vocabulary and Concept Development 1.4*—Use knowledge of antonyms, synonyms, homophones, and homographs to determine the meanings of words.

#### 2.0 READING COMPREHENSION

*Structural Features of Informational Materials 2.1*—Use titles, tables of contents, chapter headings, glossaries, and indexes to locate information in text.

*Comprehension and Analysis of Grade-Level-Appropriate Text 2.4*—Recall major points in the text and make and modify predictions about forthcoming information.

*Comprehension and Analysis of Grade-Level-Appropriate Text 2.6*—Extract appropriate and significant information from the text, including problems and solutions.

Below Level



SCIENCE • GRADE 3

California Content Standards

Life Sciences: 3.A

Life Sciences: 3.B

# Student Book

*Adapting to Environments*

Print pages 5 – 18 of this PDF for the student book.

# How to Make the Student Book

- The student book is contained on pages 5–18 of this PDF. It begins on the next page.
- To make one student book, or a two-sided master copy that can be photocopied, you will print on both sides of seven sheets of 8.5" x 11" paper.
- Do a test printout of one book first to familiarize yourself with the procedure.
- Follow these instructions carefully.

## First—Select the Paper

Since you will be printing on both sides of the sheets of paper, select a good quality white paper. We recommend using at least a 22lb sheet.

## Second—Check Printer Settings

Be sure you have the correct page setup settings for your computer and printer. You will print these pages in landscape format.

## Third—Print EVEN Pages

Open the PDF of the book you want to print. Select print from your file menu. In your printer's dialogue box enter pages 5–18 to print. Then select EVEN pages only. It is important to print only the EVEN pages first. Click "Print" to print the even pages. (**Important note:** The first page that prints will be blank. DO NOT discard this page. It will be needed to print the cover in the next step.)

## Forth—Print ODD Pages

When the even pages have printed, flip the stack of pages over to print the odd pages. Place the stack back in your printer. Select print from the file menu again. In your printer's dialogue box, select ODD pages. Click "Print" to print the odd the pages.

## Fifth—Fold the Book

You now have a complete book. Check to be sure the pages are in the correct order with the book's cover as the top page. Then fold the stack of paper in half.

## Sixth—Staple the Book

Use an extended-length stapler to staple the pages together. Place three staples in the spine of the book.

Please note that printers vary in how they output pages. Do a test printing with one book and adjust the procedure as necessary.

If you want to make a one-sided master copy, print ALL pages 5–18 at once. Then select "one-sided to two-sided" on the copy machine.

# Adapting to Environments California's Science Content Standards Met

BL

## GRADE 3 SCIENCE

**LIFE SCIENCES: 3**—Adaptations in physical structure or behavior may improve an organism's chance for survival. As a basis for understanding this concept:

- a. Students know plants and animals have structures that serve different functions in growth, survival, and reproduction.
- b. Students know examples of diverse life forms in different environments, such as oceans, deserts, tundra, forests, grasslands, and wetlands.

## GRADE 3 ENGLISH LANGUAGE ARTS

### 1.0 WORD ANALYSIS, FLUENCY, AND SYSTEMATIC VOCABULARY DEVELOPMENT

*Vocabulary and Concept Development 1.4*—Use knowledge of antonyms, synonyms, homophones, and homographs to determine the meanings of words.

### 2.0 READING COMPREHENSION

*Structural Features of Informational Materials 2.1*—Use titles, tables of contents, chapter headings, glossaries, and indexes to locate information in text.

*Comprehension and Analysis of Grade-Level-Appropriate Text 2.4*—Recall major points in the text and make and modify predictions about forthcoming information.

*Comprehension and Analysis of Grade-Level-Appropriate Text 2.6*—Extract appropriate and significant information from the text, including problems and solutions.



