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Grade
K

Teacher Created Materials
PUBLISHING

MATHEMATICS READERS

Teacher's Guide

Table of Contents

Introduction

Series Welcome	5	Using Technology to Improve Literacy	14
Fostering Content-Area Literacy.	6	How to Use This Product	15
The Importance of Strong Mathematical Content	11	About the Books	25
Differentiating for All Learners	13	Introduction to Standards Correlations. . . .	33
		Correlations to Standards	34

Unit 1: Counting and Cardinality

<i>Travel Adventures: The Serengeti: Counting</i>	
Lesson Plan	38
Student Activity Sheets.	43
<i>Spectacular Sports: Hockey: Counting</i>	
Lesson Plan	49
Student Activity Sheets.	54
<i>Amazing Animals: Bugs: Skip Counting</i>	
Lesson Plan	60
Student Activity Sheets.	65
<i>Art and Culture: Dancing Around the World: Comparing Groups</i>	
Lesson Plan	71
Student Activity Sheets.	76
<i>On the Job: Vet: Comparing Groups</i>	
Lesson Plan	82
Student Activity Sheets.	87

Unit 2: Measurement and Data

<i>Your World: Shoes: Classifying</i>	
Lesson Plan	93
Student Activity Sheets.	98
<i>Your World: Hats: Classifying</i>	
Lesson Plan	104
Student Activity Sheets.	109
<i>Money Matters: Find the Money: Financial Literacy</i>	
Lesson Plan	115
Student Activity Sheets.	120

<i>Amazing Animals: Tails: Measurement</i>	
Lesson Plan	126
Student Activity Sheets.	131

Unit 3: Operations and Algebraic Reasoning

<i>The History of Ice Cream: Addition</i>	
Lesson Plan	137
Student Activity Sheets.	142
<i>Fun and Games: Musical Chairs: Subtraction</i>	
Lesson Plan	148
Student Activity Sheets.	153
<i>Fun and Games: Bubbles: Addition and Subtraction</i>	
Lesson Plan	159
Student Activity Sheets.	164
<i>STEM: Paper Airplanes: Composing Numbers 1–10</i>	
Lesson Plan	170
Student Activity Sheets.	175
<i>Spectacular Sports: Bowling: Decomposing Numbers 1–10</i>	
Lesson Plan	181
Student Activity Sheets.	186
<i>Engineering Marvels: Gingerbread House: Composing Numbers 11–19</i>	
Lesson Plan	192
Student Activity Sheets.	197

Your World: Buses: Decomposing Numbers 11–19
 Lesson Plan 203
 Student Activity Sheets..... 208

Unit 4: Geometry

Travel Adventures: Camping: 2-D Shapes
 Lesson Plan 214
 Student Activity Sheets..... 219

Your World: Picnics: 3-D Shapes
 Lesson Plan 225
 Student Activity Sheets..... 230

Art and Culture: Big Ben: Shapes
 Lesson Plan 236
 Student Activity Sheets..... 241

Engineering Marvels: Birdhouses: Shapes
 Lesson Plan 247
 Student Activity Sheets..... 252

