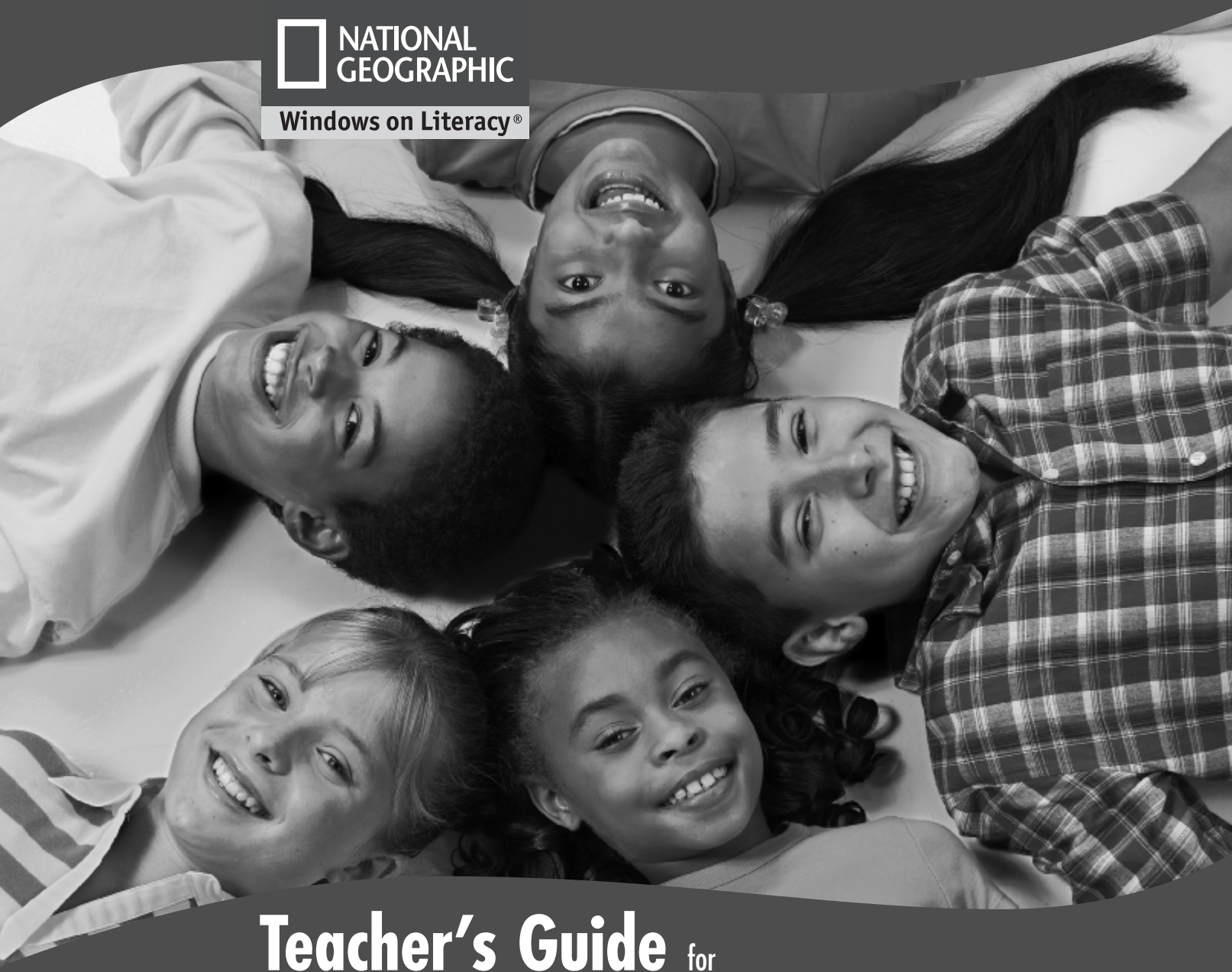
Language, Literacy & Vocabulary!

NATIONAL GEOGRAPHIC

Windows on Literacy®



Teacher's Guide for Life Cycles of Animals

Fluent Plus Science

Includes:

- Lesson Plans
- Learning Masters
- Pre- and Post-Test Assessments
- Take-Home Book Masters

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Windows on Literacy®

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About the Program

Content and Literacy Development for Diverse Language Learners

National Geographic's *Windows on Literacy: Language, Literacy & Vocabulary* program is designed for today's classroom—diverse, challenging, and complex. Many children come to school without the basic background knowledge and oral language development needed for academic success. *Language, Literacy & Vocabulary* provides the extra support young learners need to experience success from the start.

National Geographic's *Language, Literacy & Vocabulary* program offers rich opportunities for beginning learners to build background knowledge, develop vocabulary and oral language, and learn grade-level content. Throughout the nation, teachers told us they needed materials that scaffolded the learning so that children from diverse language backgrounds, at-risk readers, and children with learning challenges would have opportunities to achieve their full potential. The *Language, Literacy & Vocabulary* program meets this need through:

- Thematic units built around essential key concepts in science, social studies, and math
- Academic vocabulary development
- Age-appropriate and engaging nonfiction texts
- Considerate text with strong picture-text match
- Scaffolded, multilevel instruction for students at different levels of language proficiency
- Springboards to related reading and writing
- Customized instruction for English language learners (ELLs)
- Research-based instructional strategies
- Rich and varied teacher support and tools

Consulting Author: Linda Hoyt

Linda Hoyt is an educational consultant who strives to help teachers and school districts implement best practices in literacy instruction. She has had a rich array of experiences in education, ranging from classroom teaching to working as a reading specialist, curriculum developer, Title 1 teacher, staff developer, and Title 1 District Coordinator. She is the author of numerous books, articles, and videos and conducts presentations and workshops on literacy throughout the country.

Program Advisor: Mary Hawley

Mary Hawley is an educational consultant who has worked with teachers, educators, and publishers to implement best practices for teaching students with diverse language backgrounds. She has taught English as a Second Language in Mexico, worked with migrant and refugee children in Indiana, and studied in Latin America. In recent years, she has been instrumental in developing Spanish reading programs and products for English language learners.

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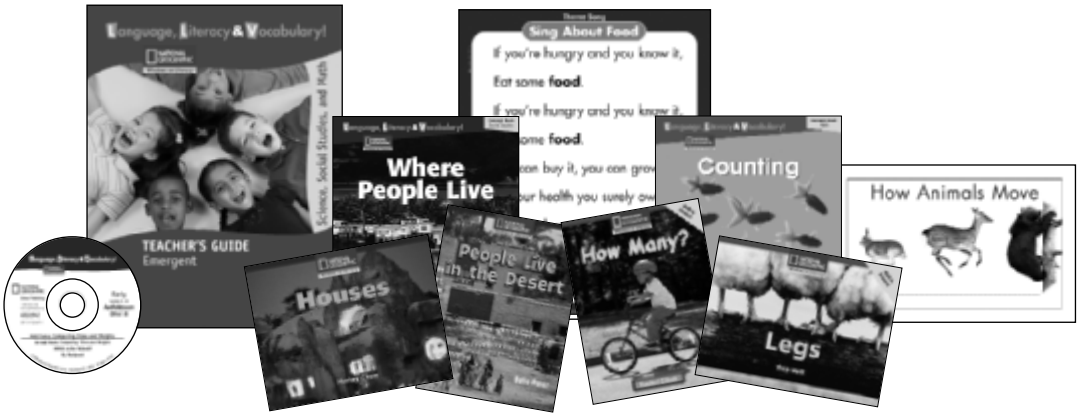
Accessible Academic Content

Success From the Start!

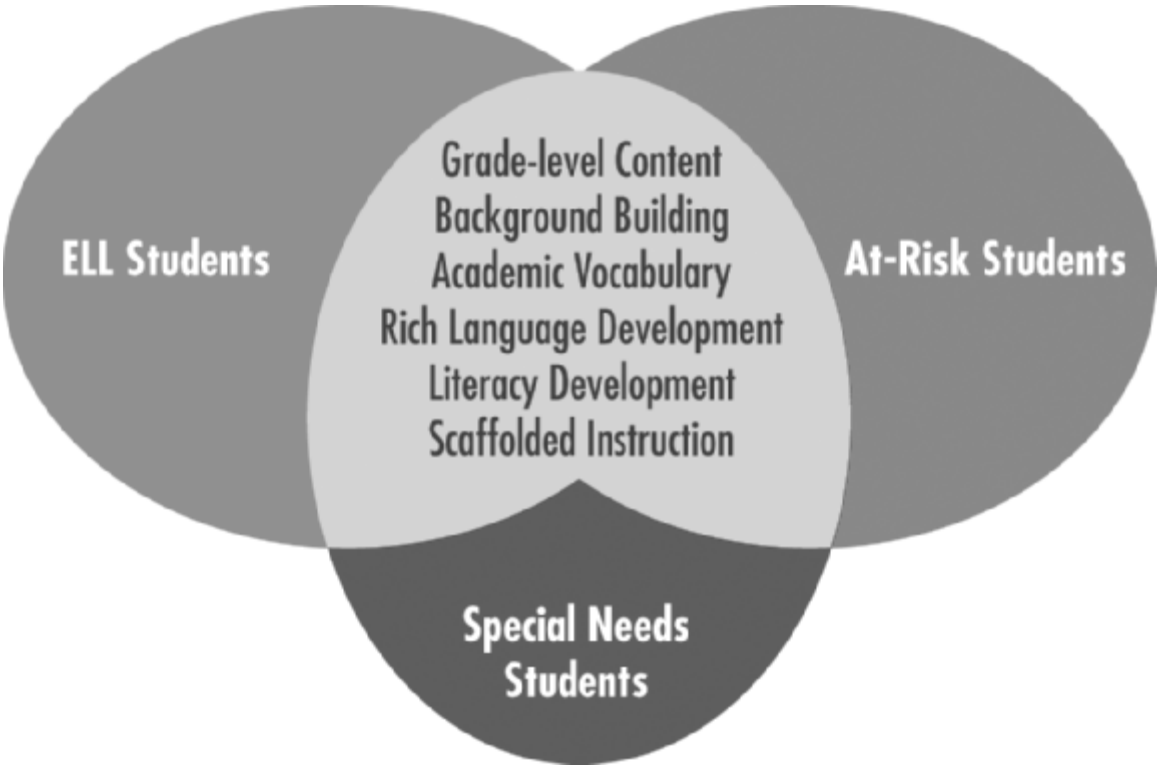
Achieving academic success is essential for children to make adequate yearly progress and for continued academic growth. Conclusive data and research show that children who fall behind on their acquisition of academic content and vocabulary during the K–2 years will fall further behind as they advance through the grade levels. To help children achieve success from the start and prevent them from falling behind, *Windows on Literacy: Language, Literacy & Vocabulary* gives children access to the core grade-level content they need for standards-based academic success through these features:

- Explicit instruction in core academic content and vocabulary to build a foundation for future success
- Focused, targeted, standards-based content
- Alignment with TESOL standards
- Multiple exposures to and applications of academic vocabulary
- Carefully leveled developmental texts
- Picture glossaries of key content vocabulary
- Simple, engaging, and visually striking student book pages
- Strong picture-text match
- Familiar language and simple sentence structures
- Multiple opportunities for oral language development
- Theme Builders for building background and developing oral language
- Opportunities for writing and related reading



One Program for Your Diverse Classroom

Windows on Literacy: Language, Literacy & Vocabulary recognizes that every classroom includes diverse language learners as well as children whose background knowledge and oral language require development. Teachers told us they wanted one program that they could use with English language learners, children with reading and vocabulary challenges, and children with learning issues that affect their ability to acquire and process language. With appropriate modifications for different needs, *Language, Literacy & Vocabulary* gives teachers a sound, research-based instructional plan to meet the common needs among diverse language learners.



Flexible Use

Windows on Literacy: Language, Literacy & Vocabulary is designed to be used in a variety of classroom situations. This flexibility allows you to custom fit the program to match your scheduling and program needs.

Regular Classrooms

The chart below shows the suggested pacing for use in the regular classroom. Each theme can be completed in five days.

