TEACHER'S GUIDE

# TEEN LITERACY LIBRARY

# GENRES

- American Culture
- American History
- Environmental Studies
- Everyday Math
- Science/Technology



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Answer Kev

# Instructional Support Components

This Teacher's Guide contains instructional support for each book in the *ELL Teen Literacy Library*. The vocabulary cards are addressed and integrated into instruction within each book's lesson pages.

# **GENRE OVERVIEW AND LESSON PLAN** (one page for each genre):



Use this page to introduce and discuss a genre. Lessons are appropriate for whole-class or small-group instruction.

## **BOOK LESSON PLAN**

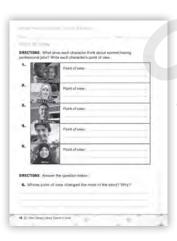
(one page for each book):



Use this page to introduce a book and to teach or review specific reading skills. Lessons are appropriate for whole-class, small-group, or individual instruction

## **VOCABULARY AND COMPREHENSION**

(one page for each book):



Use this page to introduce the five vocabulary words for each book and reinforce their pronunciations and meanings. Use the guided reading questions after the initial reading of the

book. These questions allow for a deeper rereading of the book and an exploration of the book's issues and character dynamics. Questions are appropriate for whole-class, small-group, or individual instruction.

## **COMPREHENSION ACTIVITY**

(one page for each book):



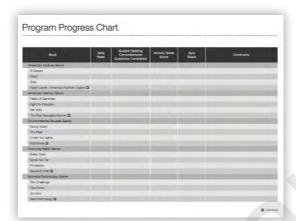
Use this page to monitor comprehension and build reading skills. Many of these pages feature graphic organizers. Activities are appropriate for paired or independent work.



#### **BOOK OUIZ**

(one page for each book):

Use this page to assess comprehension. Quizzes are a mix of multiple-choice, fill-in-the-blank, and short-answer questions.



#### PROGRAM PROGRESS CHART

(Reproduce one for each student.):

A reproducible progress chart is provided on page 14 so that teachers can track student progress as they read the books and complete the activities and quizzes.



#### **VOCABULARY CARDS**

(one set per box):

The cards include five words from each of the 20 books for a total of 100 cards. These are the same words highlighted and defined in the books. Each full-color, 3.5" x 5" card features a photograph on one side and the vocabulary word and definition on the other. These can be used for individual and partner vocabulary practice. The vocabulary page for each book integrates these cards into the suggested activities. The cards are in alphabetical order, and each card has one rounded corner for ease of organization.

The lesson plans, guided reading questions, and reproducible activities in this Teacher's Guide are designed for individual students, pairs, and small groups, depending on your classroom structure and instructional needs. Here are some options for implementation:

- Teach each genre in the order that works best for your class and district curriculum. Use the provided lesson plan pages to plan instruction. Use the vocabulary lesson and the survival vocabulary cards to pre-teach the five featured words for each book. Introduce all four books to the class, and provide time for students to read the books. Because there are three copies of each book included in the box, partners or small groups can read at the same time. As students complete the books, use the guided reading questions to spur discussion and to check comprehension. Have students complete the reproducible activities. Use the quizzes to assess comprehension.
- Form small groups. Assign two or more books from a genre set to each small group. Provide the vocabulary cards for those books to the group and have them use the cards to master the vocabulary prior to reading the books. After groups read the books, provide the guided reading questions to spur discussions and deeper reading. Have the group complete the activities for their books together or independently. Ask the group to present how their books represent the genre they are exploring. Use the guiz to assess comprehension and topic mastery.
- Display the books as part of a classroom library and allow students to selfselect titles. Use the reproducible activities and quiz for each book to monitor comprehension.

