

Focus Question:

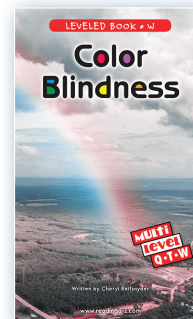
What causes color blindness, and how can it affect a person's life?

Book Summary

Text Type: Nonfiction/Informational

Color blindness is the world's most common genetic disorder, affecting more than 10 million people in the United States alone. *Color Blindness* provides students with a comprehensive explanation of the causes and effects of this condition. The book can also be used to teach students how to determine an author's purpose and to use hyphenated compound adjectives.

The book and lesson are also available for levels Q and T.



Lesson Essentials

Instructional Focus

- ☐ Summarize to understand text
- ☐ Determine author's purpose
- ☐ Describe information provided by graphics
- ☐ Recognize and use hyphenated compound adjectives
- ☐ Identify and use compound words

Materials

- ☐ Book: *Color Blindness* (copy for each student)
- ☐ Author's purpose, hyphenated compound adjectives, compound words
- ☐ Discussion cards
- ☐ Book quiz
- ☐ Retelling rubric

Vocabulary

Boldface vocabulary words also appear in a pre-made lesson for this title on VocabularyA-Z.com.

• Words to Know

Story critical: *cone cells* (n.), *genetic disorder* (n.), *photopigments* (n.), *retina* (n.), *rod cells* (n.), *wavelengths* (n.)

Enrichment: *ancestry* (n.), *complementary* (adj.), *defects* (n.), *hereditary* (adj.), *molecules* (n.), *prism* (n.)

- **Academic vocabulary:** *cause* (v.), *common* (adj.), *different* (adj.), *image* (n.), *type* (n.), *vision* (n.)

Guiding the Reading

Before Reading

Build Background

Organize students into small groups and provide each group with a piece of chart paper. Read the first paragraph on page 4 aloud to students. Invite students to work in their groups to discuss what it might be like to have color blindness and how it might affect their daily experiences. Have students record their findings on the chart paper. Invite one volunteer from each group to share their discussions with the class.

Introduce the Book

- Give students their copy of *Color Blindness*. Guide them to the front and back covers and read the title. Have students discuss what they see on the covers. Encourage them to offer ideas as to what type of book it is (genre, text type, and so on) and what it might be about.
- Show students the title page. Discuss the information on the page (title of book, author's name).
- Preview the table of contents on page 3. Remind students that the table of contents provides an overview of the book. Ask students what they expect to read about in the book, on the basis of what they see in the table of contents. (Accept all answers that students can justify.)

Introduce the Reading Strategy: Summarize

Explain to students that engaged readers summarize, or create a brief overview, as they read. Ask students to preview the book, looking at photos, captions, and other text features. Explain to students that when readers summarize what they read, it helps them remember information in the section of the book. Point out that a summary often answers the questions *who*, *what*, *when*, *where*, and *why*. Create a chart on the board with the headings *Who*, *What*, *When*, *Where*, and *Why*. Read page 7 aloud to students and model how to summarize the information. Write the summary on the board and discuss how to use the information from the chart to organize the summary.

Guiding the Reading (cont.)

Introduce the Comprehension Skill:

Author's purpose

- Remind students that authors have a purpose, or reason, for what they write. Write the words *inform*, *entertain*, and *persuade* on the board. Review with students that to *inform* means to provide information, to *entertain* means to amuse, and to *persuade* means to convince another to act or feel a certain way.
- Have students work with a partner to discuss a book the class has previously read, and have pairs determine the author's purpose for writing it. Call on students to share their book and the author's purpose. Have other students give a thumbs-up signal if they agree. Have students make a prediction about the author's purpose for writing *Color Blindness* and share it with a partner.

Vocabulary

Have students turn to the "Words to Know" box on the copyright page. Discuss each word with students. Then, have students turn to the glossary on page 16. Explain that the glossary provides definitions for the vocabulary words in the book. Point out the use of each content word and academic vocabulary word in the book, and then use each word in a different model sentence. Have students work in groups to create posters for these words. Have them include on each poster the word and its part of speech, the definition, the word in an example sentence, and a picture illustrating the meaning of the word.

Set the Purpose

- Have students read to find out more about color blindness. Write the Focus Question on the board. Invite students to look for evidence in the book to support their answer to the question.
- Have students make a small question mark in their book beside any word they do not understand or cannot pronounce. These can be addressed in a future discussion.

During Reading

Text-Dependent Questions

As students read the book, monitor their understanding with the following questions. Encourage students to support their answers by citing evidence from the book.

