

 SCHOLASTIC

# GUIDED READING PROGRAM

## Content Areas

LEVEL  
**S**

These are the cards that go with Level S of the Guided Reading Program.  
There is one card for each book in the level, as follows:

- **Abraham Lincoln**
- **Christopher Columbus**
- **The Civil Rights Movement in America**
- **Cuts, Scrapes, Scabs and Scars**
- **Light and Color**
- **Thomas Edison**
- **Valley Forge**
- **Wacky Trees**
- **The Water Cycle**
- **What's Your Angle, Pythagoras?**

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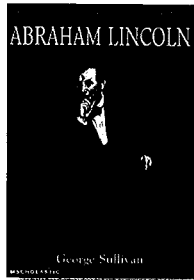
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Item# 136593



# In Their Own Words: Abraham Lincoln



by George Sullivan  
text type: Biography  
word count: 250+  
content area: Social Studies  
topic: famous Americans

**Level 5**

## Summary & Standard

The story of Lincoln's life, from frontier to the Civil War, is aided by Lincoln's own writing and speeches. Students will learn Lincoln's effects on the Presidency and American history from 1809–1865.

## Making Connections: Text to Text

Lead students to share what they've read in books or on the Web about Lincoln's life and the time period in which he lived. Ask:

*What do you know about Abraham Lincoln?*

*Why do you think he is the subject of many books?*

To extend the connection, discuss the images and captions found in other texts, such as a history book or an Internet site. Note details about what life was like in the expanding United States, Lincoln's achievements, and the Civil War.

For additional teaching ideas and resources, see [www.pbs.org/wgbh/amex/lincolns/](http://www.pbs.org/wgbh/amex/lincolns/).

## Vocabulary

**Content Words:** abolish, candidate, issue, legislature, moral, popularity, resolutely, tragedy

**Essential Words:** opposition, politics, trigger

**Related Words for Discussion:** confederation, economy, expansion, frontier, secede, territory

**Nonfiction Text Features:** bibliography, captions, headings, illustrations, photographs, timeline

## Supportive Book Features

**Text** Sentences and paragraphs are short. Captions, illustrations, and photographs reinforce the main text and set the historical time frame for the reader.

**Vocabulary** The meaning of unfamiliar words is often explained in context in the same paragraph. Some concept words such as *slavery* and *Confederacy* are repeated and expanded upon in different chapters.

Praise students for specific use of "Behaviors to Notice and Support" on page 86 of the *Guided Reading Teacher's Guide*.

## Challenging Book Features

**Text** Explain the difference between direct quotations and conversations versus quotations that indicate an actual record of a speech or letter handed down from the past. Help students recognize examples of primary sources throughout the book.

**Content** Some students may be challenged by the legal, political, and governmental discussions in the book. Help students understand documents such as the Gettysburg Address on page 93.

## ELL Bridge

Help students understand some of the text's compound words. The simple parts of the words may be familiar but may be confusing when combined into a compound: *farmhand*, *hardships*, *overruled*, *stepchildren*, *thunderstruck*, *uprooted*, and *nose-dived*. Write each word on an index card, define it, and use it in a sentence for students to echo. Then cut the cards apart, and challenge students to rebuild a compound word after you give a definition.

## Developing Comprehension

### Drawing Conclusions

Remind students that to draw a conclusion means grouping related facts together to make a decision about what the facts mean.

- Explain that details in the text, as well as prior knowledge, help readers to draw a conclusion.
- Ask students to read page 35. *What can you conclude about Mary Todd?* (She was having trouble adjusting to life as a wife and mother.)
- Read pages 39–41. *What can you conclude about Lincoln at this time?* (He is ambitious and rising politically.)
- Have students choose other text and help them draw conclusions.

For more prompts and ideas for teaching problem-solving strategies, see page 20 of the *Guided Reading Teacher's Guide*.

## Developing Phonics and Word-Solving Strategies

### Roots

Remind students that a word root is a part of a word. It contains meaning, but it cannot stand alone.

- Introduce a root word and its origin.
- Guide students to find examples in the book.  
*jud, jur, jus*, Latin "law"—*judge* (page 25), *jury* (page 47), *injustice* (page 52), *just* (page 102)

*poli*, Greek "city, the government state"—*politics* and *political* (page 25)

*pop*, Latin "people"—*population* (page 11), *popular* (page 25), *popularity* (page 42).

- Connect the ancient meaning as you define the word in context.
- Discuss other similar words students know.

## Learning About Text Features

### Headings

Explain that headings organize a book into sections and identify topics discussed.

Help students notice that the headings in the table of contents are the same as the headings that appear in the book. Have students tell what they think the headings mean and how they show chronology.

## Developing Fluency

Have students practice with a partner to read the Gettysburg Address on page 93 the way they think Lincoln may have read it. They may want to tape-record their reading.

## Learning in the Content Areas

**Talk About Lincoln's Time** Use maps and a list of statehood dates to discuss U.S. expansion. Note differences such as frontier, territory, and state; note that lifestyles centered on a regional economy—the North's growth of industry and the South's agriculture, leading to the Confederacy's wish to secede.

**Develop Specialized Vocabulary** Have students describe how America changed during Lincoln's time. Encourage use of the words *confederation*, *economy*, *expansion*, *frontier*, *secede*, and *territory*. Ask:

*Why was Lincoln's time one of change?*

### Extending Meaning Through Writing

- Have students write a paragraph describing how Lincoln showed he was against slavery during a time when much of the country was for it. They should include explanations of the Kansas-Nebraska Act, the Dred Scott decision, and the Emancipation Proclamation. (**Expository**)

## Connecting to Other Books

*Back to the Day Lincoln Was Shot!* by Beatrice Gormley

*Mr. President: A Book of U.S. Presidents* by George Sullivan

# In Their Own Words: Christopher Columbus



by Peter and Connie Roop  
text type: **Biography**  
word count: **250+**  
content area: **Social Studies**  
topic: **famous explorers**

**Level 5**

## Summary & Standard

This nonfiction book tells about the challenges faced by Christopher Columbus as he tries to make his dream of finding a passage to the Indies a reality. Students will learn the difference between primary and secondary sources.

## Making Connections: Text to World

Students will have prior knowledge about Christopher Columbus. Discuss what students know about this well-known explorer.