SCIENCE • GRADE 3

California Content Standards

Life Sciences: 3.A

Life Sciences: 3.B

# Adapting to Environments

by Linda Barr





SCIENCE • GRADE 3

California Content Standards

Life Sciences: 3.A

Life Sciences: 3.B

# Adapting to Environments

by Linda Barr

**FOCUS**curriculum

Curriculum materials for **your** content standards

Copyright © 2009 FOCUScurriculum

## Table of Contents

### Introduction:

Living in a Habitat . . . . . 4

### Chapter 1:

Types of Habitats . . . . . 5

Deserts . . . . . 5

Grasslands . . . . . 6

Forests . . . . . 7

Wetlands and Marshes . . . . . 8

Tundra . . . . . 9

Oceans . . . . . 9

### Chapter 2:

Ways That Plants Survive . . . . . 10

Adapting to Climate . . . . . 10

Adapting for Reproduction . 12

### Chapter 3:

Ways That Animals Survive . . . 13

Body Coverings . . . . . 13

Body Parts . . . . . 15

Behaviors . . . . . 18

Glossary . . . . . 22

To Find Out More . . . . . 23

Index . . . . . 24

---

## INTRODUCTION

# Living in a Habitat

A habitat is a place in nature where a plant or an animal makes its home. Earth has many types of habitats. There are hot, cold, wet, and dry habitats.

You will read about some of the plants and animals in these habitats. You will find out how animals and plants **adapt**, or change, in order to **survive** in these habitats.

**habitat:** the place where an animal lives and has its needs met  
**adapt:** to change to make more usable  
**survive:** to continue to live

---

## CHAPTER 1

# Types of Habitats

## Deserts

It almost never rains in the desert. During the day, it is very hot. But the nights can be cool. In such a dry, hot habitat, it is hard for many things to live.

Cactus is one type of plant that can survive in the desert. It can store water for a long time in its stems.

Lizards and snakes live in the desert. Owls, kit foxes, and coyotes live there, too.

California's deserts include the Mojave, the Colorado, and Death Valley.

---

## Grasslands

Grasslands get more rain than deserts, but not a lot. Summers are warm. Winters can be cold and snowy.

Grasslands are too dry for trees to grow. Most of the plants are grasses. Grass-eaters, such as bison, zebras, and kangaroos live there. So do hawks and cheetahs and other animals that hunt grass-eaters.

In North America, grasslands are also called prairies. Much of California's grasslands are now used for farms or towns.

*How does the amount of rainfall affect the plants in each habitat?*

---

## Forests

### **Deciduous**

In many forests, the trees lose their leaves every fall. Trees that lose their leaves are deciduous trees. Deciduous forests have warm summers and cold winters. Deer, bears, foxes, and hawks live in these forests.

### **Evergreen**

In evergreen forests, the trees stay green all year. They do not drop their leaves. Summers are warm or cool, and winters are very cold. Moose, beavers, owls, and rabbits live in evergreen forests.

### **Rain Forests**

Rain forests are always warm and wet. Living in the tall trees and vines are monkeys, birds, snakes, and many other animals.

California has all three types of forests.

*What kind of forest grows closest to your home?*

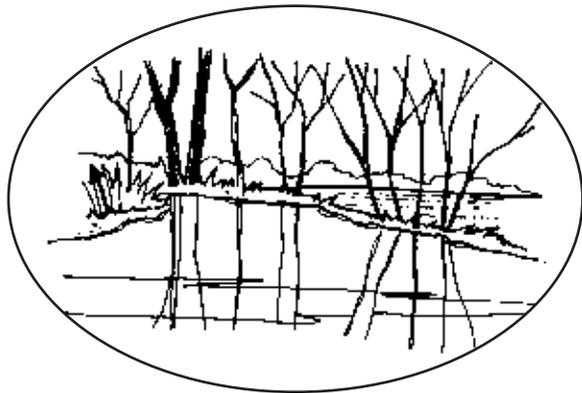
---

## Wetlands and Marshes

You will find wetlands and marshes near rivers, lakes, and the ocean. They are also called swamps. Wetlands are under shallow water all or part of the time.

Many birds, frogs, and fish lay their eggs in wetlands. Turtles, ducks, otters, muskrats, and raccoons live in this habitat. Wetland plants are mostly grasses and bushes.

Many wetlands in California and other states have been drained. Houses were built on the land.