Pacing Guide:
One Week for One Theme

Day 1 · Lesson 1	Administer Pre-Test Read Concept Book Introduce Concepts and Vocabulary Model the Reading
Day 2 · Lesson 2	Reread Concept Book Develop Concepts and Vocabulary Introduce Comprehension Strategy Small Group Reading Modeled Writing
Day 3 · Lesson 3	Read First Related Nonfiction Book Develop Concepts and Vocabulary Small Group Reading Practice Comprehension Strategy Shared Writing
Day 4 · Lesson 4	Read Second Related Nonfiction Book Review Concepts and Vocabulary Small Group Reading Apply Comprehension Strategy Guided Writing
Day 5 · Lesson 5	Rereading and Assessment Guided Writing Optional Reading Home Connection Administer Post-Test

After-School Programs

Language, Literacy & Vocabulary works within a variety of after-school programs. Whether your after-school program meets every day or only three days a week, the program can easily be adjusted to meet your scheduling needs.

- For programs that meet every day, one theme can be completed each week of the program. Use the Pacing Guide on page 6.
- For programs that meet three times per week, one theme can be completed every two weeks. Use the suggested plan shown below.

Pacing Guide:
Two Weeks for One Theme

Week 1 · Day 1 · Lesson 1	**Week 2 · Day 1 · Lesson 4**
Pre-Test Read Concept Book Introduce Concepts and Vocabulary Model the Reading	Read Second Related Nonfiction Book Review Concepts and Vocabulary Small Group Reading Apply Comprehension Strategy
Week 1 · Day 2 · Lesson 2	**Week 2 · Day 2 · Begin Lesson 5**
Reread Concept Book Develop Concepts and Vocabulary Introduce Comprehension Strategy Small Group Reading Modeled Writing	Assess and Extend Rereading and Assessment Begin Guided Writing
Week 1 · Day 3 · Lesson 3	**Week 2 · Day 3 · Complete Lesson 5**
Read First Related Nonfiction Book Develop Concepts and Vocabulary Small Group Reading Practice Comprehension Strategy Shared Writing	Complete Guided Writing Optional Reading Home Connection Post-Test

Summer School Programs

Language, Literacy & Vocabulary is the perfect fit for your summer school program. When time is short and results matter, your class time must be productive. The five-day lesson plan allows you to complete one theme during each week of your summer school program. Whether your summer school plan includes a four-, five-, or six-week program, you can select developmentally appropriate themes that focus on the content areas of math, science, and social studies while developing strong literacy skills.

Four-Week Program	Five-Week Program	Six-Week Program
Choose four themes.	Choose five themes.	Choose six themes.

Overview

Life Cycles of Animals

STANDARDS

ACADEMIC LANGUAGE/ELD
- Use academic vocabulary related to the study of animals
- Use appropriate language forms to describe animals and to predict
- Develop fluency in reading, writing, listening to, and speaking English

SCIENCE
- Describe the life cycles of animals
- Understand that different kinds of animals change in different ways
- Describe animals by their characteristics and classify animals

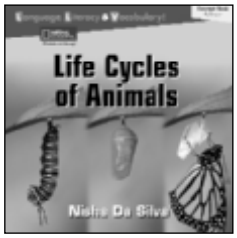
READING/LANGUAGE ARTS
- Learn and apply the comprehension strategy: Predicting
- Use the text features: Captions and Headings
- Write about animal groups
- Learn and use vocabulary related to animals—their characteristics and their life cycles

Before Theme Assessment

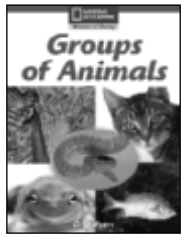
To compare progress before and after teaching this theme, use the Pre-Test and Post-Test Assessments, pages 33–43.

Theme Materials

Concept Book



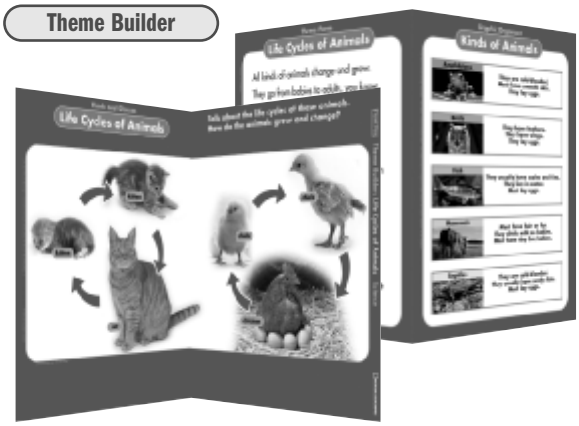
Nonfiction Books



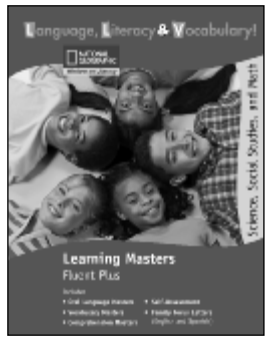
Level 19

Level 20

Theme Builder

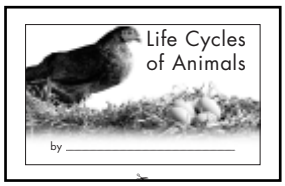


Learning Masters



Audiolesson on CD

Take-Home Book Masters



Optional Reading

Windows on Literacy
Content-Based Fiction

Tadpole Rescue Level 19

Cody's Snake Tale Level 20

Windows on Literacy
Nonfiction

Frogs Level 16

From Eggs to Butterfly Level 18

Changes All Around Us Level 21

Instructional Highlights

Key Concepts

- Animals grow and change throughout their lives.
- Different kinds of animals grow and change in different ways.
- Animals are classified according to their characteristics.

Comprehension Strategy

Predicting

Key Concept Words

amphibian
bird
classify
fish
life cycle
mammal
metamorphosis
reproduce
reptile

Text Features

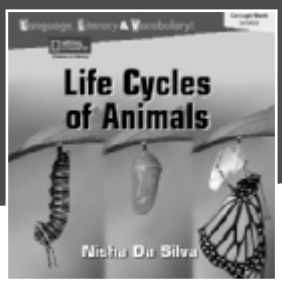
Captions
Headings

Theme Planner

Lesson 1*	Lesson 2	Lesson 3	Lesson 4	Lesson 5
Teacher's Guide pp. 10–11	Teacher's Guide pp. 12–13	Teacher's Guide pp. 14–15	Teacher's Guide pp. 16–17	Teacher's Guide pp. 18–19
Read ***Life Cycles of Animals***	**Reread** ***Life Cycles of Animals***	**Read** ***Groups of Animals***	**Read** ***The Amazing Silkworm***	**Assess and Extend**
• Administer Pre-Test, p. 38	• Develop Concepts and Vocabulary	• Develop Concepts and Vocabulary	• Review Concepts and Vocabulary	• Administer Post-Test, p. 41
• Introduce Concepts and Vocabulary	• Introduce the Comprehension Strategy: Predicting	• Small Group Reading	• Small Group Reading	• Rereading
• Model the Reading	• Small Group Reading	• Practice the Comprehension Strategy: Predicting	• Apply the Comprehension Strategy: Predicting	• Guided Writing
	• Modeled Writing	• Shared Writing	• Guided Writing	• Assessment Tools
				• Optional Reading
				• Home Connection

Lesson **1**

Read *Life Cycles of Animals*



OBJECTIVES

- Understand that animals grow and change in different ways and that animals are classified into different groups
- Learn and use vocabulary related to life cycles of animals
- Use photos to predict vocabulary
- Use text features, such as captions and headings, to comprehend text and illustrations

Materials

Photos: a variety of animals, including a dog, chicken, snake, frog, lizard, goldfish, puppies, kittens, and chicks

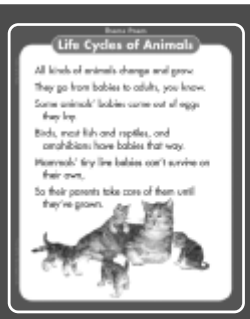
Theme Builder

Life Cycles of Animals

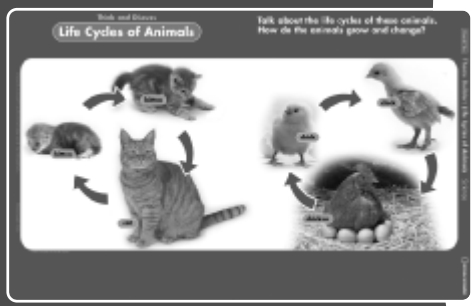
Learning Masters page 25

Audiolesson 1

Theme Builder (Poem)



Theme Builder (Scene)



Introduce Concepts and Vocabulary

Introduce Theme Question

Ask students: Do you have pets or know people who have them? What kinds of animals are pets? Have you seen pets grow and change? Explain that students will learn about different kinds of animals. They will also learn the language used to describe animals and how they grow.

Turn and Talk Provide learning partners with pictures of baby and adult animals including kittens and puppies. First, have students sort the pictures into two groups—those likely to be pets and those not likely to be pets. Next, have students sort pet pictures into a group of babies and a group of adults.

Develop Oral Language

Display a picture of a dog. Ask students to describe the dog. *(Example: It has four legs and barks.)* Model sentences about dogs: Dogs are pets. They have fur. They bark.

Repeat the activity with a picture of a chicken. Chickens are birds. They have feathers and wings.

Turn and Talk Have partners challenge one another to guess the name of an animal after listening to some clues that describe it.

Introduce Theme Poem

Display the Theme Poem on the ***Theme Builder.*** Have students say the poem in unison. Ask volunteers to show pictures of the types of animals as the group reads. Invite partners to use ***Learning Masters*** page 25 to practice reading the Theme Poem.

Introduce Key Vocabulary

Use the Think and Discuss scene to teach Key Concept Words and model language forms.

We *classify* animals, or put animals into different groups. Each group has its own characteristics. Dogs belong to a group called *mammals.* Dogs are warm-blooded and have fur.

Continue to model sentences using the words below to guide students in understanding classification.

As you introduce words, jot them down on chart paper. Display this Word Bank throughout the theme.

Turn and Talk Have partners practice using words and language forms for describing. For example: _____ belong to a group of animals called _____. _____ are _____ and have _____.

amphibian	life cycle
bird	mammal
classify	metamorphosis
fish	reproduce
	reptile

Build Background

Display the Think and Discuss scene on the ***Theme Builder*** again. Ask students to describe the animals and then tell about the animals' life cycles.

Turn and Talk Then have partners use the language forms from Turn and Talk as they discuss other animals. For example:
The *(cat)* belongs to a group of animals called *(mammals). (Cats)* are *(warm-blooded)* and have *(fur).*

Model the Reading

Preview the Book

Distribute copies of *Life Cycles of Animals*. Read aloud the title and the author's name. As you page through the book, point out:

- The headings are listed on the Contents page. Each heading tells the topic of that section.
- The highlighted words are vocabulary words.
- The boxes at the right on some pages give more information.

Predict Vocabulary

Encourage students to use pictures to predict vocabulary: Which words do you expect to see in this book?

Display pages 6–7 and cover the words: Which words do you expect to see on these pages?

Students may mention the animals on the pages, such as horses, salamanders, and lizards. Add these words to the Word Bank. Invite students to try to classify the animals they see and to describe them. As time allows, continue the activity with additional pages.

Model the Reading

Invite students to follow along as you read aloud pages 4–7 in *Life Cycles of Animals*. Read fluently, modeling smooth, accurate reading with appropriate expression. After reading each pair of pages, pause to think aloud. Also, encourage students to ask questions and make observations.

Pages 4–5

Think Aloud This is like the Think and Discuss picture on the ***Theme Builder.*** The arrows show the steps in the life cycle, which repeat again and again. Adults reproduce and have babies. The babies grow up and become adults. Then they have babies, too.

Pages 6–7

Think Aloud I read that animals belong to different groups. I can see that pages 6 and 7 show three groups. There is information about each group in a caption next to a picture.

Share the Reading

Have partners complete the reading. Encourage partners to pause after reading one or two pages and have conversations about what they have read. Ask them to share and discuss their questions.

Reread for Fluency

To guide students in practicing fluent reading, read aloud the first pages of *Life Cycles of Animals*, sentence by sentence. Have students echo-read each sentence, imitating your model. Then have them reread the entire book independently to build fluency. See *Customize the Reading*.

