

Focus Question:

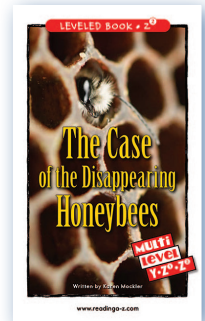
What are some factors contributing to the disappearance of honeybees?

Book Summary

Text Type: Nonfiction/Informational

We depend on honeybees to pollinate the plants that produce our food. Beekeepers, farmers, and scientists want to know why honeybees started vanishing in the last decade. *The Case of the Disappearing Honeybees* explores the mystery of colony collapse disorder (CCD), a worldwide problem that results in millions of honeybees disappearing without a trace every year. The book can also be used to teach students how to compare and contrast information and the proper use of commas in a series.

The books and lesson are available for levels Y and Z1.



Lesson Essentials

Instructional Focus

- ☐ Connect to prior knowledge to understand nonfiction text
- ☐ Identify details to compare and contrast information
- ☐ Recognize and use commas in a series
- ☐ Identify root words
- ☐ Identify captions to better understand the text

Materials

- ☐ Book: *The Case of the Disappearing Honeybees* (copy for each student)
- ☐ Connect to prior knowledge, compare and contrast, commas in a series, root words worksheets
- ☐ 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: *apiaries* (n.), *compromised* (adj.), *demise* (n.), *disorder* (n.), *pollinate* (n.), *sanctuaries* (n.)

Enrichment: *bustling* (adj.), *contagion* (n.), *fertilization* (n.), *forage* (v.), *gruesome* (adj.), *migratory* (adj.), *onset* (n.), *parasites* (n.), *pesticides* (n.), *pathogen* (n.), *susceptible* (adj.), *systemic* (adj.)

- **Academic vocabulary:** *cause* (v.), *complex* (adj.), *contribute* (v.), *determine* (v.), *difficult* (adj.), *evidence* (n.)

Guiding the Reading

Before Reading

Build Background

- Place on the board a photograph of a healthy beehive and a photograph of an unhealthy beehive. Ask students to work with a partner to compare and contrast the two pictures. Then, have partners brainstorm to find causes for the unhealthy hive. Have students share their ideas with the class.
- Discuss with students the importance of honeybees and pollination. Have students draw on a separate piece of paper a picture of a world without honeybees.

Introduce the Book

- Give students their copy of *The Case of the Disappearing Honeybees*. 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:

Connect to prior knowledge

- Explain to students that readers usually have some prior knowledge of the topic they are reading about. Explain that readers make connections to what they know while reading. This helps them better understand and remember the information in the book. Have students use the map on page 9 to make a connection to their prior knowledge. Ask students to discuss these connections in a group. Invite volunteers to share their thoughts with the rest of the class, and discuss how their connections may help them better understand and remember the book.

Guiding the Reading (cont.)

- **Independent practice:** Introduce, explain, and have students complete the [connect-to-prior-knowledge worksheet](#). Have students read the sentences and check the box labeled *Agree* or *Disagree* to complete the columns on the left. Explain that they may use single words or short phrases to answer the *How I Know* column, drawing from prior knowledge.

Introduce the Comprehension Skill:

Compare and contrast

- Explain to students that one way to organize information in a book is to explain how topics are alike and different, which is called *comparing* and *contrasting*.
- Create a Venn diagram on the board and write the words *Drone* and *Worker Bees* above the diagram. Label the left side *drone* and the right side *worker*. Invite students to explain how drones and worker bees are alike and different (alike: live in a hive; different: drones are males and stay in the hive, workers are female and leave the hive to find food). Model how to write each response on the Venn diagram.

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 pages 19 and 20. 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 the disappearance of honeybees. Write the Focus Question on the board. Invite students to look for evidence in the book to support their answer.
- 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 would happen if plants were never pollinated again?* (level 3) page 4

- *How would you describe honeybee colonies?* (level 1) page 5
- *How would you describe the disappearance of honeybees around the world?* (level 2) pages 6–7
- *What is the sequence of events of the CCD investigation?* (level 3) pages 8–9
- *How is monoculture farming related to CCD?* (level 3) pages 10–13
- *How would you test the benefits of diverse plant life on honeybees?* (level 3) page 17
- *What is your theory for CCD?* (level 3) multiple pages

Text Features: Captions

Explain that captions clarify pictures by describing the details of the pictures. Captions may provide the reader with names, dates, and locations. Have students work with a group to review the picture on page 7 and its caption. Ask students: *How does the caption help the reader understand the purpose of the picture in the book? How do captions clarify visual information? Why are captions an important tool for describing pictures?* Have students review other pictures in the book and discuss in groups what the captions describe. Invite volunteers to share their thoughts with the rest of the class.