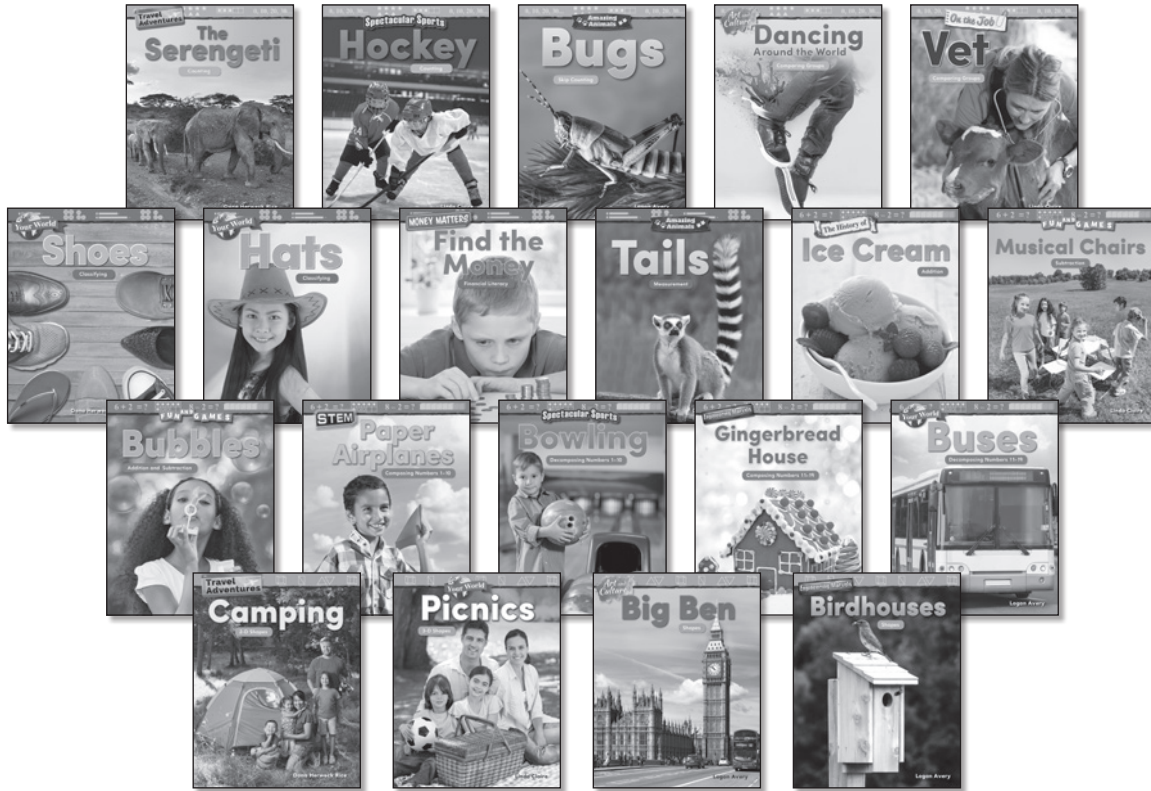
Appendix

Culminating Activity: Gingerbread House
 Design 258
 Answer Key..... 264
 References Cited..... 274
 Digital and Audio Resources 276
 Supporting Resources 283