- What is color blindness?* (level 1) page 4
- How does the use of a prism help explain wavelengths of light?* (level 1) page 5
- How are cone cells responsible for color vision?* (level 1) page 7
- How are red-green color blindness and blue-yellow color blindness the same? How are they different?* (level 2) pages 8 and 9

- In what ways is complete color blindness similar to other types of color blindness? How is it different?* (level 2) multiple pages
- In what ways can color blindness cause serious problems?* (level 1) page 11
- Why is the author hopeful that a cure for color blindness will be found?* (level 3) multiple pages

Text Features: Graphics

Have students turn to page 5. Point out that the diagram is provided by the author to expand upon and clarify the text. Ask a volunteer to explain what information the author is conveying through this graphic. Explain that this diagram includes drawings and captions, all of which help clarify the text. Point out that such features are often present in nonfiction books. Have students work with a partner to view the diagram on page 6. Have students discuss the following questions with their partner: *How does this diagram help you better understand the text? What information is included in the diagram that is not included in the text?* Have students share their discussions with the class.

Skill Review

- Review how to summarize with students. Have students reread page 13 with a partner. Provide each group with a blank sheet of paper. Ask students to answer the questions *who*, *what*, *where*, *when*, and *why* on the basis of the information found in this section. Then have students use this information to create a written summary of the section with their partner. Pair up groups and have them read the summaries aloud. Then, invite volunteers to share their summaries with the class.
- Have students work with a partner to periodically review the details they have read and discuss their effect on the reader. Have student pairs discuss their opinion on the author's purpose.
- Model evaluating details to determine the author's purpose.
Think-aloud: *The book is providing me with many details about color blindness: the causes, the effects on people's lives, the research on color blindness, and so on. All of these facts give me new information on the topic, so this leads me to believe the author's purpose is to inform. As I read, I will continue to consider the details in the text because often times an author has more than one purpose.*
- Model how to complete the author's purpose worksheet. Have students choose details from the book and record them on the worksheet. Then, have students discuss the details with a partner and determine the author's purpose for the book. Have students explain their reasoning to their partner.
- Model how to complete the **author's-purpose worksheet**.

Guiding the Reading (cont.)

After Reading

Ask students what words, if any, they marked in their book. Use this opportunity to model how they can read these words using decoding strategies and context clues.

Skill Review

Graphic Organizer: **Author's purpose**

Review the author's purpose worksheet that students completed. Have students share their work in groups. Invite volunteers to share with the rest of the class.

Comprehension Extension

Discussion cards covering comprehension skills and strategies not explicitly taught with the book are provided to be used for extension activities.

Response to Focus Question

Have students cite specific evidence from the book to answer the Focus Question. (Answers will vary but should include the following information: *Color blindness is when a person lacks the ability to distinguish between two or more colors. It can affect a person's life in many ways, including having difficulty in school, not being able to match clothes or pick out ripe fruit, limitation of career choices, and the inability to see certain safety lights.*)

Comprehension Checks

- **Book quiz**
- **Retelling rubric**

Book Extension Activities

Build Skills

Grammar and Mechanics: **Hyphenated compound adjectives**

- Review or explain that *adjectives* are words that describe nouns and pronouns. Remind students that an adjective tells which one, how many, or what kind.
- Write the following sentence on the board and read it aloud: *The monkeys had been color-blind since birth.* Circle the word *color-blind* and point out that it is a special kind of adjective called a *hyphenated compound adjective*. Point out that hyphenated compound adjectives contain multiple words connected with one or more hyphens. Invite a volunteer to the board to circle the noun that the word *color-blind* describes.
- Have students read page 9 with a partner to identify and underline all of the hyphenated compound adjectives. Invite them to circle the noun that each adjective describes. Review students' findings as a class.

- **Check for understanding:** Have students reread the section titled "Red-Green Color Blindness" to identify and underline all of the hyphenated compound adjectives. Invite students to circle the noun that each adjective describes. Review students' responses as a class.
- **Independent practice:** Introduce, explain, and have students complete the **hyphenated-compound-adjectives worksheet**. If time allows, discuss their answers.

Word Work: **Compound words**

- Write the word *wavelengths* on the board and read it aloud with students. Ask students which two words were joined together to make the word *wavelengths*. Ask a volunteer to explain how these two words help define the word *wavelengths*. Explain that two words joined together to create one word is called a *compound word*.
- Read page 5 aloud as students follow along. Have students identify each compound word. Then, invite them to turn to a partner to identify the two words that make up each compound word.
- **Check for understanding:** Have students work independently to reread the section titled "Tools to Help Color-Blind People" and circle each of the compound words. Review students' findings as a class. Invite volunteers to identify the two words that make up each compound word.
- **Independent practice:** Introduce, explain, and have students complete the **compound words worksheet**. If time allows, discuss their answers.

Connections

- See the back of the book for cross-curricular extension ideas.