# Book Overview Chart

Book	Fiction/ Nonfiction	Theme	Readability Level	Lexile Level	Word Count	
American Culture Genre						
A Debate	F	a family debates its beliefs	1.7	220L	944	
Fired!	F	challenges on the job	1.7	230L	960	
Goal	F	fitting in at a new school	1.7	220L	946	
Ralph Lauren: American Fashion Legend	NF	biography of Ralph Lauren	1.9	160L	849	
American History Genre						
Fields of Darkness	F	life during the Dust Bowl	1.8	150L	894	
Fight for Freedom	F	the Civil War	1.5	130L	821	
Her Vote	F	women's suffrage	1.7	160L	897	
The Star-Spangled Banner	NF	our national anthem	2.0	130L	784	
Environmental Studies Genre						
Going Green	F	exploring green technologies	1.8	210L	1040	
The Reef	F	the impact of climate change	2.3	250L	988	
Under the Lights	F	solar power	2.3	220L	1029	
RoboBees	NF	tiny robot bees	2.1	230L	818	
Everyday Math Genre						
Better Deal	F	saving for a big purchase	1.3	180L	980	
Gone Too Far	F	pursuing dreams	1.7	220L	1047	
Pit Master	F	managing a family business	1.7	180L	1041	
Baseball Math	NF	math in baseball	2.1	260L	763	
Science/Technology Genre						
The Challenge	F	a challenging assignment changes things	2.0	230L	960	
The Crime	F	solving a crime at work	1.2	120L	1097	
Journey	F	using technology in travel	1.9	250L	892	
Nanotechnology	NF	new technologies	2.3	210L	771	

# Genre: Environmental Studie

**DESCRIPTION** The Environmental Studies book set investigates topics vital to the future of our planet and in which we all play a role. In the US, many immigrants enjoy a higher standard of living than they did in their former countries. But along with the American lifestyle comes increased consumption that can put stress on the environment. Fortunately, while the US faces many environmental challenges, it is also one of the leaders in technology that can help address these problems. The books in this set explore environmental issues teens are likely to encounter in their daily life in the US, including the need for affordable "green" transportation and energy, as well as how climate change and the disruption of ecosystems could affect their lives. Students learn about environmentally friendly lifestyle choices and the green technology that has become part of our national focus.

# Overview of Books



An Alternative to Cars



Climate Change up Close



The Power of Solar Energy



**Robots That Could Save** the World

INTRODUCING THIS GENRE Write the word Environment on the board, and ask students what this word means to them. Discuss how this term can refer to natural features such as trees, land, and water resources, as well as topics related to keeping the planet healthy. Next, create a two-column chart, with one column labeled "Problems" and the other labeled "Solutions." Tell students to think about life in the US and to brainstorm practices that might be harmful to the environment, such as driving cars, wasteful packaging, using a lot of electricity and water, suburban sprawl, or factories that pollute. Then, in the right column, have students give examples of environmentally friendly actions people can take, such as recycling, using less electricity, walking instead of driving, etc. As students brainstorm, list their ideas on the board in the appropriate column. As a class, discuss why the impact of our actions on the environment is an important topic to know and care about. Point out that it may be helpful for US residents to be aware of these issues, since some believe Americans can have a big impact on the environment.

**PARTNER SHARE** Have partners talk about how their impact on the environment might have changed when they moved to the US. Do they use more or less energy? Do they produce more or less garbage? Is recycling a new habit here? Ask volunteers to share their ideas.

**SYNOPSIS** This book explores a bold and creative solution one group of scientists developed in response to a daunting environmental problem. Earth depends on bees to pollinate much of its food supply, but the number of bee colonies has been decreasing in recent decades. Scientists aren't completely sure of the cause or how to bring numbers back up to normal levels. But they do know this: the disappearance of bees would pose a threat to human survival. As a possible solution, scientists at Harvard have created RoboBees, tiny robots that look, fly, and behave like bees. Though they might seem like toys, these robotic bees could eventually fly from plant to plant, pollinating crops and saving our food



RoboBees

supply should real bees die out. Meanwhile, these tiny bots have many other possible uses, including environmental testing, underwater exploration, and even espionage.

### **PREPARING TO READ** Show students the cover of the book. Read them the following preview:

It may look like a bee, fly like a bee, and act like a bee—but this tiny bug is actually a robot that could save our planet. How is this possible?

Ask students to turn to a partner and talk about what they think will happen in this book based on the cover and the preview. Then ask for volunteers to tell the group some of their predictions.

READING SKILL Turn off a classroom light switch, and then turn it back on. Ask students to tell you the steps in the process of a light turning on, listing their ideas on the board. Encourage students to think backward to identify earlier steps, and to rearrange steps so they're in the proper order. (Example: Fuel is burned in a power station; electrical energy is sent along power lines; it travels to wires in the classroom; the light switch causes electricity to flow to light bulbs in the ceiling.)