Extend the real-world connection by talking about travel in the 1400s. Explain that a main mode of transportation for long journeys was ships, which depended on the wind and weather. Point out that Columbus's voyages were long and perilous. Compare and contrast travel by ship with travel today.

For additional teaching ideas and resources, see [www.ibiblio.org/expo/1492.exhibit/c-Columbus/columbus.html](http://www.ibiblio.org/expo/1492.exhibit/c-Columbus/columbus.html).

## Vocabulary

**Content Words:** Atlantic, Indies, primary source, secondary source, uncharted, wallowed

**Essential Words:** exploration, fleet, misfortune, navigation, passage, voyage

**Related Words for Discussion:** confident, courageous, determined, fearless, persistent

**Nonfiction Text Features:** bibliography, captions, maps, time line

## Supportive Book Features

**Text** The text is organized in chronological order with a description of each of Columbus's four voyages. Chapter heads, dates, and a chronology chart, or time line, at the back of the book provide support.

**Vocabulary** There are places mentioned in the story that may be unfamiliar to students, such as *Genoa*, *Mediterranean Sea*, *Portugal*, and so on. Use maps in the book or other resources to point out these places.

Praise students for specific use of "Behaviors to Notice and Support" on page 86 of the *Guided Reading Teacher's Guide*.

## Challenging Book Features

**Text** Point out that the words from the primary sources are embedded in the text inside quotation marks and are not always easy to spot. Explain that the words inside brackets indicate to whom or what the writer of the source refers, and were not actually their words.

**Content** Students should be familiar with the idea that biographies are usually written in chronological order. This structure should help them keep track of each voyage.

## ELL Bridge

Display a world map or globe and point out the United States. Ask a volunteer to find the general location of your state. Model how to trace a path from your location to another country, such as Japan, using the words *north*, *south*, *east*, and *west*. Name and point out different countries and have volunteers trace a path to show how they would get there. Encourage students to use directional words as they describe the route.

## Developing Comprehension

### Understanding Cause/Effect

Help students understand the cause/effect relationships in the book by examining the ramifications of the characters' actions. Remind students that an effect is what happens; a cause is what makes it happen.

- Queen Isabella said no to Columbus several times before she agreed to support his enterprise. What made her change her mind?
- Have students describe what it was like when Columbus went ashore for the first time. How did his behavior affect the way the natives responded to him?

For more prompts and ideas for teaching problem-solving strategies, see page 20 of the *Guided Reading Teacher's Guide*.

## Developing Phonics and Word-Solving Strategies

### Reading Suffixes -er, -or

Remind students that the suffixes -er and -or can change a verb into a noun that means "someone who does something." Write *navigate* and *navigator* on the board. Explain that a navigator (noun) is "someone who navigates (verb)."

- Ask students to turn to page 14 and find the word *explorer*. Have them find *explore* in *explorer*. Ask them what each word means.
- As students read, invite them to find other words in the story in which the suffix -er changes a verb to a noun. Examples include *weaver* (p. 20) and *governor* (p. 96).

## Learning About Text Features

### Maps

Explain that maps are sometimes included in non-fiction books to show readers the location of a place or to trace a route. Have students look at the map on pages 64 and 65 and use their finger to trace Columbus's first voyage. Point out the twists and turns around the islands of the Bahamas. Have students find in the text why the ships followed that path.

## Developing Fluency

Have students reread a favorite portion of Columbus's diary aloud to a partner. Suggest that they reread the passage several times.

## Learning in the Content Areas

**Talk About Explorers** Talk about the personality traits of people who explore. Remind students that Christopher Columbus faced different dangers than he would today. Discuss how the absence of technology impacted Columbus's travels.

## Develop Specialized Vocabulary

Ask students to describe the personal characteristics that affected Christopher Columbus's actions. Encourage students to use words such as *confident*, *courageous*, *determined*, *fearless*, and *persistent*. Ask:

*How did Christopher Columbus's personality traits help him in his voyages?*

### Extending Meaning Through Writing

- Have students draw and fill in a chart to describe each of Columbus's four voyages. Here is an example to help them get started:

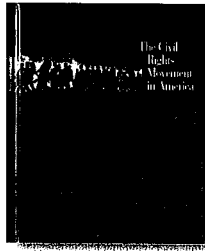
Voyage	Dates departed/returned	Where they went	What happened	King & Queen's reaction
First	8/3/1492–3/15/1493	Canary Islands Caribbean	got supplies; traded with Taino; took slaves	excited about discoveries; eager for him to continue

## Connecting to Other Books

*Great Explorations* by David Neufeld

*Lewis and Clark: In Their Own Words* by George Sullivan

# The Civil Rights Movement in America



by Elaine Landau  
text type: Informational  
word count: 250+  
content area: Social Studies  
topic: civil rights movement

**Level 5**

## Summary & Standard

This nonfiction book tells how the civil rights movement in the 1950s and 1960s led to legislation that advanced the rights of African Americans in the United States. Students will understand the need for social change.

## Making Connections: Text to Self

Students may have real-life experience with celebrating Martin Luther King, Jr., Day with others in their communities. Ask: *What do you know about Martin Luther King, Jr.?*

To extend the real-life experience, explain that men and women have worked to bring about change in this country since its beginning. Ask: *Can you name others who worked for change in the United States?*

For additional teaching ideas and resources, see [www.civilrightsteaching.org/About/about.htm](http://www.civilrightsteaching.org/About/about.htm).

## Vocabulary

**Content Words:** defiance, integrate, nonviolent, resistance, unconstitutional

**Essential Words:** boycott, discrimination

**Related Words for Discussion:** affirmative, disabilities, opportunity, perseverance

**Nonfiction Text Features:** glossary, headings, photographs, sidebars, time line

## Supportive Book Features

**Text** The text is printed in clear type, and the large print heads prepare students for the text in each section. The sidebars are well-spaced, readable, and interesting. A glossary provides further support.

**Vocabulary** Words included in the glossary are boldfaced in the text.

Praise students for specific use of "Behaviors to Notice and Support" on page 86 of the *Guided Reading Teacher's Guide*.