Learning Masters/page 25

Name _____

Theme Poem

All kinds of animals change and grow.
They go from babies to adults, you know.
Some animals' babies come out of eggs they lay.
Birds, most fish and reptiles, and amphibians have babies that way.
Mammals' tiny live babies can't survive on their own,
So their parents take care of them until they've grown.

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Customize Instruction for ELLs

Newcomers/Beginning Have students point to the animal or kind of animal you name. Use prompts such as: "Point to the frog."

Developing Point to an animal and say, "What kind of animal is this? Describe it."

Expanding/Bridging Ask students to classify a variety of animals and use sentences to describe the animals' physical characteristics.

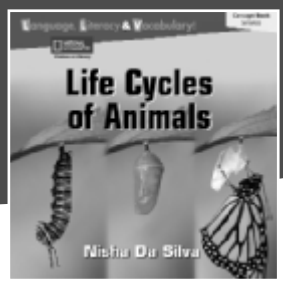
Customize the Reading

Students reread and talk about Life Cycles of Animals *on their own to build fluency.*

- *Students who are not yet able to read the book can find and name animals they recognize.*
- *Students who need extra support can reread the book while listening to the audiolesson.*
- *Students who can read the book might read independently or aloud with partners.*

Lesson 2

Reread *Life Cycles of Animals*



OBJECTIVES

- Understand that animals grow and change in different ways and that animals are classified into groups
- Use vocabulary to describe the characteristics of animals
- Learn the comprehension strategy: Predicting
- Read to gain fluency in oral and silent reading
- Write about different kinds of pets

Materials

Photos: a variety of amphibians, reptiles, mammals, birds, and fish

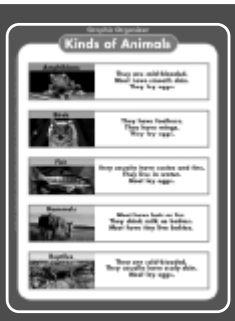
Theme Builder

Life Cycles of Animals

Learning Masters pages 24, 26, 27

Audiolesson 1

Theme Builder (Graphic Organizer)



Develop Concepts and Vocabulary

Develop Oral Language

Display photos of animals from the five groups that students have discussed. Ask students to name the animals. Next, ask: To what group does each animal belong? What are the characteristics of the group?

Turn and Talk Encourage learning partners to name several animals from each group pictured and tell how they are alike. Have students use the language forms: *(Snakes and lizards)* belong to the group of animals called *(reptiles)*. They have *(scaly skin)*.

Revisit the Theme Poem Display the Theme Poem on the ***Theme Builder***. Have partners read the poem by first reading a sentence silently and then looking up and saying it.

Build Background

Display the graphic organizer on the ***Theme Builder*** with the right column covered. Read the label for amphibians and uncover the box next to it. Read the sentences. Read the label for birds and have students predict what traits it has. Uncover the box and go over the answers. Continue with the other animals.

Turn and Talk Encourage students to name other examples of animals for each category.

Begin Vocabulary Log As students read, encourage them to use sticky notes to tag words they would like to save. After reading, students can record the words and their notes about them.

Use ***Learning Masters*** page 24.

Introduce the Comprehension Strategy

Introduce Predicting

When students make predictions, they use their prior knowledge, as well as illustrations and text, to tell what they think an entire reading selection or parts of a reading selection will be about.

Think Aloud Before I read, I can think about what I know about the subject. I can add this to the words I read and the pictures I see. Then I can **make a prediction** about what I think a book or part of a book will be about.

Model Predicting

Turn to pages 10–11 to model predicting.

When I read pages 6 and 7, I learned that the book is about groups of animals. Pages 10 and 11 tell about three groups—mammals, reptiles, and fish. I know there are other groups, like birds.

I predict that the next pages will tell about birds and amphibians **because** these are the other two groups of animals.

For additional practice in predicting, have partners work on ***Learning Masters*** page 26.

Small Group Reading

As students read, invite them to share what they notice. Use some of the suggestions below to encourage observations and talk about the book.

Pages 4–9

Check Understanding What are the six groups of animals on these pages? *(amphibians, reptiles, mammals, birds fish, insects)* How are insects different from the other groups? *(Most have a hard outer shell, six legs, antennae, and three body parts.)*

Pages 10–13

Support Comprehension Guide students to use information they already know as they make predictions about how the babies will look as they grow.

Pages 14–19

Support Comprehension Ask a volunteer to summarize pages 14–17. *(Animals get bigger and stronger as they grow. Some animals, such as frogs and some insects, change form.)* Repeat for pages 18–19.

Pages 20–21

Check Understanding Have students identify each animal *(fish, zebra, snake, tadpole, stork)* and its group *(fish, mammal, reptile, amphibian, bird)*. Ask students to use the Word Bank to describe the animals and tell how they change.

Discuss the Book

Invite students to share what they learned. Ask them to name the six groups of animals and tell the characteristics of each group. Have students explain how animals grow and have young. Encourage them to use the words in the Word Bank to discuss what they have read. Have students name new words they learned. Remind students to add words to their Vocabulary Logs.

Students can complete ***Learning Masters*** page 27.

Reread for Fluency

Say the boldfaced words on pages 6–7, and have students say them after you. Have students follow along as you read those pages. Then have students prepare to reread pages 8–13 aloud. First, have students review and practice reading any unfamiliar or difficult words. Then have them read the pages aloud. Ask students to focus on improving accuracy. For other suggestions, see *Customize the Reading*.

Modeled Writing

Use the graphic organizer on the ***Theme Builder*** to review some Key Concepts of the theme. Prepare to model writing with precise nouns and adjectives.

Think Aloud The animals we see most often are pets. I'll use precise nouns and adjectives to describe the kinds of pets people have. My audience is the students in this group.

People have many kinds of pets. Animals can belong to any of the five groups. These groups are amphibians, birds, fish, mammals, and reptiles.

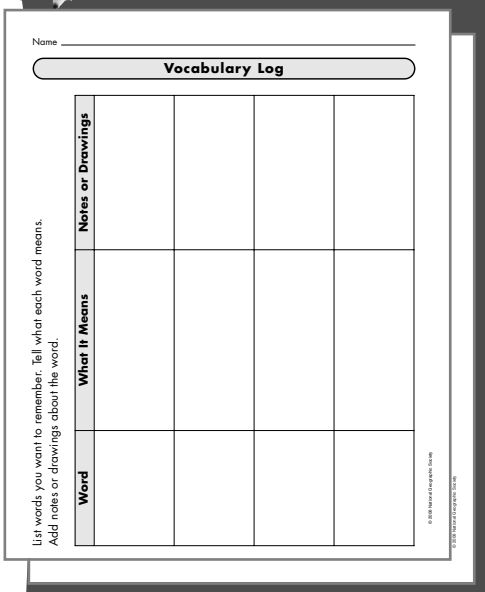
Think Aloud Words like *common* and *soft* are adjectives used to describe nouns.

Cats and dogs are common mammals people have as pets. People like to pet their soft fur.

Think Aloud It's easy to use adjectives. They make writing fun and interesting. Now I'll write about my own cat.

At home, I have a cat. Her name is Lizzy. She has brown, black, and white fur. I got her when she was a tiny kitten. Now she is an adult cat.

Learning Masters/pages 24, 26



Name _____

Vocabulary Log

List words you want to remember. Tell what each word means. Add notes or drawings about the word.

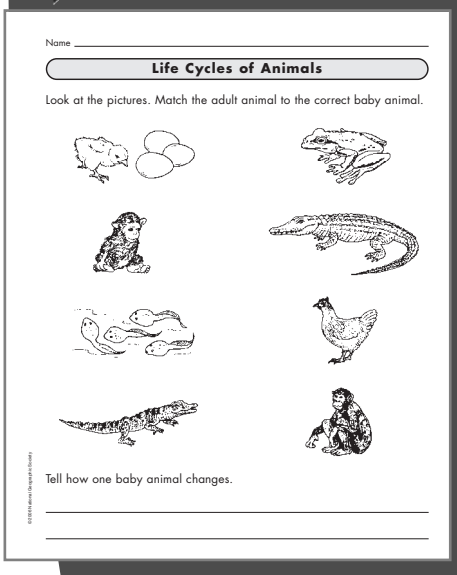
Word	What It Means	Notes or Drawings

Customize the Reading

Students reread and talk about Life Cycles of Animals *using one of the following options:*

- *Look through the pages, naming animals and the group to which each belongs.*
- *Reread the book while following along with the audiolesson.*
- *Read independently or read aloud with a partner.*

Learning Masters/page 27



Name _____

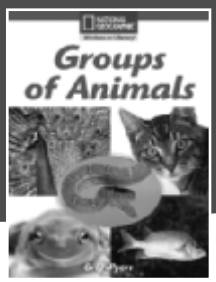
Life Cycles of Animals

Look at the pictures. Match the adult animal to the correct baby animal.

Tell how one baby animal changes.

Lesson 3

Read *Groups of Animals*



OBJECTIVES

- Read to gain fluency in oral and silent reading
- Practice the comprehension strategy: Predicting
- Understand that animals can be classified into different groups and that each group has its own characteristics
- Use captions and headings to comprehend text and illustrations
- Use a chart to summarize information

Materials

Photos: a variety of amphibians, reptiles, mammals, fish, and birds, including an eagle

Theme Builder

Groups of Animals

Learning Masters page 28

Audiolesson 1

Develop Concepts and Vocabulary

Develop Oral Language

Review the Key Concept Words for groups of animals: *amphibian*, *bird*, *fish*, *mammal*, *reptile*. Show pictures of animals, and have students identify each group.

This an eagle. Eagles belong to a group of animals called *birds*. They have feathers and wings. They can fly.

Turn and Talk Have learning partners play a guessing game by giving one another clues about animals. Suggest students refer to the language forms. For example:

I'm thinking of an animal. It belongs to the group of animals called *mammals*. It often has brown or black hair. People can ride on it. *(a horse)*

Revisit the Theme Poem Display the poem on the ***Theme Builder***. Organize students into three groups. Have each group say two lines in an oral reading.

Build Background

Distribute copies of *Groups of Animals*. Invite students to look at the cover and the title and name the animals. Have them predict what the book will be about.

Small Group Reading

Get Ready to Read

Preview the Book Read aloud the title, the author's name, and the Think and Discuss question on the back cover: What kind of animal is a salamander?

Page through the book and do the following:

- Point out that the entries listed on the Contents page are the same as the headings on the pages.
- Point out the summary charts on pages 5, 7, 9, 11, and 13 and the Animal Features chart on page 14.
- Ask students to predict what they will learn.

Predict Vocabulary Encourage students to use photos to predict vocabulary: Which words do you expect to see in this book?

Display a page and cover the words: Which words do you expect to see on this page?

List the words students mention. Add Key Concept Words from the book that students do not mention.

Text Feature: Captions

Introduce Display pages 4 and 5. The words near each picture are captions. A caption gives information about a picture.

Model I see a snake in a picture on page 5. The caption gives me information about the snake. It lies in the sun to get warm.

Practice Direct students' attention to the caption next to the photo on page 7. What information does the caption tell you about the picture?

Read the Book

As students read, invite them to share what they notice. Use some of the suggestions below to encourage observations and talk about the book.

Pages 3–9

Key Concept Words *classify*, *reptile*, *fish*

Check Understanding How are all the animals on these pages alike? *(They are vertebrates.)* What are some features of reptiles? *(scales, cold-blooded, backbone)* What are some features of fish? *(live in water, have gills, cold-blooded, backbone, scales for most)*

Pages 10–11

Key Concept Word *bird*

Practice the Comprehension Strategy

Encourage students to **Predict** to help them better understand pages 10–11.

What do you see in the picture on page 11? What will happen to the babies? What can you predict?

Pages 14–15

Support Comprehension Explain that the chart summarizes information about the five groups of animals. For example, by reading down the column on amphibians, this summary can be made: *Amphibians usually hatch from eggs, and they have backbones.* Ask questions based on the chart, such as, "Is a fish warm-blooded?"

Discuss the Book

Invite students to use the Word Bank to tell about the book. Ask what students have learned about how to classify animals after reading *Groups of Animals*. Have students explain how the information relates to their pets and other animals they have seen. Remind students to add words to their Vocabulary Logs.