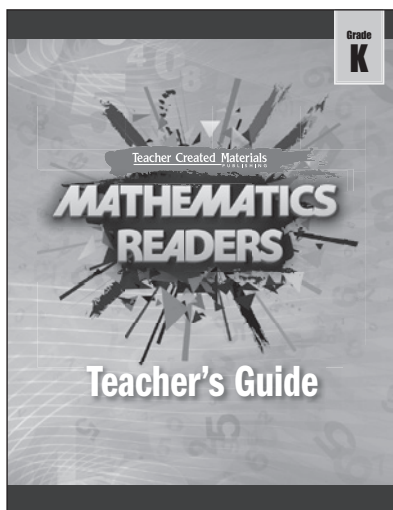
How to Use This Product

Kit Components

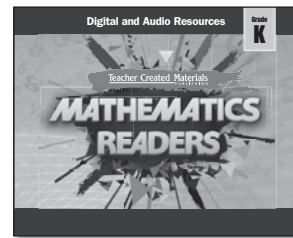
6 copies of 20 books



Teacher's Guide



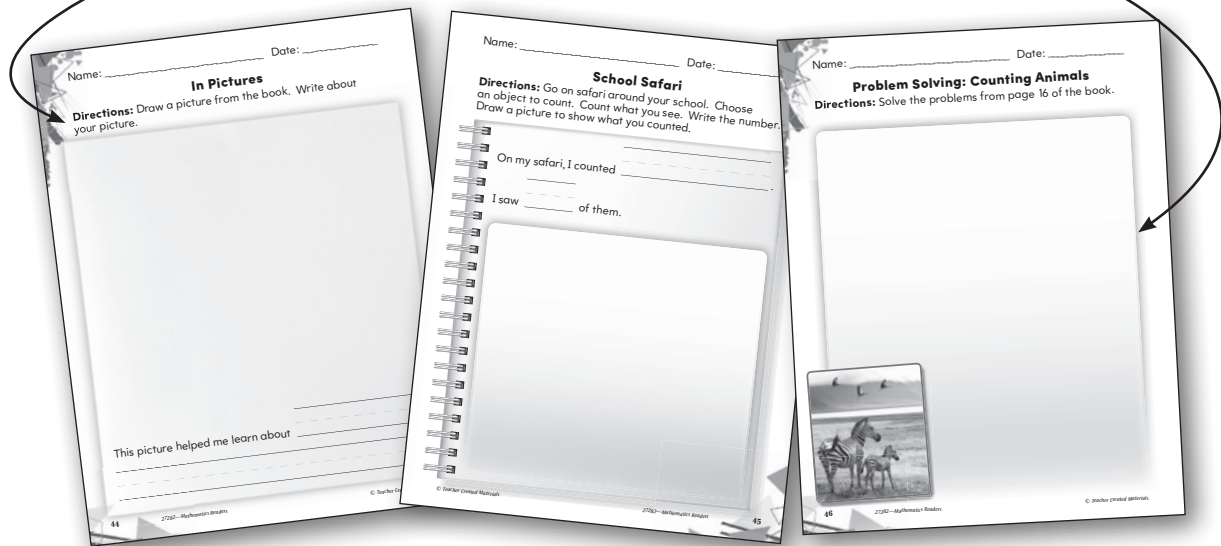
Digital and Audio Resources



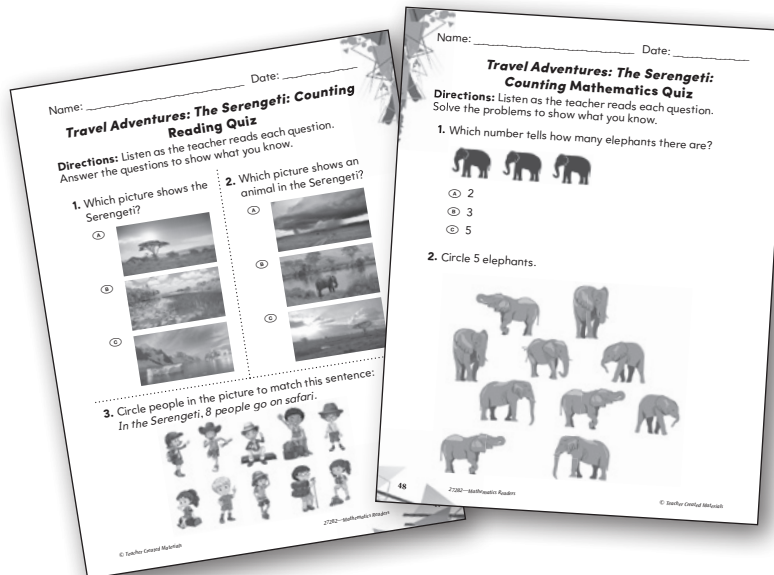
How to Use This Product *(cont.)*

Student Activity Sheets and Assessments

clear directions and activities that promote higher-order thinking skills



reading and math quizzes with text-dependent questions



How to Use This Product *(cont.)*

Pacing and Instructional Setting Options

The following pacing and instructional setting options show suggestions for how to use this product. *Mathematics Readers* is flexibly designed and can be used in tandem with a core curriculum within a mathematics block, literacy block, or both. Teachers should customize pacing according to student need (instruction may need to be extended over more days) and the teacher's preferred instructional frameworks, such as Guided Math or Guided Reading. This suggestion reflects one lesson per book for each of the 20 books. Each lesson spans 5 instructional days and requires 30–45 minutes, for a total of approximately 65 hours over the course of 100 days.

Day	1	2	3	4	5
Activity	Before Reading and Mathematics Investigation	During Reading	During Reading <i>(cont.)</i>	After Reading	Problem Solving and Assessments
Instructional Time	45 minutes	30 minutes	30 minutes	45 minutes	45 minutes

Mathematics Readers within the Guided Math and Balanced Literacy Frameworks

Classroom Environment of Numeracy and Literacy—The books in *Mathematics Readers* contribute to an environment of numeracy and literacy by immersing students in real-world connections to mathematics and by giving students the opportunity to learn outside of content-area silos.