## Challenging Book Features

**Text** You may wish to preview the book with students, noting that violent content is covered in the pictures and text. Remind students that this turbulent time in history resulted in changes that benefited African Americans.

**Vocabulary** There are many proper nouns in the book that may be unfamiliar to students. You can support students' understanding by talking about the names as you preview the book. Suggest, also, that students create lists of the organizations and their acronyms to help them as they read.

## ELL Bridge

Introduce language that students will use as they discuss cause-and-effect relationships, such as the words *because*, *so*, and *therefore*. Have them practice by using sentences based on everyday life, such as "My mother took me shopping (effect) because I needed a new pair of shoes (cause)." You may want to arrange the sentences in a chart, with causes in the left column and effects in the right column. When the chart is complete, invite students to read the sentences aloud chorally.

## TEACHING OPTIONS

### Developing Comprehension

#### Understanding Cause/Effect

Remind students that an effect is what happens; a cause is what makes it happen.

- Have students tell why they think African Americans became less willing to accept segregation. Ask what they think was the major turning point.
- Martin Luther King, Jr., encouraged nonviolent resistance. Have students find examples in the text where black people followed King's teaching.
- Ask: *What was the effect of African Americans protesting against segregation and discrimination?*

For more prompts and ideas for teaching problem-solving strategies, see page 20 of the *Guided Reading Teacher's Guide*.

### Developing Phonics and Word-Solving Strategies

#### Reading Multisyllabic Words

Remind students that words with more than one syllable are called multisyllabic. Guide students to look for familiar base words and word parts, such as prefixes, suffixes, and other endings.

- Have students turn to page 27 and find the word *hospitalized*.
- Have students find the base word, *hospital*, and the word parts, *-ize* and *-d*.
- Invite students to find other multisyllabic words in the book and identify the base word and word parts.

### Learning About Text Features

#### Sidebars

Explain that information placed next to the main text, but separate from it, is a sidebar. The spacing and different-colored type set it apart and make it easy to read. Sidebars add relevant information for the reader.

### Developing Fluency

Reread parts of the book aloud to model correct pronunciation of specialized words. As students reread several pages softly to themselves, circulate and give assistance as needed.

### Learning in the Content Areas

**Talk About Social Change** Lead a discussion about social change in American history. Explain that one change often leads to another. The movement to abolish slavery led to the women's rights movement that resulted in woman's suffrage in 1920. Discuss the changes that indirectly resulted from the civil rights movement, such as equal opportunity in employment and housing, affirmative action, and the *Americans With Disabilities Act*.

**Develop Specialized Vocabulary** Ask students to describe the need for social change. Encourage students to use words such as *affirmative*, *disabilities*, *opportunity*, and *perseverance*. Ask:

*What characteristics do those who lead social change need?*

#### Extending Meaning Through Writing

- Have students write a paragraph summarizing what they learned from reading this book. They may include information about the civil rights movement, "nonviolent resistance," and what we can do now to make sure all people are treated fairly and equally. **(Expository)**

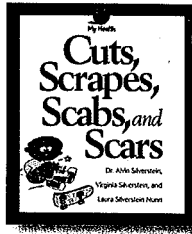
### Connecting to Other Books

*Freedom Train: The Story of Harriet Tubman* by Dorothy Sterling

*Story of Harriet Tubman: Conductor of the Underground Railroad* by Kate McMullan



# Cuts, Scrapes, Scabs, and Scars



by Dr. Alvin Silverstein, Virginia Silverstein, and Laura Silverstein Nunn  
text type: Informational  
word count: 250+  
content area: Life Science  
topic: health

**Level 5**

## Summary & Standard

This nonfiction book explains what happens when the skin is cut or scraped and how the body is able to heal itself. Students will learn healthy ways to care for and protect their skin inside and out.

### Making Connections: Text to World

Students will likely have the personal experience of a cut or scrape on a hand, elbow, arm, or leg. Talk with students about how quickly the skin of a healthy person can heal from an average cut.

Explain that the skin is considered an organ—the largest organ of the body. Discuss how the skin is a protective covering and barrier between the inside of the body and the outside world.

For additional teaching ideas and resources, see [www.kidshealth.org/kid](http://www.kidshealth.org/kid).

### Vocabulary

**Content Words:** bacteria, capillaries, cells, clot, collagen, dermis, disease, epidermis, infection, invaders, keratin, platelets, protein, tissues, vessels

**Essential Words:** affected, complicated, damaged, healing, injury, wound

**Related Words for Discussion:** antibacterial, antibiotic, antiseptic, bruises, exposure, inflammation, protective gear, reaction, sterilized

**Nonfiction Text Features:** about the author, diagrams, glossary, headings, index, list, resources for learning more, sidebars, table of contents

### Supportive Book Features

**Text** The main text is large and easy to read. The frequent sidebars support information in the text. The illustrations and photos provide additional support.

**Content** Scientific content is presented in simplified language that is accessible and appropriate for readers. Example situations should be familiar to most students.

Praise students for specific use of "Behaviors to Notice and Support" on page 86 of the *Guided Reading Teacher's Guide*.

### Challenging Book Features

**Text** The fonts used for boldface words, sidebar heads, and activities may be hard to read. Hyphenated words that break at the end of lines may also be difficult to read. Students may need to reread sentences that are confusing.

**Vocabulary** Pages where several scientific terms are introduced may be confusing. Suggest that students use context and the glossary to define words. Photos and illustrations also support the terms.

## ELL Bridge

Encourage students to use the diagram on page 11 to help them understand the layers of the skin. Name a part and have students repeat the word and point to it on the diagram. Suggest they refer to the diagram as they read further about what happens to injured skin. Students may also want to use some of the descriptions in the book to draw their own pictures, such as *The skin acts like a waterproof overcoat; The cells on the skin's surface overlap like the shingles on a roof.*

## Developing Comprehension

### Summarizing

Review that a summary is a short statement of the main ideas in an article or passage. Point out that summarizing helps readers remember and understand what they read. Model writing a summary by discussing the important ideas in "The Battle with Bacteria" (page 28). Ask: *What are bacteria? Why are they dangerous? What is the body's reaction to bacteria? How is infection treated?* Work with students to write a short summary. Then have students summarize "Treating a Cut."