Explain that many nonfiction books, especially books about science and the environment, explain steps in a process. Have students turn to pages 12 and 13 of RoboBees and read about how bees help plants reproduce. Draw a flowchart on the board, and invite students to contribute ideas as you fill in the series of steps involved in a bee pollinating a flower. Tell students that as they read RoboBees, they will learn about other processes related to the environment and technology. Encourage students to pay attention to the sequence of steps in each process.

Finally, have students look again at the cover of the book. Point out that the word RoboBees is actually made of two words: robot and bees. Write each word on the board and discuss its meaning. Ask students what the title RoboBees might reveal about the subject of this book.

# **Vocabulary and Comprehension**

**VOCABULARY LESSON** This book includes a few words that are key vocabulary related to the book's subject and main idea. Teach these words before students read the story. Write each word on the board. If appropriate, have the students write each word on an index card, and then trace the letters as they say the word.

colony a family of bees that works together as a group
pest an unwanted or harmful insect
pollen a yellow powder made by a flower; it allows plants to reproduce
robot a machine that is programmed by a computer to do a task by itself
sensor a tool that records physical information, such as light or heat

Invite students to work in pairs. One partner should think of a vocabulary word and draw a sketch to illustrate it. The other partner should try to guess the word and then use the word in a complete sentence. Have partners switch roles until they have each drawn and guessed all five vocabulary words.

#### **GUIDED READING QUESTIONS**

PAGES 4-9 Why do you think Pakpong was excited? (Responses will vary.)

PAGES 10 AND 11 What do scientists study about bees? (how they move, communicate)

**PAGES 12 AND 13** How do bees help plants reproduce? (The bee lands on a flower; pollen gets on the bee; it flies to another flower; pollen is spread.)

**PAGES 14 AND 15** What could happen if bees disappeared? (Crops wouldn't grow; food would run out; animals could die without food; people could die too.)

PAGES 16-19 What does the graph show? (There are fewer bees than long ago.)

**PAGES 20–25** What could be harming bees? (pesticides, mites, and people changing the land) How could building on land harm bees? (Bees have less food.)

**PAGES 30–33** How similar is a RoboBee to a real bee? (Responses will vary.)

**PAGES 34–37** How does electricity help the bee move? (It makes fake muscles get bigger and smaller; it helps the bee stick to things.)

**PAGES 38–43** What happens after sensors collect information? (It is sent through a wire; signals come back to move the bee.)

**PAGES 52–61** What can RoboBees do besides spread pollen? (collect data, test soil or plants, spy, explore underwater)

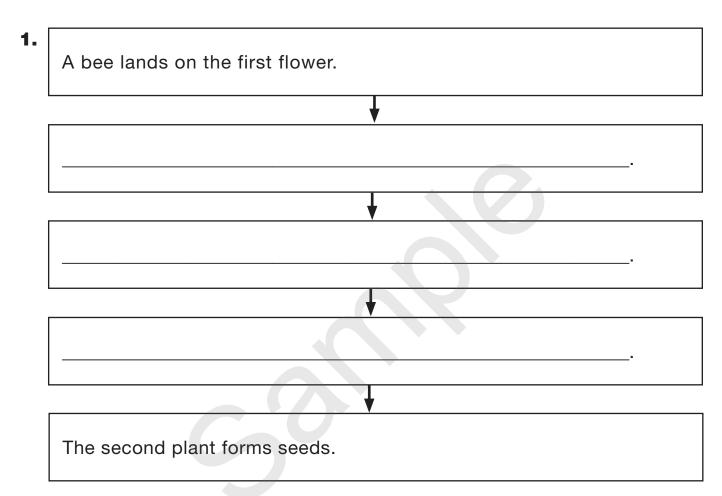
**OVERALL QUESTIONS** Do you think RoboBees are a silly or an important idea? Why? (Responses will vary.)

Did this book change the way you think about bees? Why or why not? (Responses will vary.)

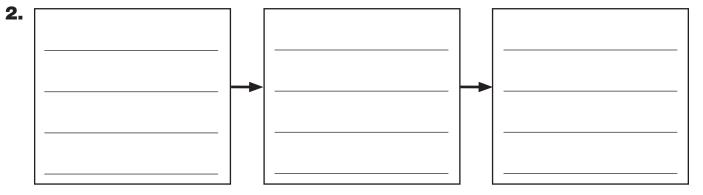
Name \_ Date\_

# Sequence of Events

**DIRECTIONS:** Complete the chart. Write steps to show how a bee helps a flower form seeds.



DIRECTIONS: Think about what could happen if many bee colonies die. Write the events in the chart.