Whole-Class Instruction—The Before Reading activity in each *Mathematics Readers* lesson is a great opportunity to activate students' prior knowledge and capture their interest in a topic.

Small-Group Instruction—The lessons in *Mathematics Readers* offer flexibility that allows students to complete Before Reading, Mathematics Investigation, During Reading, and After Reading activities in small groups or any other preferred instructional setting, depending on student need. These activities have differentiation suggestions and targeted objectives and give students time to work with manipulatives and models.

Workshop—The During Reading, After Reading, and Problem Solving activities in each *Mathematics Readers* lesson can be completed during Math or Reading Workshop, in centers or at workstations, depending on students' previous learning experiences and their need for teacher support.

Conferencing—The Problem Solving activity and assessments in each *Mathematics Readers* lesson offer multiple opportunities for teachers and students to confer about concepts and ideas.

Assessment—*Mathematics Readers* offers multiple formative and summative assessment opportunities. Teachers can gain insight into student learning through reading and mathematics quizzes, small-group observations, analysis of written assignments, and a culminating activity.

Amazing Animals: Bugs: Skip Counting



Materials

- *Amazing Animals: Bugs: Skip Counting* books
- copies of student activity sheets (pages 65–70)
- counters (30 per student)
- *Ladybugs* (ladybugs.pdf)
- *Missing Numbers Hundreds Chart* (missing100.pdf)
- *Decade Cards* (decadecards.pdf)
- *Hundreds Chart* (hundredschart.pdf)
- crayons (1 per student)

Learning Objectives

- Name the author and illustrator of a text and define the role of each in presenting the ideas or information in a text.
- With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
- Use patterns to skip count to 100 by tens.

Mathematical Practices and Processes

- Reason abstractly and quantitatively.
- Model with mathematics.
- Use appropriate tools strategically.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

Lesson Timeline

Day 1 Day 2 Day 3 Day 4 Day 5

Day 1	Day 2	Day 3	Day 4	Day 5
Before Reading and Mathematics Investigation (pages 61–62)	During Reading (page 63)	During Reading (cont.) (page 63)	After Reading (page 63)	Problem Solving and Assessments (page 64)
45 minutes	30 minutes	30 minutes	45 minutes	45 minutes
Name the author and make predictions about the text. Count objects to skip count by tens.	Identify the author’s work in the book and describe what they learned from it.		Answer a question about bugs using information from the book.	Review the vocabulary, complete the problem solving activity, and take the assessments.

Amazing Animals: Bugs: Skip Counting *(cont.)*

Mathematics Vocabulary

- patterns
- skip count
- ten

Before Reading

1. Display the *Amazing Animals: Bugs: Skip Counting* book for the class. Point out the author's name on the front cover. Explain that the author's job is to write words for books.
2. Read the title and back cover aloud. Ask students to predict what they think the author wants them to learn by reading the book. Have them justify their responses with evidence from the title and back cover.
3. Preview the pages in the book with numerals. Read the numerals. Ask students to predict the mathematics they think the author wants them to learn.

Mathematics Investigation

Build Understanding

1. Have students examine the image of the ladybugs on page 19 of the *Amazing Animals: Bugs: Skip Counting* books. Point out the dots on their backs. Read the vocabulary words aloud. Guide students to create student-friendly definitions.
 - *What do you notice about the dots on the ladybugs?*
 - *How can you use numbers to describe the ladybugs and dots? How can you count to prove that you are correct?*
2. Distribute *Ladybugs* (ladybugs.pdf) from the Digital Resources and counters to students. Tell students the counters stand for dots on the backs of ladybugs. Tell students that each ladybug has 10 dots on its back. Have students use the counters to find how many total dots there are on all the ladybugs.
 - Support **below-level learners** by giving them ten frames to organize their work.
 - Have **above-level learners** describe how the numbers 2 and 20 are alike and different.
 - Confirm that **English language learners** understand they are counting dots, not ladybugs.
3. Ask students guiding questions to build understanding.
 - *How are you making sure that each ladybug has 10 dots on its back?*
 - *Other than by ones, how can you count the total number of dots?*
 - *How is counting by tens different from counting by ones?*
 - *How is the number of ladybugs related to the number of dots?*

Amazing Animals: Bugs: Skip Counting (cont.)