For more prompts and ideas for teaching problem-solving strategies, see page 20 of the *Guided Reading Teacher's Guide*.

## Developing Phonics and Word-Solving Strategies

### Adjectives

Review that adjectives describe or modify nouns or pronouns. They give more information about a noun such as telling what kind, which one, and how many. Point out that sometimes a noun is modified by more than one adjective.

- Provide an example such as *sharp, prickly spines* on page 6. Have students identify the noun and the two adjectives.
- Invite students to find additional adjectives in the book and tell what nouns they modify.

## Learning About Text Features

### Sidebars

Explain that sidebars in a nonfiction text contain additional information related to the main text. A sidebar is usually separated from the main text by a box or other design element. Have students identify the sidebar on page 23 and tell how the information in it expands on the main text on the page.

## Developing Fluency

- Model reading pages 20 and 21 while students listen to your phrasing, tone, and expression.
- Have students read the same text quietly, then aloud until they have mastered expression and phrasing.

## Learning in the Content Areas

**Talk About Skin Safety** Discuss the different kinds of protective gear available for various sports. Then talk about additional dangers to the skin, such as sunburn and exposure to poison ivy.

**Develop Specialized Vocabulary** Discuss methods to prevent and treat reactions to sun, poisonous plants, and insect bites. Suggest that students list skin problems and ways to treat them. Encourage students to use words such as *antiseptic, exposure, inflammation, and reaction*. Ask:

*How would you prepare for a safe picnic and hike in the woods?*

### Extending Meaning Through Writing

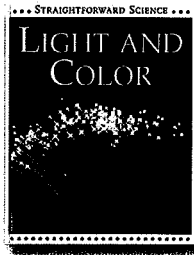
- Have students write a paragraph describing the steps the body takes to heal when we get a cut or scrape. Ask them to include the steps that explain how a scab is formed and what happens underneath the scab to completely heal the skin. **(Expository)**

## Connecting to Other Books

*The First Woman Doctor* by Rachel Baker

*Gentle Annie: The True Story of a Civil War Nurse* by Mary Frances Shura

# Light and Color



by Peter Riley  
text type: Informational  
word count: 250+  
content area: Physical Science  
topic: light and color

**Level 5**

## Summary & Standard

Natural and artificial light illuminates our world and creates color. Students will learn about light as a form of energy, where light comes from, how light creates color, and how the eye works.

### Making Connections: Text to World

Students will likely have some knowledge of how light works and experience with using color. Invite students to share what they know.

To extend the connection, discuss with students the colors found in nature. Ask: *Why is the sky blue? Why are leaves green?* Explain that how light is reflected or absorbed by plants, animals, and rocks determines what colors we see.

For additional teaching ideas and resources, see [www.thetech.org/exhibits/online/color/](http://www.thetech.org/exhibits/online/color/).

### Vocabulary

**Content Words:** absorbed, artificial, atmosphere, camouflage, luminous, natural, opaque, particles, reflection, refraction, translucent, transparent

**Essential Words:** angle, bend, concave, converge, convex, diverge, investigate, scatter

**Related Words for Discussion:** field of view, filter, lens, primary, range, rays, shadow, spectrum

**Nonfiction Text Features:** captions, chapter headings, diagrams, glossary, index, photographs, subheadings, table of contents

### Supportive Book Features

**Text** The text type is large and easy to read. Subheadings introduce small sections of information. Large photos provide strong visual support, and sidebars help readers understand scientific concepts.

**Vocabulary** Most of the scientific terms are defined in the text and supported by photographs and diagrams. A glossary appears on pages 30–31.

Praise students for specific use of "Behaviors to Notice and Support" on page 86 of the *Guided Reading Teacher's Guide*.

### Challenging Book Features

**Text** Students may be distracted by the variety of ways the information is presented on the page. Help students keep track of the main text by identifying the headings and subheadings and explaining the difference between the two. Suggest students read the main text before concentrating on photographs and captions.

**Content** The scientific content may be difficult to follow. Recommend that students reread confusing sections and closely study photographs and diagrams to help them visualize processes.

## ELL Bridge

Students will best understand the concepts described in the book by doing the *Investigate!* experiments. Supply materials and assign partners to each experiment. Suggest partners try to answer the questions *what, where, why, and how* for each activity. For example, model questions for the activity on page 11: *What is a shadow? Where do you put the light for a long shadow? Why does a shadow change when the flashlight is moved? How can you make a short shadow? Encourage partners to share the results of the experiments aloud with the class.*

## Developing Comprehension

### Understanding Cause/Effect

Review with students that identifying cause-and-effect relationships means figuring out what happened (the effect) and why it happened (the cause).

- Write the words "cause" and "effect" on the board in two columns.
- Have students use the book to answer cause/effect questions: *What causes a sunbeam? What are the effects of light hitting a concave mirror? What causes a rainbow? What is the effect of mixing red and green light?* Write their responses in the correct column on the board.
- Invite students to find other cause/effect relationships in the book and add them to the board.

For more prompts and ideas for teaching problem-solving strategies, see page 20 of the *Guided Reading Teacher's Guide*.

## Developing Phonics and Word-Solving Strategies

### Recognizing Antonyms

Remind students that antonyms are words with opposite meanings, such as *solid* and *liquid*, *light* and *dark*.

- Have students look for an antonym for *luminous* on page 4. (*nonluminous*) Ask what makes the antonym opposite in meaning. (the prefix *non-*)
- Invite students to find antonyms for other words: *natural* (page 5), *opaque* (page 9), *concave* (page 14), *converge* (page 14). (*artificial*, *transparent*, *convex*, and *diverge*)

## Text Features

### Diagrams

Explain that diagrams are labeled illustrations that show how something works or how something is made. Have students refer to the diagrams on pages 8 and 9. Discuss how these diagrams help you understand what happens to light as it hits different surfaces. Ask students how these diagrams help the reader understand the text on pages 20 and 21.

## Developing Fluency

Have students select a spread in the book to read with a partner. Have students take turns reading sections identified by a subheading aloud.

## Learning in the Content Areas

**Talk About Color** Discuss with students that the spectrum has a range of seven visible colors to humans. Point out that it also includes colors humans can't see, such as ultraviolet. However, we know that ultraviolet rays are real because the sun's rays can cause our skin to burn.