Use ***Learning Masters*** page 28.

Reread for Fluency

Have students reread the entire book independently to build fluency. See *Customize the Reading*.

Learning Masters/page 28

Name _____

Groups of Animals

Look at each picture. Give one characteristic of each animal group. Name other examples of that kind of animal.

Mammals	_____ Some examples of mammals: _____
Birds	_____ Some examples of birds: _____
Fish	_____ Some examples of fish: _____
Reptiles	_____ Some examples of reptiles: _____
Amphibians	_____ Some examples of amphibians: _____

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Customize the Reading

Students reread and talk about Groups of Animals *using one of the following options:*

- *Look through the pages, naming the animals, the group to which each animal belongs, and the group's characteristics.*
- *Reread the book while following along with the audiolesson.*
- *Read independently or aloud with a partner.*

Shared Writing

Review the writing you modeled in Lesson 2. Invite students to write a paragraph about a different group of animals people often have as pets, such as birds, fish, or reptiles. Have volunteers suggest examples of pets from each group. Help students frame a sentence to state the new paragraph's main idea. Ask them to suggest details about the animal. Then invite them to discuss any personal experiences they have with the animal as a pet.

Customize Instruction for ELLs

Newcomers/Beginning Have students say the names of animals in the group and tell some of the group's characteristics.

Developing Encourage students to use sentence frames such as: Many people have _____ as pets.

Expanding/Bridging Have students offer examples of people they know who have pets from a particular group. Ask students to describe what the pets look like and how they act.

Lesson 4

Read *The Amazing Silkworm*

OBJECTIVES

- Read to gain fluency in oral and silent reading
- Apply the comprehension strategy: Predicting
- Develop an understanding that different kinds of animals grow and change in different ways
- Use headings and captions to comprehend text
- Use pictures to comprehend text

Materials

Realia: piece of silk, such as a scarf; world map

Photos: moth; depiction of life cycles of chicks and frogs

Theme Builder

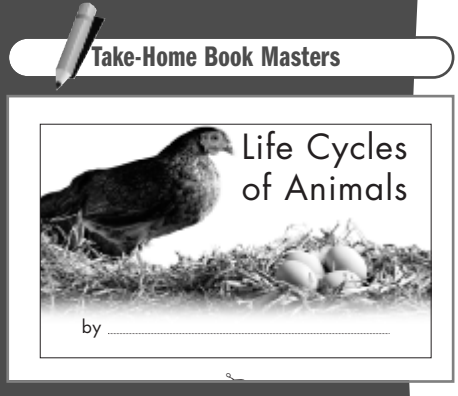
The Amazing Silkworm

Learning Masters pages 29, 30

Take-Home Book Masters: *Life Cycles of Animals*

Audiolesson 1

Take-Home Book Masters



Review Concepts and Vocabulary

Develop Oral Language

Model the Key Concept Words *life cycle*. First, display pictures of eggs, chicks, and hens. Ask students to describe the life cycle of this animal. Next, review the meaning of *metamorphosis*. *(a changing of form during growth)* Ask students to provide an example of an animal that goes through metamorphosis in its life cycle. *(frog)*

Turn and Talk Have learning partners make a list of words related to the life cycle of animals, such as *adult*, *babies*, *reproduce*, and *kittens*.

Revisit the Theme Poem Display the poem on the Theme Builder. Assign three students to read only the names of the animal groups. Then chorally read the poem.

Build Background

Distribute copies of *The Amazing Silkworm*. Read the title. Ask students to classify the silkworm. *(insect)* Have students review what they learned earlier about the life cycle of insects. *(Most insects lay eggs. Some insects change shape. For example, a caterpillar changes to a butterfly.)*

Small Group Reading

Get Ready to Read

Preview the Book Read aloud the title, the author's name, and the Think and Discuss question on the back cover: What kinds of things are made from silk cloth?

Page through the book, and do the following:

- Point out that that the pictures and captions often help make clear the text on the facing page.
- Point out that pages 7, 9, 11, 13, and 15 show changes in the silkworm during its life cycle.
- Ask students to predict what they will learn.

Predict Vocabulary Encourage students to use photos to predict vocabulary: Which words do you expect to see in this book?

Display a page and cover the words: Which words do you expect to see on this page? List the words students mention. Add Key Concept Words in the book that students do not mention.

Text Feature: Headings

Introduce Direct students' attention to the heading on page 6. The words in big red type with the yellow line below it are the main heading. They tell the subject of the following pages.

Model Pages 6 and 7 have the heading *The Silkworm,* so I know they give information about a silkworm. When I turn to page 8, I see another red heading. This heading, *The Egg,* is smaller, and I don't see a yellow line. I know the big topic is still "The Silkworm."

Practice Have students name the stage of life of the silkworm on pages 10, 12, and 14.

Read the Book

As students read, invite them to share what they notice. Use some of the suggestions below to encourage observations and talk about the book.

Pages 4–5

Support Comprehension Show the location of China on a map and explain that the country has a long history. Tell students that the text in the box tells an old story. After reading the pages, ask students to retell the story and explain the connection between China and the silkworm.

Pages 6–7

Key Concept Words *metamorphosis*, *life cycle*

Apply the Comprehension Strategy

Have students read the first paragraph. Encourage them to **Predict** the life cycle of a silkworm, using information they know about insects and metamorphosis.

When I read the first paragraph, I learned that _____.
I predict that _____ because _____.

Pages 8–9

Support Comprehension Explain that the heading on this page lets us know that the page is about the egg stage of a silkworm's life cycle. Tell students that the pictures and captions will help them understand the text on the facing page. Suggest they use pictures and captions on upcoming pages to help them understand the text in the same way.

Pages 10–15

Check Understanding Ask students to summarize the life cycle of the silkworm. Ask them to identify the stage in which the silkworm makes its silk thread. *(caterpillar stage)*

Discuss the Book

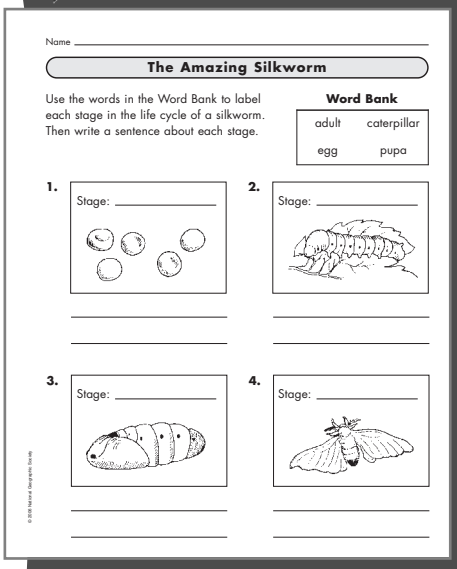
Invite students to use the Word Bank to discuss the book and share what they have learned. Ask students what they found surprising about the life cycle of a silkworm. Have students add the new words to their Vocabulary Logs.

Use ***Learning Masters*** page 29.

Reread for Fluency

Have students reread the entire book independently to build fluency. See *Customize the Reading*.

Learning Masters/page 29



Name _____

The Amazing Silkworm

Use the words in the Word Bank to label each stage in the life cycle of a silkworm. Then write a sentence about each stage.

Word Bank

adult	caterpillar
egg	pupa

1. Stage: _____
2. Stage: _____
3. Stage: _____
4. Stage: _____

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Customize the Reading

Students reread and talk about The Amazing Silkworm *using one of the following options:*

- *Look through the pages, naming the objects pictured and describing the life cycle of a silkworm.*
- *Reread the book while following along with the audiolesson.*
- *Read independently or aloud with a partner.*

Guided Writing

Distribute copies of the ***Take-Home Book Masters.*** Read the title and page through the book. Explain that students will write books about animals' life cycles. Work with students to:

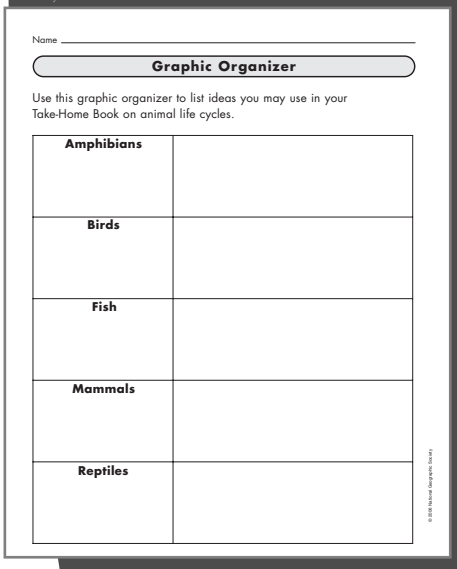
- Complete the Contents page.
- Describe the animals shown and discuss the life cycle of the animals.
- Share writing ideas for each pair of pages.

Record students' writing ideas for the pages of their books on chart paper. Have them suggest labels for the photos.

Tell learning partners they will plan what to write. Explain that each partner will complete a graphic organizer in order to list information and plan writing. Display the Word Bank and remind students to check their Vocabulary Logs as they begin to write.

Use ***Learning Masters*** page 30.

Learning Masters/page 30



Name _____

Graphic Organizer

Use this graphic organizer to list ideas you may use in your Take-Home Book on animal life cycles.

Amphibians	
Birds	
Fish	
Mammals	
Reptiles	

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Lesson 5 Assess and Extend

OBJECTIVES

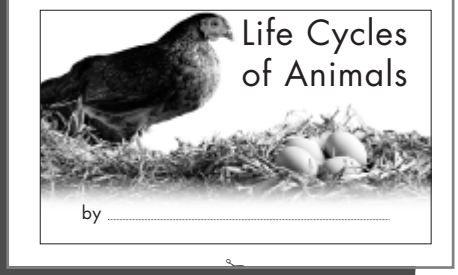
- Use Key Concepts and Key Concept Words in writing
- Demonstrate oral language proficiency
- Demonstrate comprehension of theme selections
- Read related titles to reinforce Key Concepts and vocabulary

Materials

Take-Home Book Masters:
Life Cycles of Animals

Learning Masters pages 22–23, 31–32

Take-Home Book Masters



Rereading and Assessments

Allow time for children to independently reread the theme selections. Display the Word Bank for children's reference as they read.

As children reread, meet with individuals. Use the Post-Test on pages 41–43 to evaluate children's progress and to update their records.

Guided Writing

Students continue writing the Take-Home Books they began in Lesson 4. Review the group list of writing ideas. Display the Word Bank.

Page through the theme books to review the text features, including captions and headings. Talk about text features students might add to their Take-Home Books. For example, they might use subheadings (smaller headings) on their writing pages to talk about each specific animal they describe.

Point out that good writers:

- Use details. Students can describe what the particular animals look like by using descriptive words.
- Include words that help the reader order things that happen, such as *first*, *next*, and *then*.
- Read over their work. Ask students to check to be certain their ideas are clear.

Have students complete the Picture Glossary and About the Author last.

As students write, circulate to coach and support individuals. If students need help, try reading back what they have written. Guide them to add information or restate ideas.

Have partners exchange books and discuss what they like in each other's book. For example, a partner may point out a vivid sentence that describes an animal or tells about a personal experience with an animal. Each writer decides what changes to make and adds any final touches.

Customize Instruction for ELLs

Newcomers/Beginning Have students dictate what they want to write to a bridging partner.

Developing Tell students to write simple sentences describing the animals in their Take-Home Books. Encourage students to read their sentences aloud to learning partners to check the sentences for sense.

Expanding/Bridging Encourage students to add other examples for each group of animals.

Assessment Tools

Self-Assessment

Allow children to reflect and assess their own learning by completing ***Learning Masters*** pages 22–23.

- What I Learned, page 22
- How I Learned, page 23

Reading

In addition to the Pre-Test and Post-Test Assessments, the following assessment tools, available online, can help you evaluate and record children's progress in reading.

- Retelling Guide and Scoring Rubric
- Fluency Scoring Guide
- Oral Reading Record

Writing

Use the completed Take-Home Books available online and the following tools to assess children's development as writers.