Mathematics Investigation (cont.)

Expand Understanding

1. Ask students to explain how counters help them skip count by tens. Explain to students that a hundreds chart is another tool to help them skip count by tens.
2. Distribute *Missing Numbers Hundreds Chart* (missing100.pdf) and cut *Decade Cards* (decadecards.pdf) from the Digital Resources to students. Ask students how they can use the cards to fill in the missing numbers on the charts. Have students read each number card as they complete the charts.
3. Ask students guiding questions to expand understanding.
 - *What patterns do you notice in the hundreds chart before you fill in the missing numbers? After?*
 - *What patterns do you notice in the numbers on the cards?*
 - *What strategies are you using to make sure you are placing your cards correctly?*
 - *How can hundreds charts help you skip count by tens?*

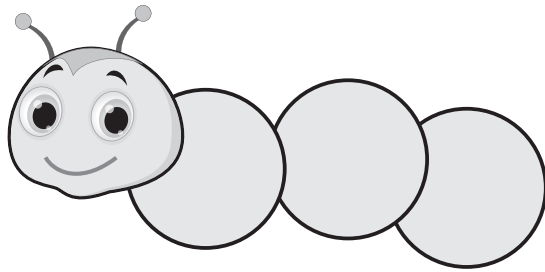
Apply Understanding

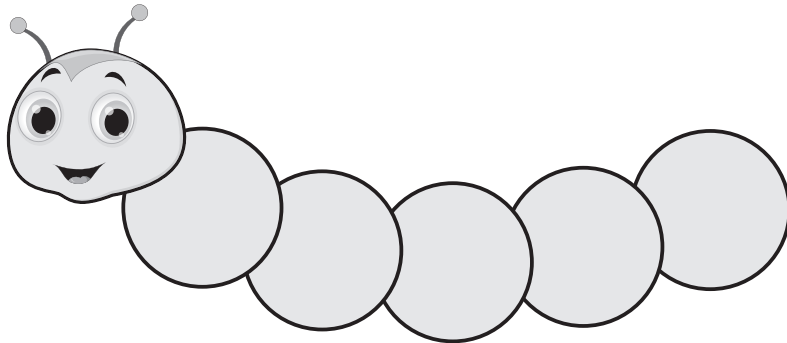
1. Distribute *Bugging Out* (page 65) to students. Read the directions aloud to students. Remind students that each circle of the bugs' bodies must have 10 legs. You may wish to have *Hundreds Chart* (hundredschart.pdf) from the Digital Resources available for students to support them as they work.
2. Ask students questions to assess understanding.
 - *Is counting by ones the best way to count the legs? Why or why not?*
 - *How can counting by tens help you find the number of legs?*
 - *What strategies are you using to make sure you are drawing and counting correctly?*
 - *How is the number of circles related to the number of legs?*
 - *How do you know your number is written correctly?*

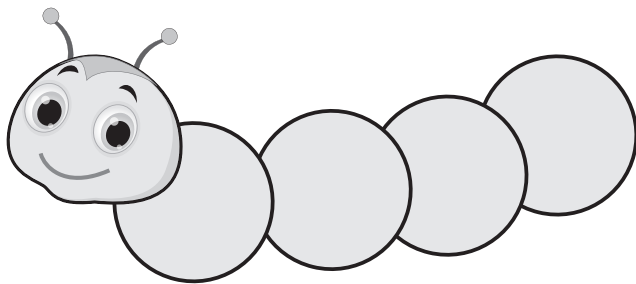
Name: _____ Date: _____

Bugging Out

Directions: Draw 10 legs on each circle of the bugs' bodies. Write how many legs each bug has.







Name: _____ Date: _____

Helpful Author

Directions: Write something the author taught you about bugs. Draw a picture to match.