**Develop Specialized Vocabulary** Have students share how colors change in shadow, bright light, and with filters such as sunglasses. Encourage them to use words such as *filter*, *lens*, *spectrum*, and *rays*. Ask:

*What would our world be like if we could only see the colors black and white?*

### Extending Meaning Through Writing

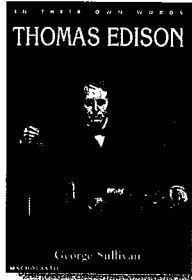
- Have students write a paragraph to explain what happens when light hits an object, and then describe how our eyes are able to see that object. Ask them to include explanations of light hitting transparent, translucent, and opaque objects. (**Expository**)

## Connecting to Other Books

*The Story of Thomas Alva Edison, Inventor: The Wizard of Menlo Park* by Margaret Davidson

*Experiments with Electricity* by Salvatore Tocci

# In Their Own Words: Thomas Edison



by George Sullivan  
text type: Biography  
word count: 250+  
content area: Social Studies  
topic: famous Americans

**Level 5**

## Summary & Standard

This biography uses quotes, writings, drawings, and newspaper headlines of the day to tell the story of Thomas Edison's life and inventions. Students will learn to view historic events through the eyes of those who were there.

## Making Connections: Text to Text

Students will have some experience reading biographies. Ask students to tell about biographies they have read and what they learned about the life of the main characters.

Extend the connection by talking about ways authors of biographies use primary sources such as journals, quotes, personal recollections, speeches, interviews, notes, and records and how these resources bring the story to life.

For additional teaching ideas and resources, see [www.nps.gov/edis](http://www.nps.gov/edis).

## Vocabulary

**Content Words:** achievements, chemical, generate, genius, phonograph

**Essential Words:** filament, inventions, laboratory, patent, telegraph

**Related Words for Discussion:** ambitious, competitive, curious, intelligent, meticulous, organized, persistent

**Nonfiction Text Features:** captions, chapters, drawings, headings, introduction, photographs, table of contents

## Supportive Book Features

**Text** Sentences are short and easy to follow. Chapters organize events in Edison's life into manageable chunks. The photos, illustrations, and captions strongly support the text. Some of Edison's writing is set off in indented, italicized paragraphs that are easy to spot.

**Vocabulary** When important words are introduced in the text, their meaning is often explained in context. For example, on page 8, the reader learns what the word *patent* means. On page 32, the book explains the Morse code.

Praise students for specific use of "Behaviors to Notice and Support" on page 86 of the *Guided Reading Teacher's Guide*.

## Challenging Book Features

**Text** Point out that because some of the information takes the form of primary sources, students should understand that most sentences in quotation marks indicate a historical record and not dialogue.

**Content** Students may need help keeping track of Edison's inventions. Refer them to the chronology chart at the back of the book. Some students may benefit from making their own time line of important inventions.

## ELL Bridge

Page through the book and elicit from students simple sentences that describe some of the photographs or drawings. Write each suggested sentence on an index card. Read each card aloud. Have students repeat the sentence. Then mix up the cards and distribute them to partners. Call on partners to read their card and match it with a picture in the book. Have them compare each sentence with its corresponding caption.

## TEACHING OPTIONS

### Developing Comprehension

#### Summarizing

Tell students that summarizing is a good way to remember the most important points when we read. A summary is a short statement that tells about the main idea and most important details in your own words.

- Chapter 2 describes Edison's childhood. What important events shaped his future? Give a short summary of his early years.
- In Chapter 6 the author tells about Edison's Invention Factory. Find the paragraph at the end of the chapter that summarizes this information.
- Choose a topic from the book that you find interesting—such as the invention of the light bulb—and give an oral summary that states the most important points about it.

For more prompts and ideas for teaching problem-solving strategies, see page 20 of the *Guided Reading Teacher's Guide*.

### Developing Phonics and Word-Solving Strategies

#### Adverbs

Remind students that an adverb tells *how*, *where*, or *when* about an action verb. An *-ly* at the end of a word signals that the word may be an adverb. The word ending in *-ly* means "in the manner of" or "in a certain way."

- Point out the word *intently* on page 33. Explain that *-ly* signals that *intently* in this context is an adverb and means "in an intent way." Have students find other adverbs that end with *-ly* as they read and use what they know about the ending's meaning to figure out what each *-ly* word means.

### Learning Text Features

#### Captions

Explain that captions give information about a photograph or illustration. They may repeat or summarize information in the main text. Review the information about the electric vote recorder on page 43. Then read the caption on page 45 and discuss how the information is summarized.

### Developing Fluency

Model reading quotations from Edison's notebooks, such as those on page 68, the way you think Edison would say the lines. Then have partners practice reading the lines to each other.

### Learning in the Content Areas

**Talk About Inventions** Lead a discussion about what life would be like without Edison's inventions. Ask students to name other inventions that have changed our lives. Talk about how one invention may lead to another.

**Develop Specialized Vocabulary** Ask students to name the characteristics that helped Thomas Edison in his quest for new inventions. Encourage students to use such words as *ambitious*, *competitive*, *curious*, *intelligent*, *meticulous*, *organized*, and *persistent*. Ask:

*What are some obstacles inventors might have to overcome?*

#### Extending Meaning Through Writing

- Have students write a paragraph explaining how a lot of Edison's work involved making improvements on other inventions. Ask students to include some examples from the book, describing how he made certain inventions even better. **(Expository)**

### Connecting to Other Books

*Eureka! It's an Airplane* by Jeanne Bendick

*The Wright Brothers at Kitty Hawk* by Donald J. Sobol

# Valley Forge



by Richard Ammon  
text type: Informational  
word count: 250+  
content area: Social Studies  
topic: American Revolution

**Level 5**

**Summary & Standard**  
This nonfiction book tells about the Revolutionary War from September 1777 to June 1778, focusing on events at Valley Forge. Students will learn about people and events that helped shape American history.

## Making Connections: Text to World

Students will have at least some prior knowledge of George Washington and the winter the Continental Army spent camped at Valley Forge. Invite them to share what they know.

To extend the real-world experience, explain that the British army was well-trained and experienced. They also hired Hessians (German mercenaries) to help them fight the colonists. Point out that the odds were strongly in favor of the British.