Name	Date				
Comprehension Quiz					
DIRECTIONS: Read the question. Then fill	in the circle next to the correct answer.				
1. What has happened to the number of bees over the years?					
A. It has stayed the same.	C. It has gone down a lot.				
<b>B.</b> It has gone down a little bit.	D. It has gone up a lot.				
2. How can RoboBees help crops?					
A. They can spray pesticides.	C. They can plant seeds.				
B. They can spread pollen.	D. They can kill mites.				
3. What is the main goal of RoboBees?					
A. to test the soil	C. to swim underwater				
B. to spy on enemies	D. to protect our food				
<b>DIRECTIONS:</b> Read the words and definitions. Write each word next to its definition.					
colony pest polle	n robot sensor				
4 a tool that records physical information, such as light or heat					
5 a machine that is program	nmed by a computer to do a task by itself				
6 a family of bees that works together as a group					
a yellow powder made by a flower; it allows plants to reproduce					
an unwanted or harmful insect					

# Genre: Everyday Math

**DESCRIPTION** The Everyday Math genre explores the simple math students will use in their everyday lives in the US, from purchasing goods to managing paychecks and even to understanding sports. The fiction books in this set feature immigrant teens who, in the course of school, work, and interests, face daily decisions requiring quick calculations and an understanding of American customs and currency. These situations include paying for transportation, understanding how to budget income from a job, knowing when and how much to tip, and ordering food by the pound. The nonfiction book gives an overview of how math is involved in the American sport of baseball, while exploring standard units of measurement. The goal of this set is to illustrate a range of situations in which knowledge of units, currency, and basic math can help students live, work, and play in the US.

# Overview of Books



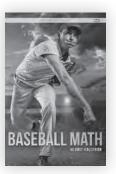
Saving up for a **Splurge** 



A Ticket to New **Opportunities** 



When Feasts Are the **Family Business** 

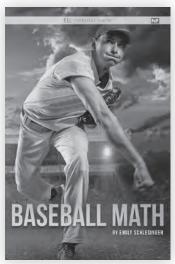


The Numbers Behind the Game

INTRODUCING THIS GENRE Create a slideshow of photos found on the Internet, each showing an image of something that includes numerals encountered in everyday American life. For example, you might show a gas station sign with fuel prices; a scale at a deli counter; a percent-off sale sign at a clothing store; a speed limit sign; and so on. As you display each image, ask volunteers to tell the meaning of the image and where they might see it. List each type of number or measurement on the board. Finally, ask the class to tell you why learning certain "everyday math" skills is crucial to living in the US.

PARTNER SHARE Assign students to pairs, and provide each pair with a section of a newspaper. Have partners search through the section and find an example of a number they can explain to the class, such as a price, measurement, or statistic. Invite pairs to share their math example with the class.

synopsis This book introduces professional baseball, focusing on how math is involved in nearly every aspect of the game. For example, the layout of the baseball field includes distance and geometry; pitching involves rates of speed; equipment follows measurement and weight rules; and statistics and money are involved in the business and entertainment aspects of the sport. While exploring the math behind the game, students also learn more about the standard units of measurement used in the US (which may be less familiar to students from countries that use the metric system). Students also read about some of the sport's most memorable players and moments.



Baseball Math

#### **PREPARING TO READ** Show students the cover of the book. Read them the following preview:

Baseball is one of the most popular sports in the US and is watched by millions of people. But it is more than just great entertainment. There is math in every part of the game.

Ask students to turn to a partner and discuss what kinds of math they think might be involved in baseball, based on the illustrations. Then have volunteers share their ideas.

**READING SKILL** Ask students to think about a sport they know well (other than baseball). Point out that most sports include special vocabulary to tell about equipment, rules, and players. Have a volunteer share examples of vocabulary having to do with a favorite sport. He or she should write each word on the board and explain its meaning to the class. (The student does not have to know the English translations of the words.) Explain that special words having to do with a subject are called *domain-specific vocabulary*. Point out that *domain* means the same as *subject*.