- Writing Rubric
- Developmental Checklist

Content Assessment

Have students create a book with drawings or photos of animals. Encourage students to label each animal's picture with the type of animal it is and the group to which it belongs. Have students describe the animal and something about its life cycle and share their work with the group.

Vocabulary and Oral Language

Use the following resources, available online, in addition to the Think and Discuss scene on the ***Theme Builder,*** to assess oral language development.

- Content Vocabulary Checklist
- Oral Language Developmental Checklist

Optional Reading

Reading related titles allows students to explore concepts and vocabulary at different levels. It also allows them to use reading strategies in different types of texts. Encourage students to compare the theme books to the books in the next column.

Optional Titles

These related *Windows on Literacy* titles reinforce Key Concepts of the *Life Cycles of Animals* theme.

Nonfiction Titles

Frogs Level 16

From Eggs to Butterfly Level 18

Changes All Around Us Level 21

Fiction Titles

Tadpole Rescue Level 19

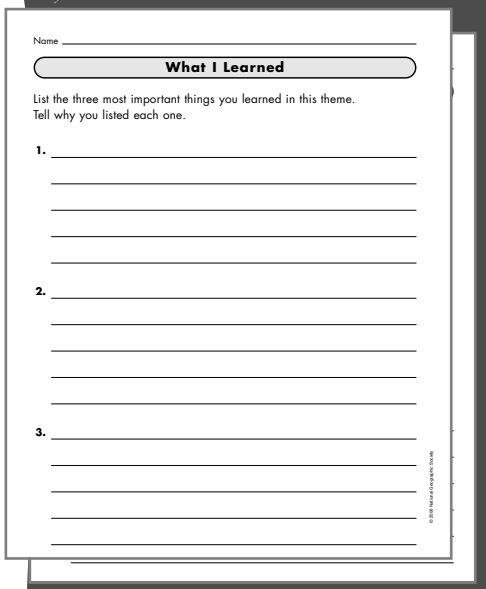
Cody's Snake Tale Level 20

Home Connection

The Family Focus letters on ***Learning Masters*** pages 31–32 summarize key concepts about animals, ways to classify them, and their life cycles.

In the Share and Learn activity, family members describe animals in a picture and tell about the group each animal belongs to.

Learning Masters/pages 22–23

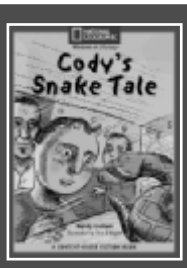

Name _____

What I Learned

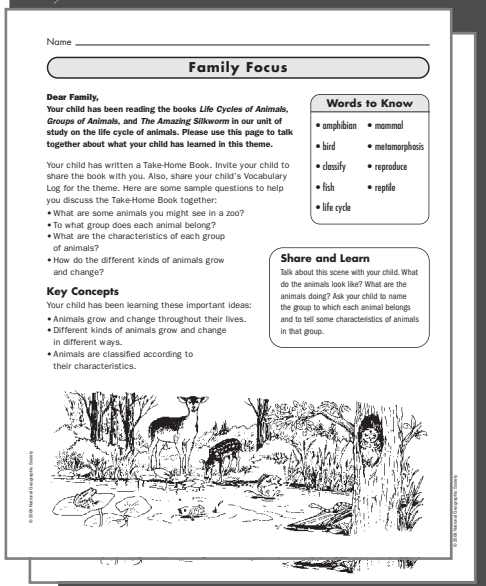
List the three most important things you learned in this theme.
Tell why you listed each one.

1. _____
2. _____
3. _____

Related Fiction Titles



Learning Masters/pages 31–32


Name _____

Family Focus

Dear Family,
Your child has been reading the books *Life Cycles of Animals*, *Groups of Animals*, and *The Amazing Silkworm* in our unit of study on the life cycle of animals. Please use this page to talk together about what your child has learned in this theme.

Your child has written a Take-Home Book. Invite your child to share the book with you. Also, share your child's Vocabulary Log for the theme. Here are some sample questions to help you discuss the Take-Home Book together:

- What are some animals you might see in a zoo?
- To what group does each animal belong?
- What are the characteristics of each group of animals?
- How do the different kinds of animals grow and change?

Key Concepts

Your child has been learning these important ideas:

- Animals grow and change throughout their lives.
- Different kinds of animals grow and change in different ways.
- Animals are classified according to their characteristics.

Words to Know

- amphibian
- bird
- classify
- fish
- life cycle
- mammal
- metamorphosis
- reproduce
- reptile

Share and Learn

Talk about this scene with your child. What do the animals look like? What are the animals doing? Ask your child to name the group to which each animal belongs and to tell some characteristics of animals in that group.

Language, Literacy & Vocabulary!

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Windows on Literacy®

Learning Masters

Fluent Plus: Life Cycles of Animals

Name _____

What I Learned

List the three most important things you learned in this theme.
Tell why you listed each one.

1. _____

_____

_____

_____

_____

2. _____

_____

_____

_____

_____

_____

3. _____

_____

_____

_____

_____

_____

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Name _____

How I Learned

Think about reading the books in this theme.
Draw an *X* next to the things you did as you read.

- ☐ I made connections.
- ☐ I thought about what would happen next.
- ☐ I asked questions before I read.
- ☐ I asked questions while I read.
- ☐ I made pictures in my mind.
- ☐ I picked out the most important ideas.
- ☐ I figured things out without the author telling me.

Choose one thing from your list.
Tell how it helped you understand the text.

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Name _____

Vocabulary Log

List words you want to remember. Tell what each word means.
Add notes or drawings about the word.

Word	What It Means	Notes or Drawings

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Name _____

Theme Poem

All kinds of animals change and grow.

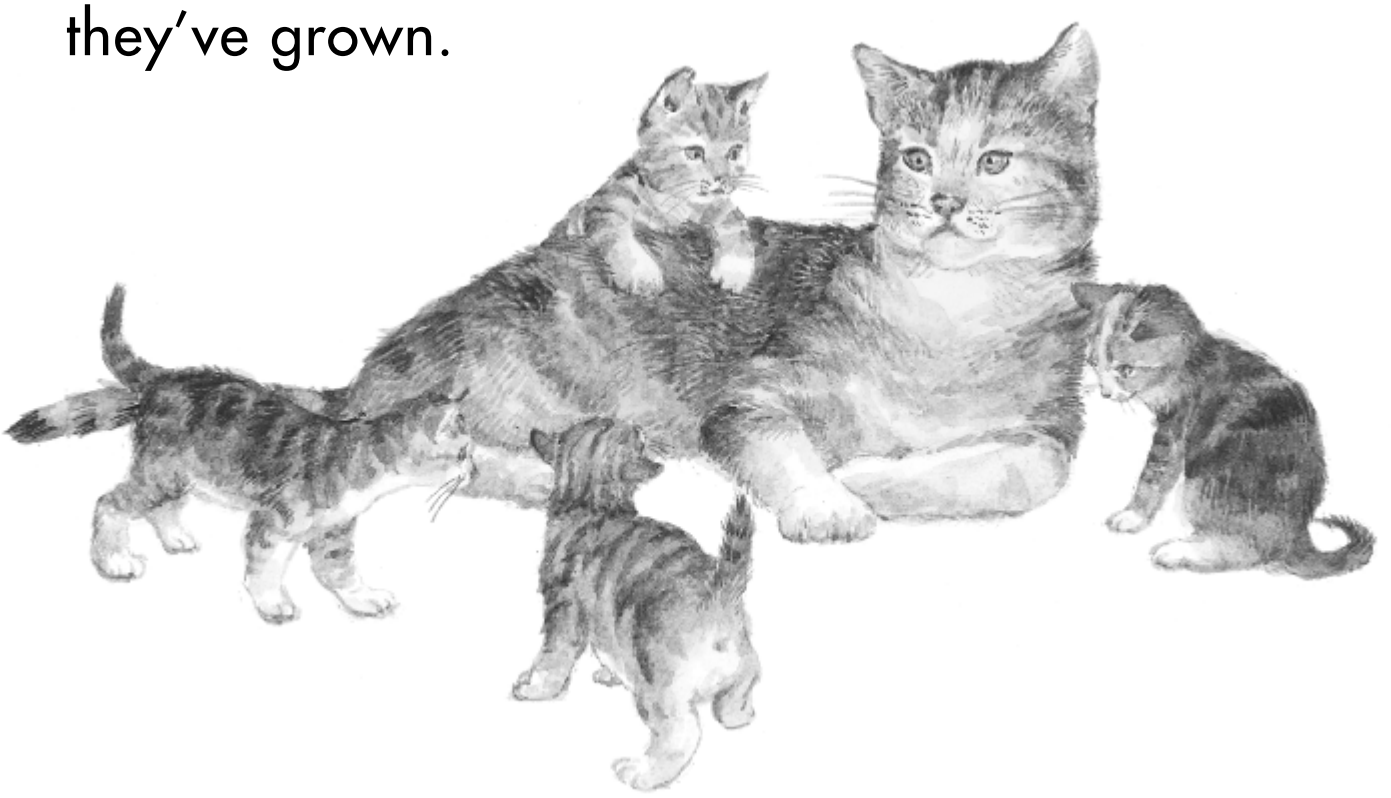
They go from babies to adults, you know.

Some animals' babies come out of eggs they lay.

Birds, most fish and reptiles, and amphibians have babies that way.

Mammals' tiny live babies can't survive on their own,

So their parents take care of them until they've grown.



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Name _____

Predicting

Look at the photos on pages 10–13 of *Life Cycles of Animals.*
Predict how the animals will grow and change.

I predict that

because

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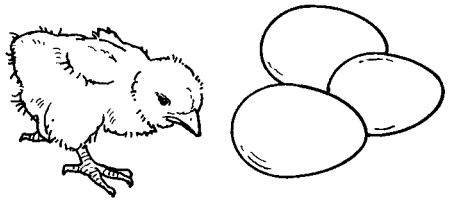
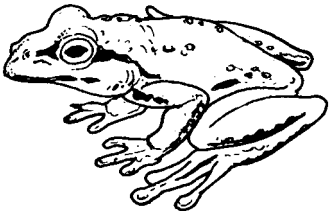
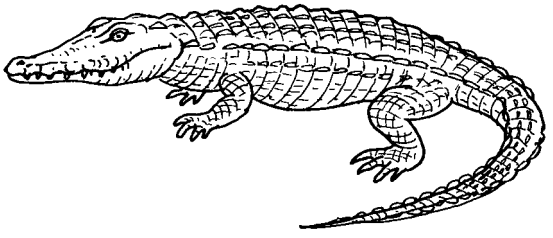
Name _____

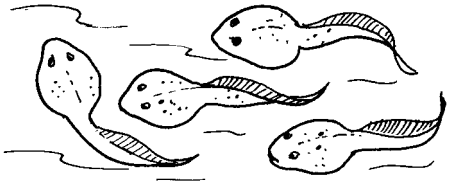
Life Cycles of Animals

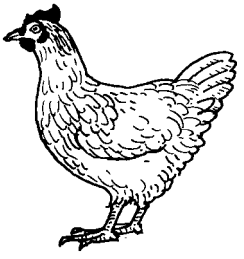
Look at the pictures. Match the adult animal to the correct baby animal.

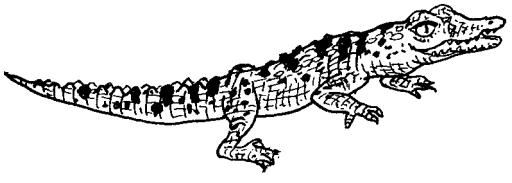












Tell how one baby animal changes.

_____

_____

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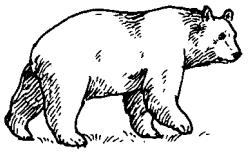
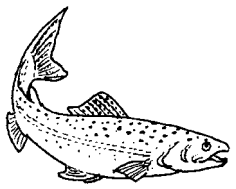
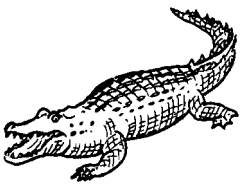
Name _____

Groups of Animals

Look at each picture. Give one characteristic of each animal group. Name other examples of that kind of animal.