For additional teaching ideas and resources, see [www.ushistory.org/valleyforge/](http://www.ushistory.org/valleyforge/).

## Vocabulary

**Content Words:** bayonets, campaign, foraging, inoculated, outmaneuvered, patriots

**Essential Words:** independence, provisions, rebellion, strategy

**Related Words for Discussion:** deserters, discipline, militia, patriotic, professional, recruits

**Nonfiction Text Features:** bibliography, close-up illustrations, headings, insets, introduction, predictable format, reference page, time line

## Supportive Book Features

**Text** The book is organized into chapters consisting of one page of text and one beautiful illustration. Students can use chapter titles to identify dates relevant to Valley Forge. The time line at the beginning of the book helps readers understand the chronology. Inset boxes contribute interesting additional information.

**Content** The friendly, clear writing style will draw students into text that otherwise might be difficult to read and comprehend.

Praise students for specific use of "Behaviors to Notice and Support" on page 86 of the *Guided Reading Teacher's Guide*.

## Challenging Book Features

**Text** Help students identify primary source information. Point out that brackets added to the text may indicate the modern spelling of a word or a missing word. Prepare students for realistic and graphic content at times.

**Vocabulary** There is no glossary to help define words that may be unfamiliar to students, such as *militia*, *foraging*, and *outmaneuvered*. Guide students to look for context clues that help define these words.

## ELL Bridge

Guide students to understand the historical background of the book. Write the following words and names on the board and talk about their meanings: *Revolutionary War*, *Parliament*, *patriots*, *rebellion*, *militia*, *redcoats*, *Thomas Paine*, *Patrick Henry*, *Alexander Hamilton*, *General Lafayette*, *Continental Army*, and *British and Hessian soldiers*. If possible, provide visuals to help students make connections between words and concepts. Encourage students to use the words in sentences.

## Developing Comprehension

### Making Predictions

Explain that you are always using what you already know as well as what you read to make predictions about what will happen next in a text. Making predictions, whether correct or incorrect, helps you better understand what you read. Sometimes it is necessary to adjust a prediction.

- Turn to page 12. Ask: *What can you predict from this chapter title and illustration? What did you already know that helped your prediction? What did you predict the huts would be like?*
- Turn to page 20. Ask: *How did information you've read so far help you predict what the Continental soldiers' clothing would be like?*
- Ask: *When did you predict that the winter in Valley Forge was going to be very difficult for the soldiers?*

For more prompts and ideas for teaching problem-solving strategies, see page 20 of the *Guided Reading Teacher's Guide*.

## Developing Phonics and Word-Solving Strategies

### Understanding Compound Words

Remind students that a compound word is a word made up of two or more smaller words.

- Turn to page 16. Point out the compound word *shoemakers*. Identify the two smaller words; then discuss the meaning of *shoe* and *makers* and how those meanings help you know the meaning of *shoemakers*. Ask volunteers to use the word in a sentence.
- Encourage students to find other compound words in the book, such as *ironwork*, *campfires*, and *girlfriends*.

## Learning About Text Features

### Time Line

Explain to students that a time line is a graphic organizer that shows the order in which events happen. Turn to page 4. Explain to students that this time line is a vertical list instead of a horizontal bar with labeled events. This time line includes additional events that happened both before and after the events discussed in the book.

Have students use the time line to notice the sequence of events.

## Developing Fluency

With three volunteers, model reading aloud the chapter "December 1777" on page 10. Read the narration and have each volunteer read one man's quotes. Read with expression, conveying the reality and despair these men felt. Have students read the same text silently and then gather in groups of four to perform in front of the whole group.

## Learning in the Content Areas

**Talk About Military Leaders** Lead a discussion about the impact of a military leader on his or her troops in time of war. Point out that not all commanders have the necessary qualities to make a good leader.

**Develop Specialized Vocabulary** Have students tell, in their own words, the type of military leader George Washington was. Encourage them to use words such as *discipline*, *militia*, *recruits*, *professional*, and *deserters*. Ask:

*Would George Washington be a good military leader today? Why or why not?*

### Extending Meaning Through Writing

- Have students write a paragraph explaining why the Continental Army spent the winter of 1777–78 at Valley Forge and the conditions there. (**Expository**)

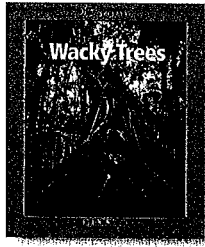
## Connecting to Other Books

*George Washington: The Man Who Would Not Be King* by Stephen Krensky

*The American Revolution* by Stewart Ross



# Wacky Trees



by D. M. Souza  
text type: Informational  
word count: 250+  
content area: Life Science  
topic: trees

**Level 5**

## Summary & Standard

This nonfiction book tells about the parts of trees and their functions, including photosynthesis, and describes the adaptations of unusual trees. Students will learn about the functions and needs of trees in general and the life cycles and habitats of certain species of trees.

## Making Connections: Text to Self

Invite students to share their experiences with trees—climbing trees, planting trees, walking or resting in the shade of trees, or raking leaves. Ask what is the most interesting or unusual tree they have ever seen. Tell students to keep that tree in mind and compare it with the trees they read about in this text.

For general information on trees and activities, see [www.units.muohio.edu/dragonfly/trees.htmlx](http://www.units.muohio.edu/dragonfly/trees.htmlx).

## Vocabulary

**Content Words:** crown, epiphyte, fibrous root, phloem, photosynthesis, root hairs, species, taproot, xylem

**Essential Words:** adapted, inner, outer, products, support, system

**Related Words for Discussion:** bark, branch, environment, grow, leaf, root, sturdy, trunk

**Nonfiction Text Features:** about the author, additional reading, chart, cross-section diagram, glossary, index, note on sources, sidebars

## Supportive Book Features

**Text** Large, widely spaced text will help students focus. Most pages have colorful photographs or sidebars, creating a visually interesting and attractive text.

**Vocabulary** Important content terms are in boldface type and defined in context. In addition, a glossary at the back of the book gives detailed definitions.

Praise students for specific use of “Behaviors to Notice and Support” on page 86 of the *Guided Reading Teacher’s Guide*.