Next, tell students that in *Baseball Math*, they will encounter many words specific to baseball. Write the words *run*, *out*, *base*, *strike*, *hit*, *field*, and *diamond* on the board. Explain that these words have an everyday meaning in English, but a special, different meaning when talking about baseball. Give examples of the two meanings each word can have. For example, *run* means "to jog" in everyday English, but in baseball it means scoring a point. *Out* means "away" in everyday English, but in baseball it means a player loses the turn. *Strike* means "to hit" in everyday English, but in baseball it means to miss the ball.

Finally, have students turn to the measurement conversion chart on pages 8 and 9 of *Baseball Math*. Discuss each standard unit, having students give real-life examples of something that might be measured in each unit and how many units it might be.

# **Vocabulary and Comprehension**

**VOCABULARY LESSON** This book includes a few words that are key vocabulary related to the book's subject and main idea. Teach these words before students read the story. Write each word on the board. If appropriate, have the students write each word on an index card, and then trace the letters as they say the word.

**average** the number you get when you add things together and then divide the total by the number of things

**circumference** the distance around a circle **diameter** the distance across a circle at its widest part **pitch** the throw of a ball to a batter; the player who throws is called a pitcher **statistics** numbers that give information about something

Have pairs create a ball using crumpled paper and masking tape and then find the diameter and circumference using a ruler. Point out that finding the circumference requires wrapping another object around the ball and measuring it. Next, write the words *Class Statistics* on the board. Survey the class and calculate the average diameter and circumference students found, recording the averages on the board. Then tell pairs to take turns "pitching" each ball to their partner, who tries to hit it with a pencil. Have pairs record how many hits each student gets out of ten pitches. Then help students calculate the classroom average number of hits, and record it on the board.

#### **GUIDED READING QUESTIONS**

**PAGES 4-7** Why is a baseball field called a *diamond*? (The bases make the shape of a diamond.)

**PAGES 16–23** Why would it take an hour for Nolan Ryan's pitch to go from New York to Philadelphia? (The cities are 100 miles apart. Ryan could throw 100 MPH.)

**PAGES 24 AND 25** How does a team get a point in baseball? (by running around the bases to home plate) What is the name for a point? (a run)

- PAGES 26-29 When is an inning over? (after both teams bat and get three outs)
- PAGES 30-33 What is a home run? (A player hits a ball far and runs to home plate.)
- **PAGES 34–37** What part of the bat is the diameter? (the distance across the circle)
- PAGES 38-41 Why do you think Ruth chose a heavy bat? (Responses will vary.)

**PAGES 42 AND 43** How does the circumference of a baseball compare to its diameter? Why? (longer; Circumference is the distance all the way around the ball.)

- **PAGES 48–51** Why is batting average a useful statistic? (Responses will vary.)
- **PAGES 52–63** Why do you think baseball players earn so much? (Responses will vary.)

**OVERALL QUESTIONS** How does the amount of math in baseball compare with other sports you know? Why? (Responses will vary.)

What other statistics do you think there could be in baseball? (Responses will vary.)

Name	Date
The Langua	ge of Baseball
DIRECTIONS: Rea	ad each word. Write what the word means in baseball.
<b>1.</b> run:	
<b>2.</b> out:	
<b>3.</b> base:	
<b>4.</b> diamond:	
<b>5.</b> strike:	
DIRECTIONS: Real baseball.	ad each unit of measurement. Write what the unit has to do with
<b>6.</b> foot:	
<b>7.</b> inch:	
8. miles per ho	ur:
<b>9.</b> ounce:	
<b>10.</b> pound:	

Genre: Everyday Math Book: Boo	aseball Math			
Name	Date			
Comprehension Quiz				
DIRECTIONS: Read the question.	Then fill in the circle next to the correct answer.			
1. What is a point called in base	eball?			
A. an inning	C. an out			
B. a strike	D. a run			
2. What piece of baseball equip	ment weighs an average of two pounds?			
A. ball	C. glove			
B. bat	D. base			
3. What is the circumference of	a baseball?			
A. the speed of the ball	C. the distance around the ball			
B. the distance across the ba	D. the weight of the ball			
<b>DIRECTIONS:</b> Read the words and definitions. Write each word next to its definition.				
average circumference	diameter pitch statistics			
4 the distance arou	nd a circle			
5 the distance acros	ss a circle at its widest part			
<b>6.</b> the throw of a bal pitcher	I to a batter; the player who throws is called a			
7 numbers that give	e information about something			

the number you get when you add things together and then

divide the total by the number of things