A spiral notebook page with a grey cover and silver spiral binding on the left. The page contains several horizontal writing lines. The first section has two sets of lines, each consisting of a solid top line, a dashed middle line, and a solid bottom line. Below these is a large rectangular area outlined with a dotted line, intended for drawing. The page is otherwise blank.

0, 10, 20, 30...



0, 10, 20, 30...

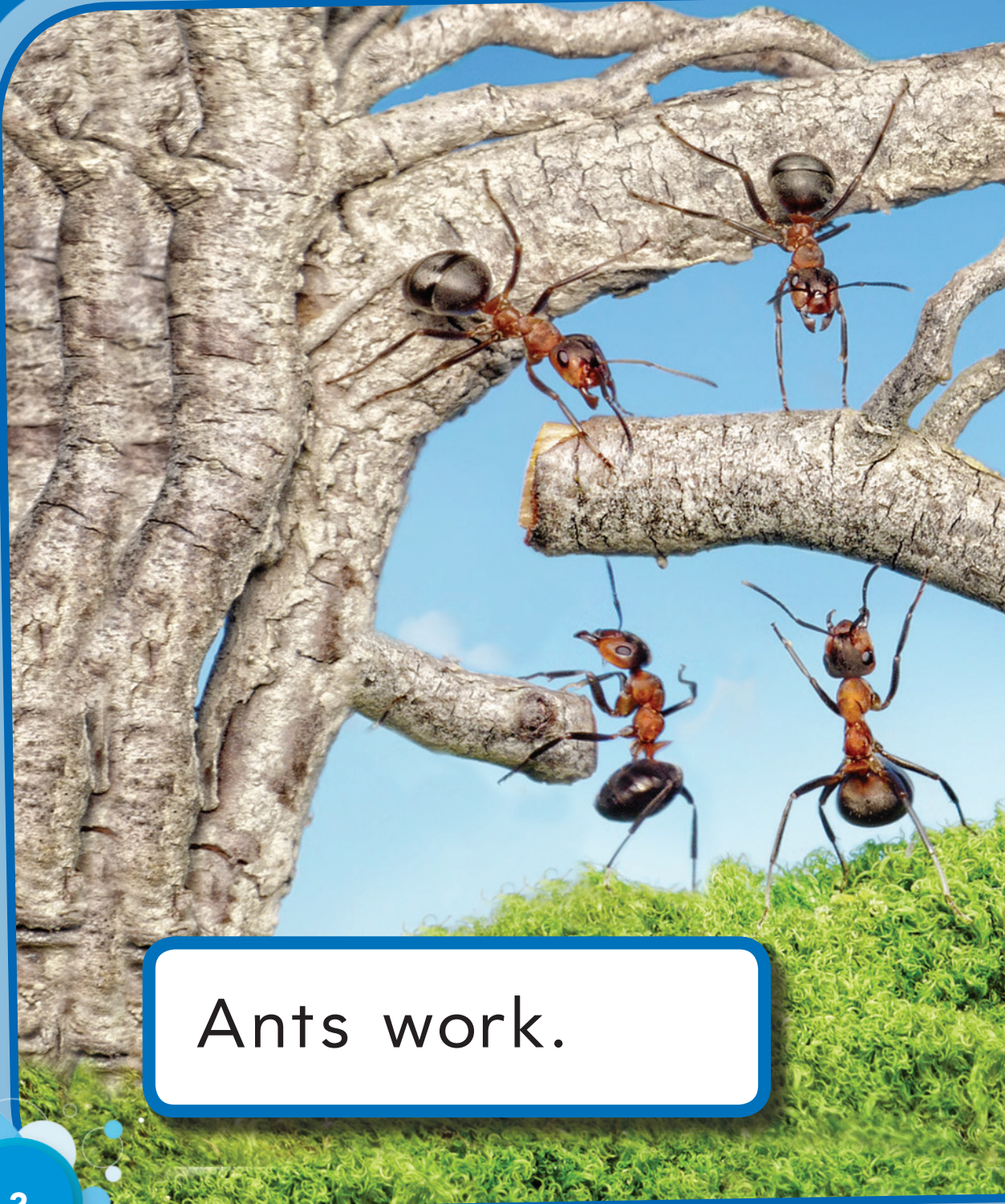
 **Amazing
Animals** 

Bugs

Skip Counting



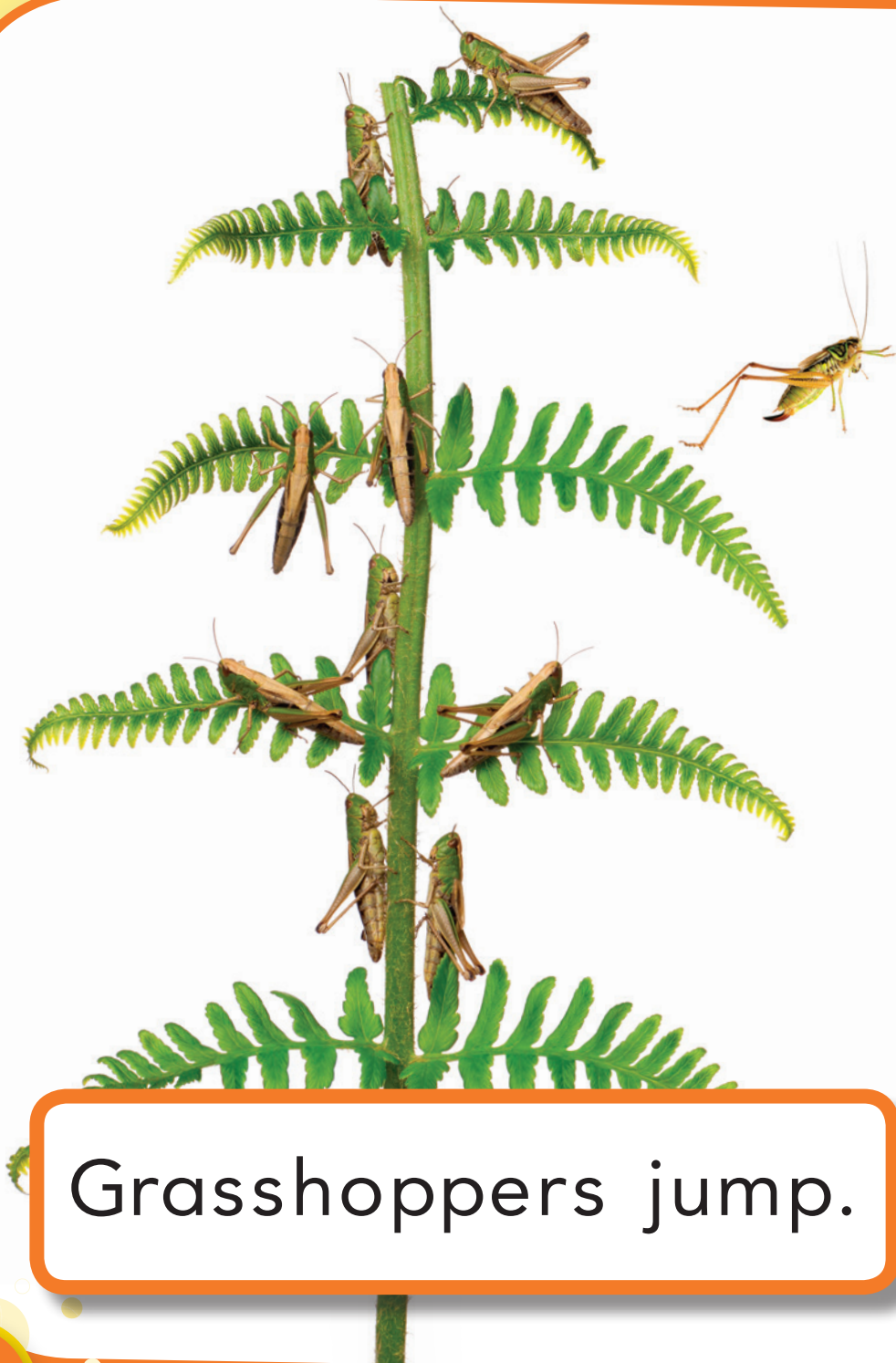
Logan Avery