Skill Review

- Ask students to complete the middle column of the connect-to-prior-knowledge worksheet and write evidence for the examples that have been discussed in the book. Model for students how you make connections to prior knowledge. Invite volunteers to share their evidence with the class.
- Have students work in groups to periodically compare and contrast information in the book and discuss these comparisons.
- Model comparing and contrasting.
Think-aloud: I read on page 10 that small farms with different crops used to exist everywhere, but now monoculture farming is taking over in the United States and other countries. I read on page 10 that pests love monoculture farms, therefore, farmers need to use more pesticides on them than on traditional farms.
- Model how to complete the [compare-and-contrast worksheet](#). Have students identify details from the book and circle them. Then, have students compare and contrast the details with a partner.

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.

Guiding the Reading (cont.)

Skill Review

Graphic Organizer: Compare and Contrast

Review the compare-and-contrast worksheet that students completed. Have students share their work in groups. Invite volunteers to share with the rest of the class the comparisons they made. Discuss with students the justification for these comparisons.

Comprehension Extension

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

Response to Focus Question

Have students cite specific evidence from the book to answer the Focus Question. (Answers will vary. Reasons should include human involvement. Samples: *Some factors contributing to the disappearance of honeybees are systemic pesticides from monoculture farming, the rise of mobile hives, and a lack of diverse plant life in some regions.*)

Comprehension Checks

- Book quiz
- Retelling rubric

Book Extension Activities

Build Skills

Grammar and Mechanics: Commas in a series

- Explain to students that whenever a list contains three or more items, a comma must be placed between the items. Listed items can be nouns, verbs, adjectives, or entire phrases or clauses. Remind students that this is only one of the many uses for a comma.
- Have students turn to page 7 and read the following sentence aloud: *Reports of other losses began to surface across the United States, Europe, Argentina, China, and other countries.* Explain that when the sentence is read aloud, the commas create pauses between the words or phrases. Point out the list of countries, the commas used to separate each item, and the use of the word *and* before the last phrase.
- Have students return to page 7 and locate the following sentence: *Food, baby bees, and a few queens were all that remained.* Point out the phrases separated by commas. Talk about the location of the commas within the list. Point out that the last phrase (*a few queens*) is joined to the list by the word *and* following the comma.

- **Check for understanding:** Have students turn to page 12. Ask them to find a list of bees' abilities that are affected by systemic pesticides (*ability to learn, remember, and navigate*). Ask them to circle the commas and notice that the last item is added to the list after the word *and*. Point out that other commas are used on the page, but not to separate a list of words.
- **Independent practice:** Introduce, explain, and have students complete the [commas-in-a-series worksheet](#). If time allows, discuss their answers.

Word Work: Root words

- Write the word *healthy* on the board. Ask students what the word would be if the -y ending were removed, and write *health* next to *healthy*. Explain that *health* is a noun. When the -y suffix is added to the word *health*, an adjective is created. Discuss that root words may have a prefix, a suffix, or both added to them.
- Review or explain that a suffix is a letter or group of letters added at the end of a word to form another word, often altering or changing its meaning. Some examples of suffixes are -ed, -y, -s, -es, and -ing.
- Review or explain that a prefix is a letter or group of letters attached to the beginning of a word to modify its meaning. Some examples of prefixes are *dis-*, *mis-*, and *un-*.
- Have students turn to page 4 in the text and locate the word *disappearance*. Ask what this word means (*not visible or in existence*). Have students explain how the meaning of the sentence would be changed if the prefix *dis-* or the suffix *-ance* were not part of the root word.
- **Check for understanding:** Give students a half-sheet of paper and write the following words on the board: *continue*, *concern*, and *understood*. Have students identify the meaning of each root word. Then have them add the following suffixes or prefixes to create new words: *dis-*, *-ed*, and *mis-* (*discontinue*, *concerned*, *misunderstood*). Have students identify how the meaning of each word has changed.
- **Independent practice:** Introduce, explain, and have students complete the [root words worksheet](#). If time allows, discuss their answers.

Connections

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