*How is a wetland different from a river?*

---

## Tundra

The tundra is Earth's coldest habitat. Summers are cool and short. There is little rain. Only small plants grow there. Animals, such as caribou, rabbits, sheep, wolves, and bears, survive in this harsh habitat.

California has no tundra.

*Few trees grow on the tundra. Trees are not able to send roots into the frozen ground.*



## Oceans

The oceans are Earth's largest habitat. Millions of tiny plants float on the water. They create much of the oxygen you breathe. Seaweed grows near the shore. The ocean is home to fish of all sizes and air-breathing animals such as whales.

## Ways That Plants Survive

### Adapting to Climate

Plants find ways to meet their needs in all kinds of habitats. Small plants survive in the frozen, windy tundra by growing low to the ground. These plants have to make seeds quickly during the short summers.

When it rains on the desert, many plants soak up the water fast. They store it in their needles, stems, and roots. Then when there is no rain, the plants can use the water.

---

Even in the rain forest, plants struggle to survive. Rain forest trees grow close together. They block sunlight from reaching the forest floor. Few plants can survive down there. To soak up more sunlight, plants grow wide leaves. Vines climb up trees to reach the light.



---

## Adapting for Reproduction

Most plants reproduce by seeds. Seeds wait until there is warmth and water. Then they sprout. For example, desert seeds don't sprout until after a rare rainstorm.

Flowers need **pollen** to produce seeds. Many flowers have bright colors and **nectar** that birds and insects like. When they go after the nectar, the birds and insects pick up pollen on their bodies. They spread the pollen from flower to flower helping to create seeds.

Seeds travel in other ways. Dandelion seeds float on the air. Some end up in places where there is room for them to grow.



**reproduce:** to create more of the same kind  
**pollen:** a fine powder produced by flowers that fertilizes other flowers of the same kind  
**nectar:** a sweet liquid produced by some flowering plants

## Ways That Animals Survive

### Body Coverings

Body coverings help animals in many ways. In cold climates, many animals have thick layers of fur or fat to keep them warm. In the desert, the scales on snakes and lizards help keep water in their bodies.

Body coverings also help animals hide from **predators**. Some animals have colors that match their setting, such as a tree or rock. For example, many birds and insects are green or brown. They blend in with the trees and rocks. That makes it harder for predators to spot them.

**predator:** an animal that eats other animals such as a lion, wolf, or hawk

---

There are times when predators are helped by the color of their own body covering. For instance, wolves are brown so they blend in with trees and rocks. That makes it harder for their **prey** to see them coming.

A hard body covering protects some animals, such as insects, snails, and lobsters. Armadillos are covered with bony plates. Porcupines have sharp quills. Turtles have hard shells.



*Armadillo*

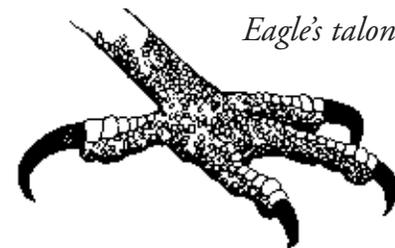
**prey:** an animal that is eaten by other animals such as a mouse, rabbit, or bird

---

## Body Parts

Body parts help predators and prey survive. Flippers help whales and sea lions dive deep to find food. An eagle's talon helps it grab prey for food.

Webbed feet help frogs and ducks swim fast. They can escape from their predators. Special hooves help bighorn sheep climb up cliffs. Strong back legs help rabbits and kangaroos out-hop predators.



*Eagle's talon*



*Duck's foot*

---

Sharp eyesight helps predators and prey see each other. Good hearing helps both, too. Mice can hear the whoosh of a hawk's wings. The hawk can hear mice try to scamper away.

Some animals can feel prey or predators getting closer. Special hairs help them feel the air or water move.

Claws and teeth help animals protect themselves. Teeth also help animals eat. Wolves have sharp teeth for eating their prey. Cows have flat teeth for grinding up grasses.

*How do your eyes, ears, and teeth help you survive?*

---

## Beaks and Bills

### Eagle

Eagles and hawks have strong, sharp beaks. These beaks help them catch and eat small prey.