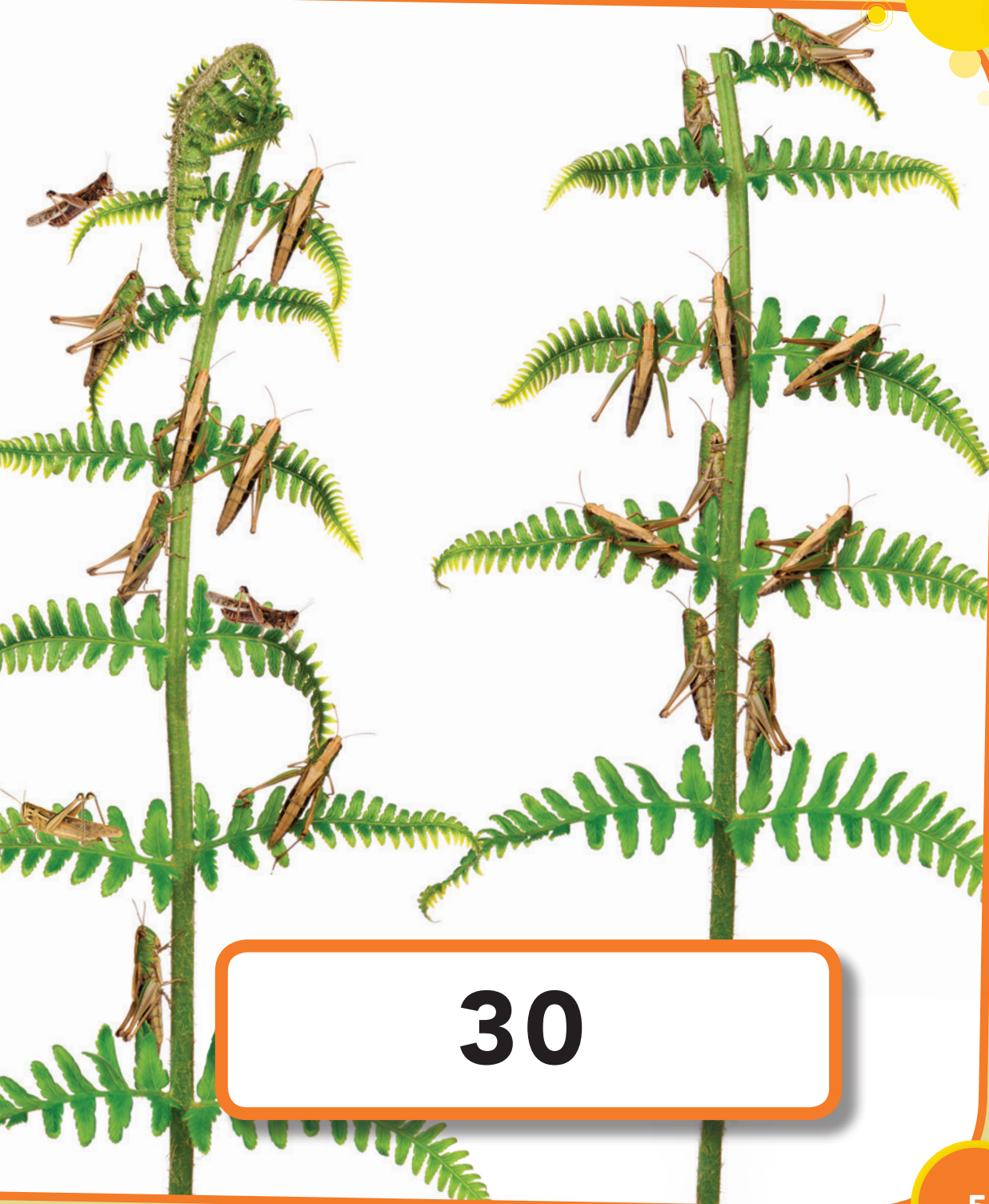
Ants work.



10



Grasshoppers jump.



30



Problem Solving

Ladybugs are sitting on logs. Count the logs. Then, count the ladybugs by tens. Write numbers to complete the sentences.

1. There are _____ logs.
2. There are _____
ladybugs.