## Challenging Book Features

**Text** Sidebars give interesting additional information but may be distracting on the page. Tell students to finish reading a subsection or page before they read the sidebar on the page.

**Vocabulary** Scientific terminology, including Latin scientific names, may cause students trouble. Tell them to use the dictionary to learn how to pronounce terms such as *xylem*.

Explain that they can sound out the scientific names, but being able to pronounce them is not necessary.

## ELL Bridge

Discuss content-related words with multiple meanings: *bark, branch, crown, leaves, trunk*. Have students use a dictionary to write the content meaning of each word on one side of an index card and another, common meaning on the other side. Use each word in a sentence and have students show which meaning you used. Then have students create a sentence with each meaning for each word.

## Developing Comprehension

### Noting Details

Remind students that good readers note important details as they read. Details will help them visualize and understand what they are reading.

- Read aloud the section "Underground Operations" on pages 9–11. Work with students to note on the board the most important details about tree roots.
- Tell students to note the important details about each type of tree that make it special or different from other trees.

For more prompts and ideas for teaching problem-solving strategies, see page 20 of the *Guided Reading Teacher's Guide*.

## Developing Phonics and Word-Solving Strategy

### Reading Prefixes

Remind students that the prefix *un-* means "not." When placed at the beginning of a word, it creates a new word with the meaning "not \_\_\_\_."

- Have students read the following sentence on page 33: "As soon as unripe figs appear on its branches. . . ." Ask what the root word of *unripe* is and what the word *unripe* means.
- Tell students to look for other words with the prefix *un-* as they read and to note the root words to help them figure out their meanings (*unusual*, page 8; *unstable*, *unable*, page 36; *unmarked*, *undisturbed*, page 54).

## Learning About Text Features

### Sidebars

Explain that a sidebar is a box outside the main text that gives additional information or interesting "fun facts." Have students find and read aloud several sidebars. After students finish the book, ask them which sidebar they found most informative or interesting and why.

## Developing Fluency

Model how to pronounce multisyllabic scientific terminology for students, such as *pneumatophores* and *propagules*. Say a word and have students repeat it. Then read the word in context and have students echo read the sentence.

## Learning in the Content Areas

**Talk About Trees** Discuss what all trees have in common and what makes the trees discussed in this book special or "wacky."

**Develop Specialized Vocabulary** Have students discuss the parts that every tree has and their functions. Encourage students to use words such as *bark*, *branch*, *environment*, *grow*, *leaf*, *root*, *sturdy*, and *trunk*. Ask:

*What makes a tree "wacky" or unique?*

### Extending Meaning Through Writing

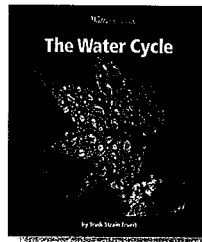
- Have students create a chart to compare different trees from each of the chapters. Columns should include the name of the tree, oddities, and uses. **(Graphic Aid)**
- Then have the students write a paragraph describing which tree is the most interesting. **(Expository)**

## Connecting to Other Books

*Life in the Rain Forests: Animals • People • Plants* by Lucy Baker

*The Great Kapok Tree* by Lynne Cherry

# The Water Cycle



by Trudi Strain Trueit  
text type: Informational  
word count: 250+  
content area: Earth Science  
topic: water cycle

**Level 5**

## Summary & Standard

This book traces the journey that water takes from the ground to the atmosphere and back. Students will learn about the resources that humans use, such as rock, soil, water, and gases.

## Making Connections: Text to World

Students come into contact with the water cycle every day. Invite students to share their observations of the precipitation and bodies of water in their area.

To extend the real-world connection, ask students to list how water is used in their community. Point out that using too much water and polluting water are ways this important resource is misused. Discuss how some of the water topics in the book affect their community.

For additional teaching ideas and resources, see [www.epa.gov/water/kids.html](http://www.epa.gov/water/kids.html).

## Vocabulary

**Content Words:** condense, currents, cycle, fresh-water, molecule, pollution, precipitation, runoff

**Essential Words:** quenches, surface, vast

**Related Words for Discussion:** conserve, conservation, supply, toxic

**Nonfiction Text Features:** about the author, boldface print, captions, glossary, index

## Supportive Book Features

**Text** Many photographs with captions help to reinforce or serve as examples for concepts presented in the text.

**Content** Ideas are presented simply with everyday examples that students can understand. The illustrations, captions, and chapter subheads serve as a preview for the information presented in each section.

Praise students for specific use of "Behaviors to Notice and Support" on page 86 of the *Guided Reading Teacher's Guide*.

## Challenging Book Features

**Text** Boxed features interrupt the text, and text often continues onto the next page. Model for students when to pause at paragraph and section breaks in order to read the information in the boxed features.

**Vocabulary** Some of the vocabulary may be unfamiliar to students. Help students use context clues, pictures, and the glossary to understand difficult words in the text.

## ELL Bridge

Have students practice identifying causes and effects using sentence prompts based on everyday experiences with the water cycle. Point out signal words such as *because*, *so*, and *therefore*. On the left side of the board, write *Because it was raining....* Invite students to tell what might happen as a result and write their ideas on the right side. Draw an arrow from the cause to each effect. Repeat with the prompt: *The water was cold, so I....*

## TEACHING OPTIONS

### Developing Comprehension

#### Understanding Cause/Effect

Help students understand the cause and effect relationships in the book by examining the effects of water on the land. Remind students that an effect is what happens; a cause is what makes it happen.

Have students examine the pictures on pages 26 and 28. Ask them to describe the effects shown in each picture. Then ask students to describe what caused each effect to happen.

Have students look at page 36. Invite students to describe possible causes for this pollution.

For more prompts and ideas for teaching problem-solving strategies, see page 20 of the *Guided Reading Teacher's Guide*.

### Developing Phonics and Word-Solving Strategies

#### Using Context Clues

Remind students that whenever they encounter a difficult word, they can often use the words around it to figure out the meaning.

- Ask students to locate *impact* on page 17. Write the word on the board.
- Ask a volunteer to read aloud the last paragraph on page 17. Have another volunteer use the words surrounding *impact* to define the word.
- Have students do the same with *disastrous* on page 20 and *offset* on page 44.