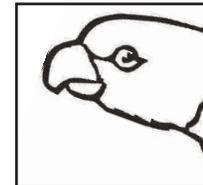
### Woodpecker

Woodpeckers and many other birds eat insects. They need pointed beaks to reach the bugs crawling under tree bark.



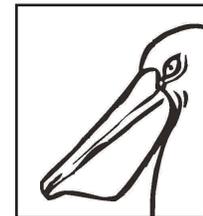
### Parrot

The parrot's strong, curved bill helps it open seeds and nuts.



### Pelican

Pelicans store fish in their large bills so they can feed their babies.



*A scientist finds a new kind of bird. Why must this scientist describe the bird's beak very carefully?*

---

## Behaviors

Thick fur helps some animals, such as wolves and bears, survive through cold winters. Yet as winter arrives, other animals change what they do. Some animals **migrate** to a warmer place. In spring, they come back. Many kinds of birds migrate. Whales migrate to have their babies in warm places.

Some animals sleep through winter to survive the cold. First, they eat a lot to store fat in their bodies. Next, they find a hole in a tree or the ground. Then they go into a deep sleep.

*Do people migrate? Why?*

**migrate:** to travel from one place to another and back again in order to survive changing weather conditions

---

As an animal **hibernates**, its heart slows way down. Its body gets cooler. It breathes less often. Energy from the stored fat keeps it alive. Hibernators include chipmunks, squirrels, and bats.

Some animals seem to hibernate, but don't. Instead, they go **dormant**. Their bodies slow down and cool off a little. They might wake up and eat on warm days. This group includes bears, frogs, and snakes. Some desert animals go dormant when it's very hot and dry.

*What is the difference between hibernating and being dormant? Why don't all animals hibernate during the winter?*

**hibernate:** to go into a very deep sleep-like state for a long while  
**dormant:** a state of being alive but not moving or growing

---

You know that body coverings help animals hide themselves. For example, chameleon skin has four colors of “paint” cells in it: red, yellow, blue, and white. The cells let chameleons change color in 20 seconds!

Behaviors help them blend in, too. Some animals just stand very still. The predators do not see them. They pass right by. Opossums and some snakes pretend to be dead. They let their mouths fall open. After the predator leaves, the animal hurries to safety.

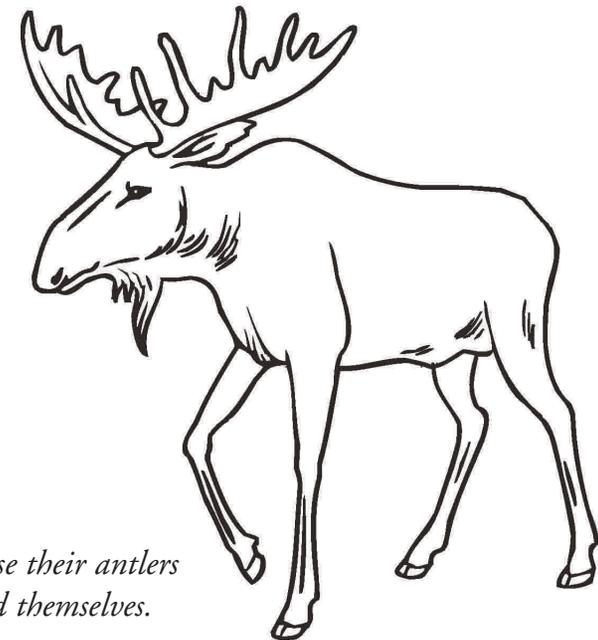
*What is an animal's risk of pretending to be dead?*

---

Many animals use their teeth, claws, wings, or feet to protect themselves against predators. Sheep use their horns, while moose use antlers. Wasps and jellyfish sting. Skunks use smell to chase predators away. Porcupines shoot quills at them.

Some animals, such as puffer fish, make themselves larger to scare off predators. Others, such as cats, make a lot of noise.

Animals use their body coverings, body parts, and behaviors to survive.