Mammals 	_____ Some examples of mammals: _____
Birds	_____ Some examples of birds: _____
Fish 	_____ Some examples of fish: _____
Reptiles 	_____ Some examples of reptiles: _____
Amphibians	_____ Some examples of amphibians: _____

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Name _____

The Amazing Silkworm

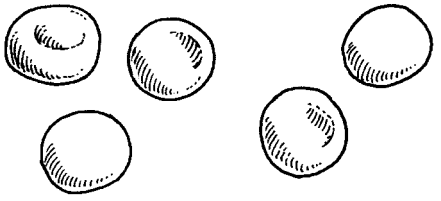
Use the words in the Word Bank to label each stage in the life cycle of a silkworm. Then write a sentence about each stage.

Word Bank

adult	caterpillar
egg	pupa

1.

Stage: _____

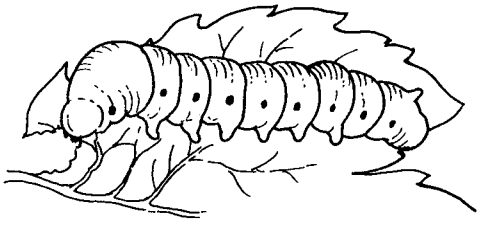


_____

_____

2.

Stage: _____

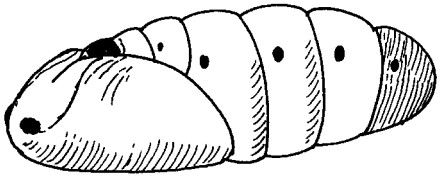


_____

_____

3.

Stage: _____

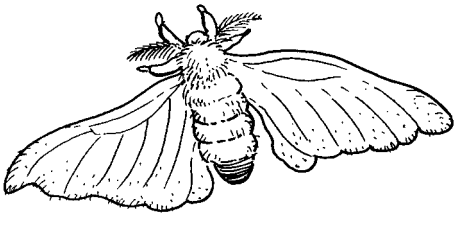


_____

_____

4.

Stage: _____



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_____

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Name _____

Graphic Organizer

Use this graphic organizer to list ideas you may use in your Take-Home Book on animal life cycles.

Amphibians	
Birds	
Fish	
Mammals	
Reptiles	

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Name _____

Family Focus

Dear Family,
Your child has been reading the books *Life Cycles of Animals, Groups of Animals,* and *The Amazing Silkworm* in our unit of study on the life cycle of animals. Please use this page to talk together about what your child has learned in this theme.

Your child has written a Take-Home Book. Invite your child to share the book with you. Also, share your child's Vocabulary Log for the theme. Here are some sample questions to help you discuss the Take-Home Book together:

- What are some animals you might see in a zoo?
- To what group does each animal belong?
- What are the characteristics of each group of animals?
- How do the different kinds of animals grow and change?

Key Concepts

Your child has been learning these important ideas:

- Animals grow and change throughout their lives.
- Different kinds of animals grow and change in different ways.
- Animals are classified according to their characteristics.

Words to Know

- amphibian
- bird
- classify
- fish
- life cycle
- mammal
- metamorphosis
- reproduce
- reptile

Share and Learn

Talk about this scene with your child. What do the animals look like? What are the animals doing? Ask your child to name the group to which each animal belongs and to tell some characteristics of animals in that group.

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Enfoque en la familia

Estimada familia,
Su escolar ha estado leyendo los libros *Life Cycles (Los ciclos de vida), Groups of Animals (Grupos de animales)* y *The Amazing Silkworm (El fascinante gusano de seda)* en nuestra unidad de estudio sobre los ciclos de vida de los animales. Favor de usar esta página para hablar juntos sobre lo que su escolar ha aprendido acerca de este tema.

Su escolar ha escrito un libro para llevar a la casa. Pídale a su escolar que le lea el libro. También revise el Diario de Vocabulario que ha creado para el tema. Use estas preguntas para discutir el libro juntos.

- ¿Cuáles son algunos animales que se pueden ver en un zoológico?
- ¿A qué grupo pertenece cada animal?
- ¿Cuáles son las características de cada grupo de animales?
- ¿Cómo crecen y cambian los diferentes tipos de animales?

Vocabulario

- **anfibio** (amphibian)
- **ave** (bird)
- **ciclo de vida** (life cycle)
- **clasificar** (classify)
- **mamífero** (mammal)
- **metamorfosis** (metamorphosis)
- **pez** (fish)
- **reproducirse** (reproduce)
- **reptil** (reptile)

Compartir y aprender

Platique sobre esta escena con su escolar. ¿Cómo son los animales? ¿Qué están haciendo los animales? Pregúntele a su escolar el nombre del grupo al que pertenece cada animal y anímele a nombrar algunas características de los animales en el grupo.

Ideas Clave

Su escolar ha estado aprendiendo estas ideas importantes:

- Los animales crecen y cambian durante sus vidas.
- Los diferentes tipos de animales crecen y cambian de maneras distintas.
- Los animales se clasifican según sus características.

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Assessments

Fluent Plus: Life Cycles of Animals

Administering the Tests

About the Pre-Test and Post-Test

The Pre-Test and Post-Test measure students' performance in four skill domains:

- Concept Words
- Key Concepts
- Comprehension Strategies
- Text Features

The Pre-Test gives information about each student's baseline proficiency with the theme of study. Analyzing student results will help you select appropriate teaching strategies and target areas of need. The Post-Test, when compared with the Pre-Test data, captures students' gains and serves as a useful tool in documenting student progress.

Administering the Test

1. Before distributing the test, be sure that students have their Concept and Related Nonfiction books accessible These texts are often referred to in both the Pre- and Post-Tests.

2. Distribute the test.

3. Look to make sure that each student is working on the correct page. Read all directions and test items out loud to students. Have students work individually on sections and allow a reasonable amount of time for them to complete each item.

4. Collect all tests and score them using the Answer Key on page 35.

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Answer Key

Scoring the Pre-Test and Post-Test

Items 1–12 and 15–18 are worth one point. Items 13–14 are worth 2 points. There are 20 points total. For free response answers that require students to draw or write, answers need to show an understanding of the key word or concept to receive the point. Do not penalize students for incorrect spelling or grammar.

Pre-Test

Concept Words (1–6)	Key Concepts (7–12)	Comprehension Strategy (13 & 14)		Text Features (15–18)
1 point each	*1 point each*	*2 points each*		*1 point each*
1. (e)	**7.** classify	Points	Description	**15.** silk
2. (d)	**8.** metamorphosis	*2*	Response demonstrates a *complete* understanding of the strategy.	**16.** caterpillar
3. (f)	**9.** bird	*1*	Response demonstrates a *partial* understanding of the strategy.	**17.** chrysalis
4. (b)	**10.** amphibians	*0*	Response is totally incorrect or irrelevant.	**18.** butterfly
5. (c)	**11.** hatch		**Note:** Do not score written response for grammar, mechanics, or spelling.	
6. (a)	**12.** life cycle			

Post-Test

Concept Words (1–6)	Key Concepts (7–12)	Comprehension Strategy (13 & 14)		Text Features (15–18)
1 point each	*1 point each*	*2 points each*		*1 point each*
1. (e)	**7.** silkworm	Points	Description	**15.** Answers will vary.
2. (d)	**8.** Animals	*2*	Response demonstrates a *complete* understanding of the strategy.	
3. (f)	**9.** classified	*1*	Response demonstrates a *partial* understanding of the strategy.	**16.** eggs
4. (b)	**10.** fish	*0*	Response is totally incorrect or irrelevant.	**17.** tadpoles
5. (c)	**11.** reproduce		**Note:** Do not score written response for grammar, mechanics, or spelling.	**18.** frog
6. (a)	**12.** adult			

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Student Profile for Pre-Test and Post-Test

Name _____

Test & Date	Concept Words	Key Concepts	Compr. Strategy	Text Features	Point Score	Percent Score
Pre-Test Date: ___	/6	/6	/4	/4	/20	%
Post-Test Date: ___	/6	/6	/4	/4	/20	%

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Class Profile

Teacher Name _____

Student Name	Pre-Test Date:		Post-Test Date:	
	Point Score	Percent Score	Point Score	Percent Score
	/20	%	/20	%

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Pre-Test

Name _____ Date _____

Concept Words

Draw a line from the word to what it means.

1. classify	**a.** To change form as part of growth. What tadpoles go through to become frogs.
2. reptile	**b.** Frogs, toads, and salamanders belong to this group of animals.
3. life cycle	**c.** Mate or to make new life.
4. amphibians	**d.** Cold-blooded animals like lizards, snakes, and turtles belong to this group.
5. reproduce	**e.** To sort things into groups with similar features.
6. metamorphosis	**f.** The stages an animal goes through during its life.

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Pre-Test

Name _____ Date _____

Key Concepts

Complete these sentences. Choose **one** of the words in parenthesis. Circle the correct word. Follow the example.

Example: Amphibians are another group of (**animals**, **features**).

7. To (**life cycle, classify**) is to put things into groups.

8. When animals go through very different stages as they grow, we say that that go through a (**metamorphosis, reproduce**).

9. A (**bird, reptile**) has feathers, wings, and a beak.

10. Salamanders are (**mammals, amphibians**). Like others in this group, it lives part of its life in water.

11. Birds (**lay, hatch**) from eggs. They are also warm-blooded.

12. All animals go through a (**chrystalis, life cycle**).

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Pre-Test

Name _____ Date _____

Comprehension Strategy

Look at the photos on pages 10–11 of *Life Cycles of Animals.*
Predict how the animals will grow and change.

13. I predict that _____

_____

14. because _____

_____

Text Features

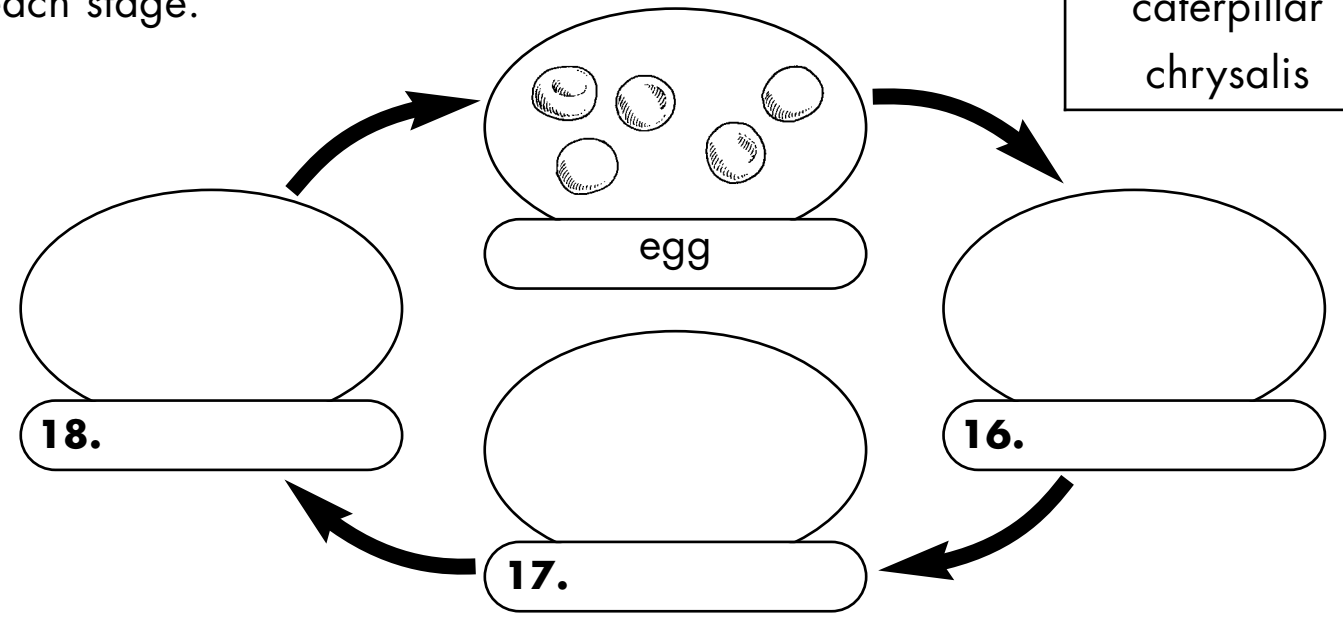
What is the heading on page 2 of *The Amazing Silkworm*?