### Text Features

#### Boldface Print

Explain that important vocabulary is often set in boldface print and appears again in a glossary at the back of the book. Have students find *evaporate* on page 14, and then find the same word in the glossary (page 51). Have students take turns locating and reading other boldface words and sharing the definition from the glossary with the group.

### Developing Fluency

Model fluent reading using the first complete paragraph on page 14. Stress appropriate pauses—at the end of sentences, before commas, and so on. Emphasize the boldface word. Ask students to repeat each sentence.

### Learning in the Content Areas

**Talk About Water Conservation** Explain that water conservation means using less water. Ask volunteers to list on the board the many ways they use water in one day. Then direct students to the list of conservation ideas on page 48. Ask students to discuss which of these things they already do.

**Develop Specialized Vocabulary** Invite students to share ideas for a water clean-up day that their class could sponsor. Encourage them to use words such as *conserve*, *supply*, *toxic*, and *conservation*. Ask:

*What are other ways you can conserve or protect your water supply?*

### Extending Meaning Through Writing

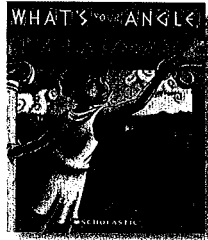
- Have students write a paragraph explaining where the water that runs through our faucets comes from. They should include descriptions of surface water, the water table, aquifers, reservoirs, and treatment plants. (**Expository**)

### Connecting to Other Books

*Experiments with Water* by Salvatore Tocci

*Clouds* by Trudi Strain Trueit

# What's Your Angle, Pythagoras?



by Julie Ellis

text type: Historical Fiction

word count: 250+

content area: Math

topic: Pythagorean theorem

**Level 5**

## Summary & Standard

This historical fiction book details the significance of the Pythagorean theory through the eyes of a young, fictional Pythagoras. Students will analyze two- and three-dimensional geometric shapes, including transformations and spatial reasoning.

## Making Connections: Text to World

Have students find examples of right angles in the classroom. Ask students why it was important to get the angles right in construction of the classroom and classroom furniture.

Help students see how  $a^2 + b^2 = c^2$  can be used to find the height of buildings or other distances. Use nonstandard measurements (e.g., linking cubes) to demonstrate the equation to less fluent math students.

For additional teaching ideas and resources, see [www.pbs.org/wgbh/nova/proof/puzzle/use.html](http://www.pbs.org/wgbh/nova/proof/puzzle/use.html).

## Vocabulary

**Content Words:** distance, lengths, pattern, right triangle, square, squaring

**Essential Words:** columns, temple

**Related Words for Discussion:** angle, degrees, square, types of triangles: acute, equilateral, isosceles, obtuse, right

**Nonfiction Text Features:** historical note

## Supportive Features

**Text** Clear text and familiar vocabulary will help students read pages that contain new concepts and many lines of text.

**Vocabulary** The information in the illustrations helps students understand new terms that name unfamiliar math concepts.

Praise students for specific use of "Behaviors to Notice and Support" on page 86 of the *Guided Reading Teacher's Guide*.

## Challenging Features

**Text** Throughout the story Pythagoras uses tiles to help him solve the problem. Students may not immediately understand the significance of the tiles. Point out that the drawing helps the reader see the sum of the squares on the sides.

**Content** The author has significantly manipulated history. The lighthouse at Alexandria was built a few hundred years after Pythagoras's death; and the actual Pythagorean theorem is attributed to the group Pythagoras founded, not directly to Pythagoras. Remind students that this is historical fiction and that the plot has been manipulated to better explain the relationship of the length of sides in a right triangle.

## ELL Bridge

Use math tiles to help students recreate the mathematical proof shown on pages 18 and 22. Or, find reproducibles online that walk students through the proof using paper, scissors, and glue. Have students discuss what they discover as they work.

## Developing Comprehension

### Recognizing Reality/Fantasy

Remind students that in historical fiction, the events seem like they could have happened, even if they didn't. Review with students the Historical Note, and add that drawings showing the relationship of the sides of a right triangle to each other predate Pythagoras by hundreds of years. However, the proof developed by Pythagoras, or one of his many followers, is clear and easy to understand, making it the best known of the many proofs for this pattern. Point out that there really was a lighthouse at Alexandria, although not during Pythagoras's time. Add that young boys in Greece were encouraged to study, and that a merchant's son would realistically have accompanied his father on many trips.

For more prompts and ideas for teaching problem-solving strategies, see page 20 of the *Guided Reading Teacher's Guide*.

## Developing Phonics and Word-Solving Strategies

### Denotation/Connotation

Explain that the denotation of a word is its literal meaning. The connotation of a word is the secondary meaning, including feelings or judgments.

- Have students reread page 13. Explain that Nef's explanation of the right triangle is pretty close to the connotative meaning of *right*. *Right* means "straight or true," and has long referred specifically to two lines that intersect at a 90° angle. Have students look up the definition in their math glossary to compare Nef's definition to the denotative meaning.

## Learning About Text Features

### Historical Note

The historical note contains important information for understanding the context of the story. You may wish to have students read it before reading the book. Have students discuss why the author chose to present Pythagoras as a child when the actual events of his childhood are not known.

## Developing Fluency

Assign each role in the story to a student or group of students. Assign the non-dialogue text to two or three narrators. Have students read the story as a Readers Theater, focusing on natural expression and pacing.

## Learning in the Content Areas

**Talk About Triangles** Point out the triangles on pages 14 and 15. Have students discuss what is different about the types of triangles shown. If students have studied triangle types, encourage them to use specific terms, such as *isosceles triangle* or *acute triangle*.

**Develop Specialized Vocabulary** Have students draw a right triangle using a ruler or straight edge and then tell what attributes they attempted to include in their drawing. Remind students that one angle should look like the corner of a square. If students have experience with protractors, have them measure this angle to check that it is 90°. Ask:

*How is a right triangle different from other types of triangles?*

## Extending Meaning Through Writing

- Have students describe how Pythagoras used the right angle to solve measurement problems. Ask them to explain one way the Pythagorean theorem can be used to solve a measurement problem. (**Expository**)

## Connecting to Other Books

*Sideways Arithmetic from Wayside School* by Louis Sachar

*Benjamin Franklin* by Deborah Kent