*Moose use their antlers to defend themselves.*

---

## Glossary

**adapt**—to change to make more usable

**dormant**—a state of being alive but not moving or growing

**habitat**—the place where an animal lives and has its needs met

**hibernate**—to go into a very deep sleep-like state for a long while

**migrate**—to travel from one place to another and back again in order to survive changing weather conditions

**nectar**—a sweet liquid produced by some flowering plants

**pollen**—a fine powder produced by flowers that fertilizes other flowers of the same kind

**predator**—an animal that eats other animals such as a lion, wolf, or hawk

**prey**—an animal that is eaten by other animals such as a mouse, rabbit, or bird

**reproduce**—to create more of the same kind

**survive**—to continue to live

---

## To Find Out More . . .

Want to learn more about different habitats and how animals survive in them?

### Try these books

*Animal Habitats* by Michael Chinery.  
Southwater, 2004.

*The Arctic Habitat* by Molly Aloian and Bobbie Kalman. Crabtree, 2006.

*Claws, Coats, and Camouflage* by Susan E. Goodman. Millbrook Press, 2001.

*A Desert Habitat* by Kelley Macaulay and Bobbie Kalman. Crabtree, 2006.

*A Forest Habitat* by Bobbie Kalman.  
Crabtree, 2006.

*A Rainforest Habitat* by Molly Aloian and Bobbie Kalman. Crabtree, 2006.

*What Are Camouflage and Mimicry?* by Bobbie Kalman. Crabtree, 2001.

### Access these Web sites

What's It Like Where You Live?  
[www.mbgnet.net/sets/temp/index.htm](http://www.mbgnet.net/sets/temp/index.htm)

Learn about different habitats  
[www.nationalgeographic.com/geographyaction/habitats](http://www.nationalgeographic.com/geographyaction/habitats)

Amazing Animal Senses  
<http://faculty.washington.edu/chudler/amaze.html>

---

# Index

basic needs, 4

bird beaks, 17

deciduous forest, 7

evergreen forest, 7

hibernate, 18

migrate, 18

rain forest, 7

swamps, 8



ENGLISH-LANGUAGE ARTS • GRADE 3

California Content Standards
Vocabulary and Concept Development: 1.4
Structural Features of Informational Materials: 2.1
Comprehension and Analysis of Grade-Level-Appropriate Text: 2.4
Comprehension and Analysis of Grade-Level-Appropriate Text: 2.6

Below Level

# English-language Arts Activities

*Adapting to Environments*

Print pages 20–24 of this PDF for the reading activities.

# Synonyms and Antonyms

## TRY THE SKILL

Words that mean the same, such as *yell* and *shout*, are synonyms. Words that mean the opposite, such as *yell* and *whisper*, are antonyms.

For example, a synonym for *happy* is *glad*. *Happy* and *glad* have the same meaning. An antonym for *happy* is *sad*. *Happy* and *sad* have opposite meanings.

Write the correct words from the box on the lines. You will use some of the words twice.

store   survive   reduce   produce   prevent

1. A synonym for *stop* \_\_\_\_\_
2. An antonym for *die* \_\_\_\_\_
3. An antonym for *use up* \_\_\_\_\_
4. A synonym for *live* \_\_\_\_\_

5. A synonym for *save* \_\_\_\_\_

6. An antonym for *increase* \_\_\_\_\_

7. A synonym for *cut down* \_\_\_\_\_

9. A synonym for *make* \_\_\_\_\_

**Think of more synonyms and antonyms. Write them on the lines below.**

---

---

---

---

---

---

---

---

# Find Information in Books

## TRY THE SKILL

If you want to find information in a book, you don't have to read the whole thing. You don't even have to look at every page. Instead, you can check these parts of the book:

- **Table of Contents**

This part is in the front of the book. It lists the chapters, their titles, and the page on which each chapter starts. Sometimes it also lists the topics covered in each chapter.

- **Glossary**

This part is usually in the back of the book. It defines any words that readers might not understand. The words are listed alphabetically.

- **Index**

The index is also in the back of the book. It lists the topics covered in the book alphabetically. You can also see the page numbers where each topic is mentioned.