15. The heading is _____.

Complete the diagram of the life cycle of a butterfly.
Use the words in the Word Bank to label each stage.

Word Bank

~~egg~~
butterfly
caterpillar
chrysalis



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Post-Test

Name _____ Date _____

Concept Words

Draw a line from the word to what it means.

1. bird	**a.** To change form as part of growth. What tadpoles go through to become frogs.
2. reptile	**b.** Frogs, toads, and salamanders belong to this group of animals.
3. life cycle	**c.** A kind of animal that has hair and produces milk for its young.
4. amphibians	**d.** Cold-blooded animals like lizards, snakes, and turtles belong to this group.
5. mammal	**e.** A kind of animal that has feathers, wings, and a beak.
6. metamorphosis	**f.** The stages an animal goes through during its life.

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Post-Test

Name _____ Date _____

Key Concepts

Look at the words in the Word Bank. Choose the word that best completes the sentence. Write the word on the line.

Word Bank	
silkworm	reproduce
classified	adult
fish	Animals

7. Inside its cocoon, a _____ changes into a pupa.

8. _____ change as they grow. They get bigger and stronger.

9. Toads and salamanders are _____ as amphibians.

10. The 5 groups the books discuss are: reptiles, amphibians, birds, mammals, and _____.

11. When animals _____, they have babies.

12. According to the book *The Amazing Silkworm,* the fourth stage in the life cycle of the silkworm is the _____.

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Post-Test

Name _____ Date _____

Comprehension Strategy

13. Look at the photos on pages 12–13 of *Life Cycles of Animals.* Predict how the animals will grow and change.

I predict that _____

14. because _____

_____

Text Features

15. Read the text.

> Like all moths, the silkworm moth goes through four different stages of growth as it becomes an adult. This process is called metamorphosis, which means change.

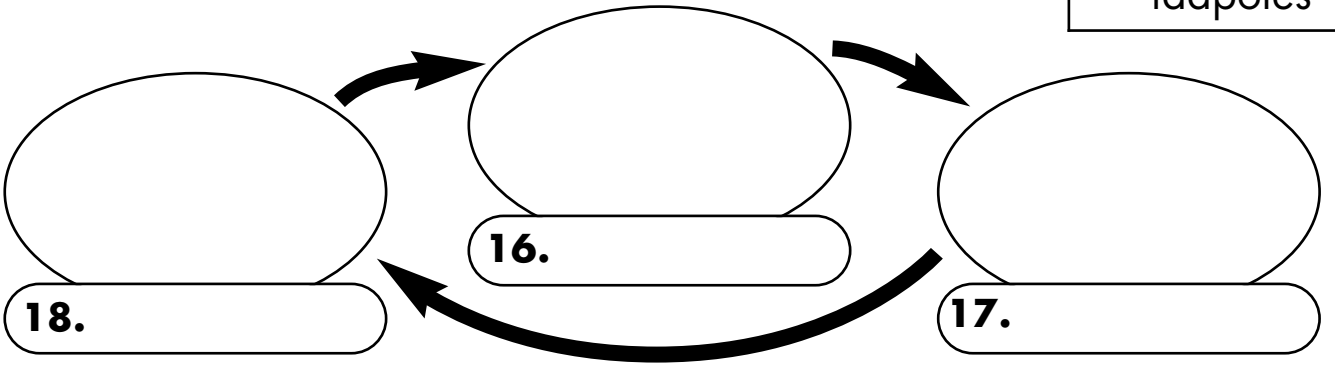
What do you think the text's heading should be?

Write it on the line. _____

Complete the diagram of the life cycle of a frog. Use the words in the Word Bank to label each stage in the life cycle.

Word Bank

eggs frog tadpoles



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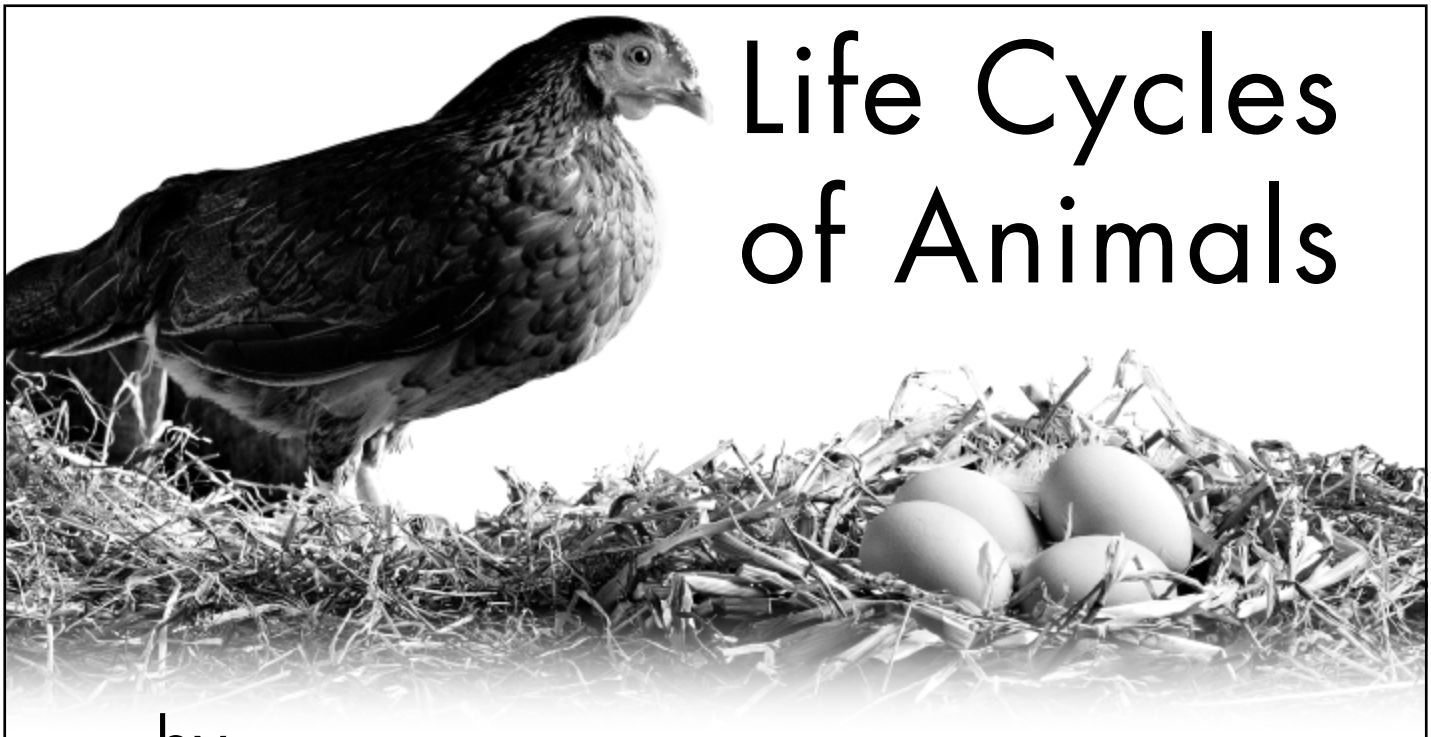

Life Cycles of Animals

by .....

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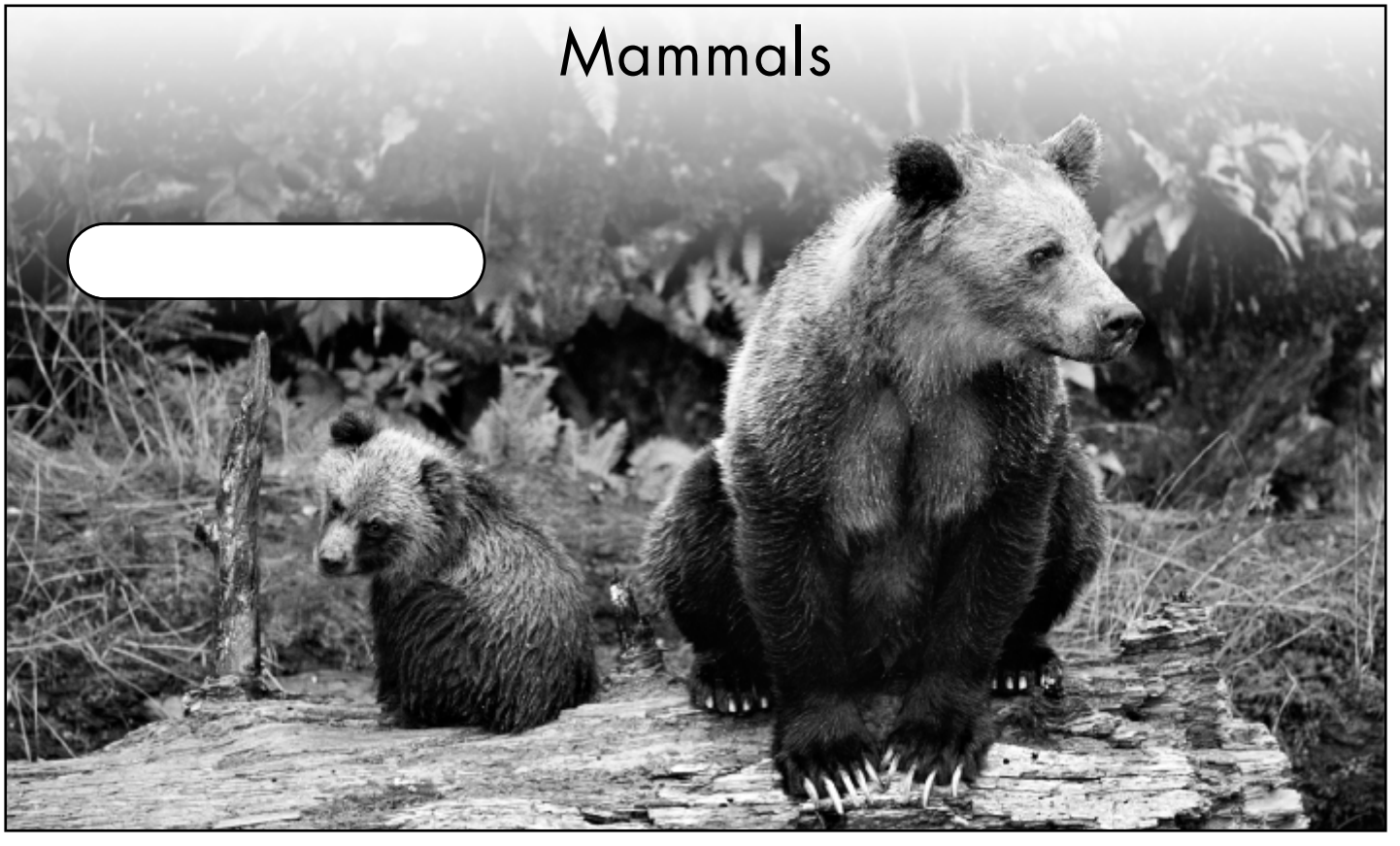