- **For More Information (Bibliography)**

Many books have a list of sources in the back. You can check these sources for more information on that topic. They can include other books, Web sites, or places to write.

Shade in the circle next to your answer choice.

1. Which part of a book would tell you the meaning of the word *camouflage*?
  - Ⓐ table of contents
  - Ⓑ glossary
  - Ⓒ index
  - Ⓓ for more information
2. Which part would tell you the main topics covered in the book?
  - Ⓐ table of contents
  - Ⓑ glossary
  - Ⓒ index
  - Ⓓ for more information
3. Which part would tell you whether the book mentions manatees?
  - Ⓐ table of contents
  - Ⓑ glossary
  - Ⓒ index
  - Ⓓ for more information

# Predict Outcomes

## TRY THE SKILL

**You can use the facts you read to make predictions. Try to predict what will happen next in your reading and then see if you were correct. If your predictions did not come true, perhaps you need to re-read those paragraphs. Maybe you didn't understand them well.**

**In this book you read how body coverings help animals survive. Let's say that brown fur helps a rabbit hide from predators most of the year. Predict what will happen to this rabbit in winter. (Its brown fur will make it stand out against the white snow. A predator is likely to spot it—and catch it.) Predict how this rabbit might change its body covering in the winter. (Arctic rabbits turn white in the winter.)**

**Read about each animal. Then shade in the letter that correctly predicts what will happen to it.**

1. Hermit crabs live in empty seashells. However, as the crabs grow, they must find bigger shells. Predict what might happen to a crab as it moves from its out-grown shell to a bigger one.
  - Ⓐ The crab will blend in with its surroundings.
  - Ⓑ Predators might catch the crab while it is outside a shell.
  - Ⓒ Predators will ignore the crab.

2. A frog is born without webbing in its feet. Instead, its toes are long and skinny. Predict what will happen to this frog.
  - Ⓐ This frog will swim faster than other frogs and catch more food than they do.
  - Ⓑ This frog will learn how to use its long toes to get away from predators.
  - Ⓒ This frog will swim slowly and be caught by a predator.
3. A zebra is born with a white coat and no stripes. Predict how this white coat will affect this zebra.
  - Ⓐ The other zebras will not recognize this animal as one of them.
  - Ⓑ This zebra will be easy prey because it won't blend in with tall grasses.
  - Ⓒ This zebra will move to a snowy habitat.

# Identify Problems and Solutions

## TRY THE SKILL

**Good readers think about what they read. They can spot problems even when the author does not state them in so many words. For example, read this passage:**

You will find wetlands and marshes near rivers, lakes, and the ocean. They are also called swamps. Wetlands are under shallow water all or part of the time. They help keep the water clean.

Many birds, frogs, and fish lay their eggs in wetlands. Turtles, ducks, otters, muskrats, and raccoons live in this habitat. Wetland plants are mostly grasses and bushes.

Many wetlands in California and other states have been drained. Houses were built on the land.

**What problem is described in these paragraphs?**

The author reports that people are draining the water out of wetlands. That makes the wetlands disappear. They cannot help clean pollution out of water. Less wetlands means more pollution.

1. Read the paragraph. Think about how trees losing their leaves affects prey. Shade the letter that describes the problem for these prey.

In many forests, the trees lose their leaves every fall. These forests have warm summers and cold winters. The animals include deer, bears, foxes, and hawks.

- 5

  - Ⓐ When the leaves are gone, prey can see hawks perching in the trees.
  - Ⓑ When the leaves are gone, predators have nothing to eat.
  - Ⓒ When the leaves are gone, prey are easier to see.
2. Rabbits and mice are often prey. Explain how camouflage can be both a problem and a solution for these prey.

---

---

---

---

---

---

# Answer Key

## Use Synonyms and Antonyms

1. prevent
2. survive
3. store
4. survive
5. store
6. reduce
7. reduce
8. produce

## Find Information in Books

1. B
2. A
3. C

## Predict Outcomes

1. B
2. C
3. B

## Identify Problems and Solutions

1. C
2. Possible answer: Camouflage is a problem when predators use it to sneak up on prey. Camouflage is the solution when prey use it to hide from predators.