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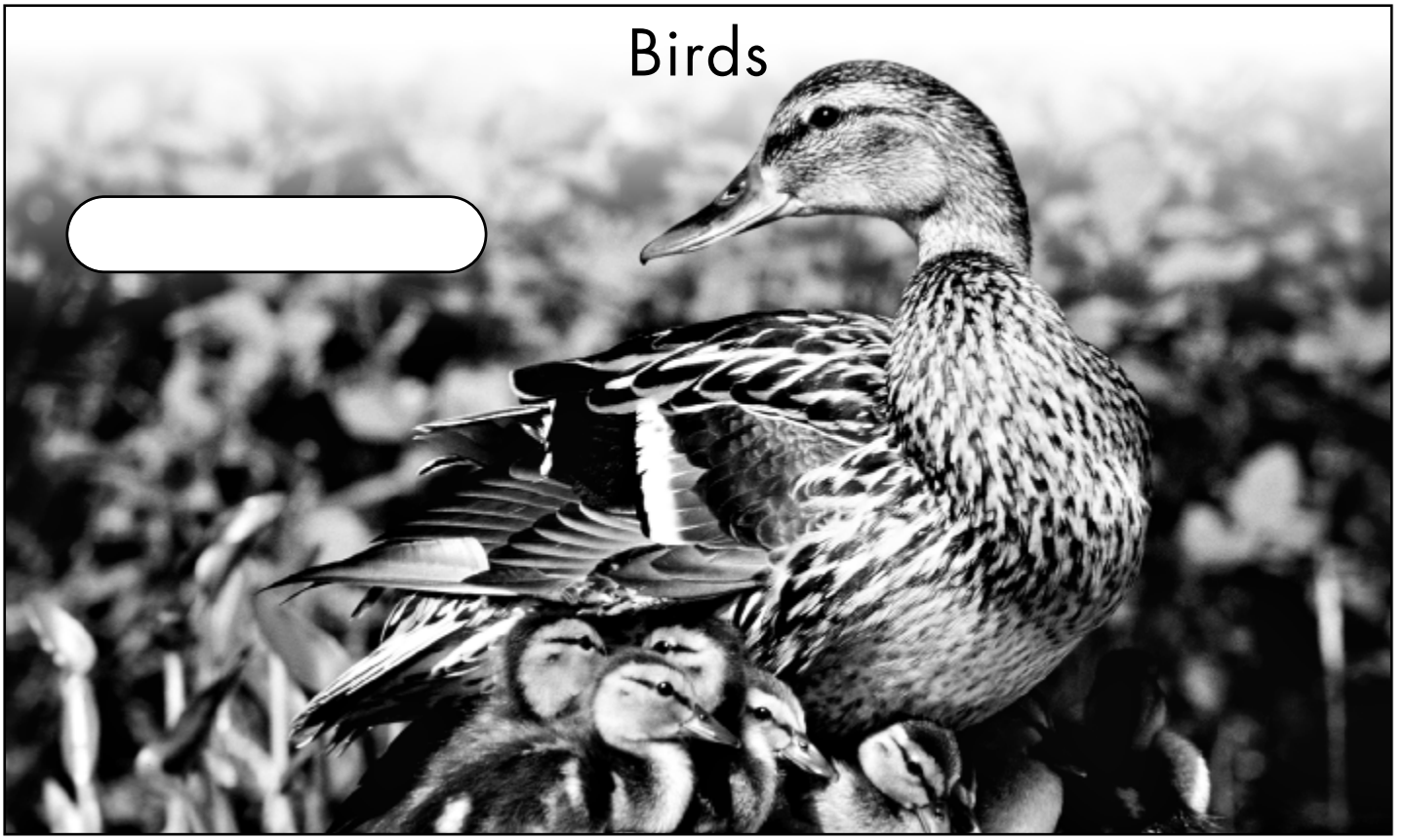

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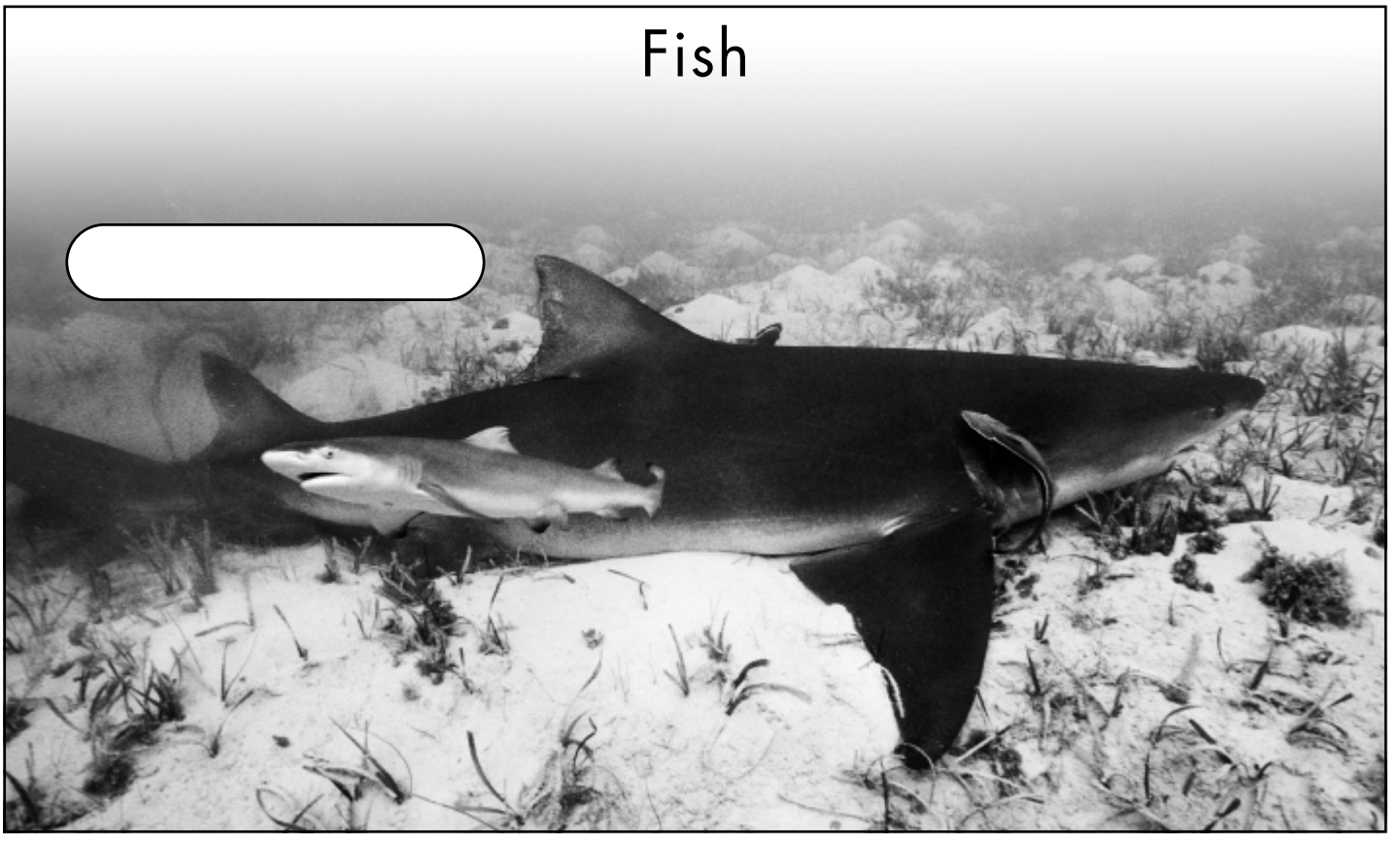

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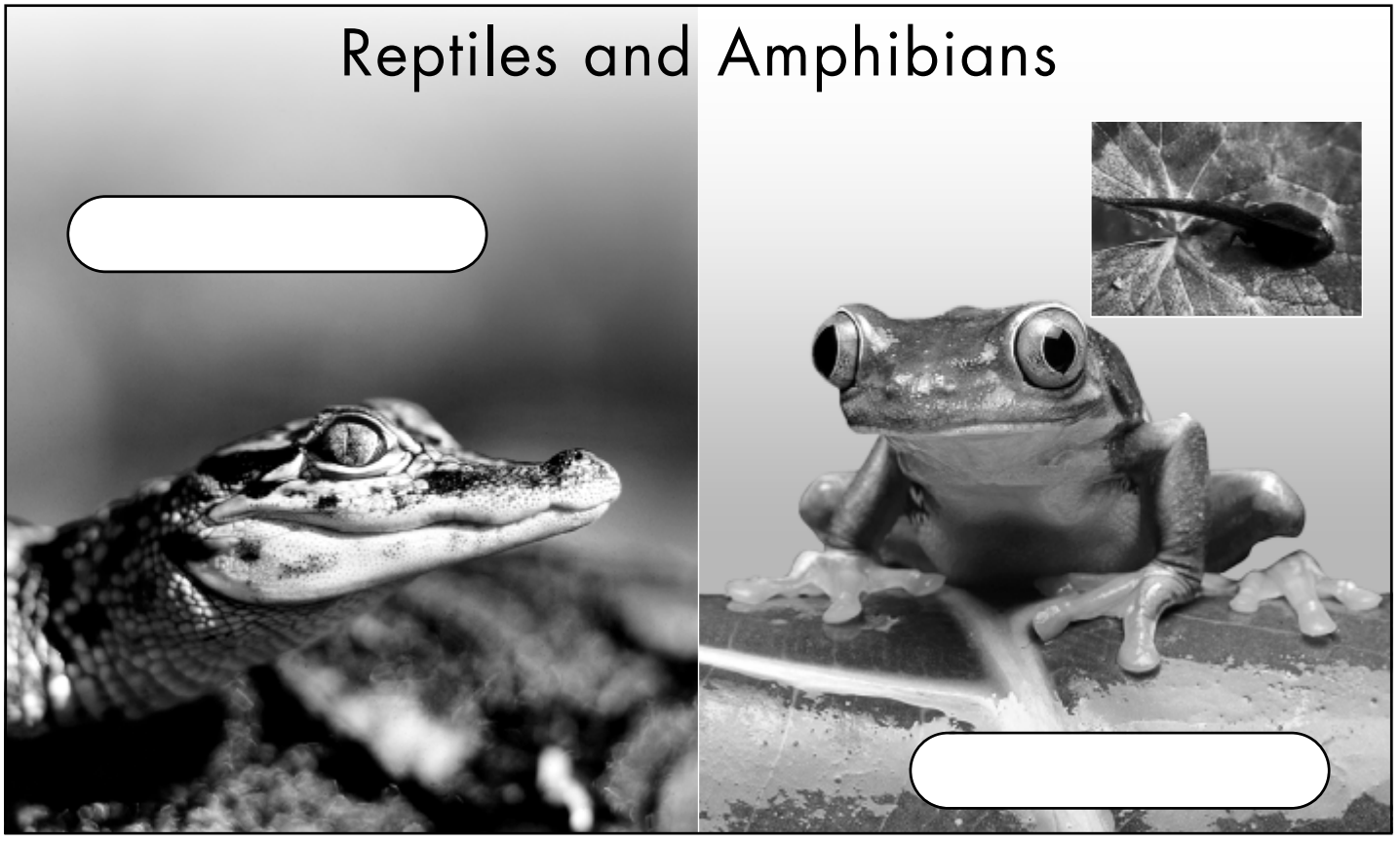
Reptiles and Amphibians



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Picture Glossary

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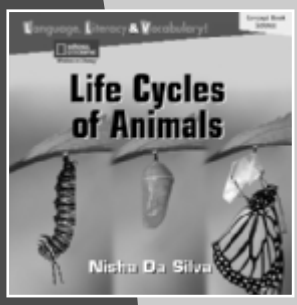
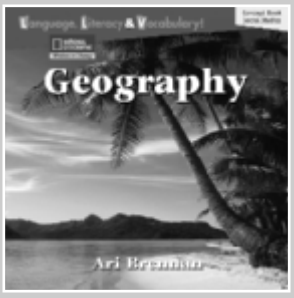
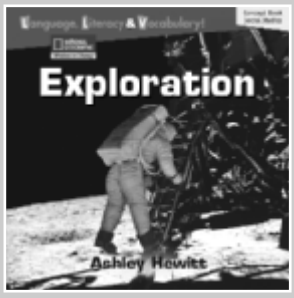
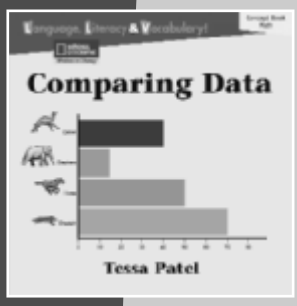
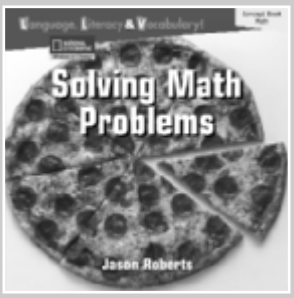
Themes

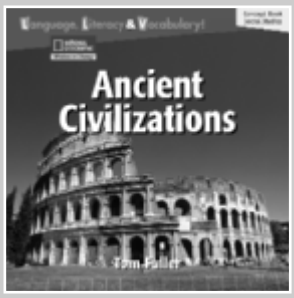












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