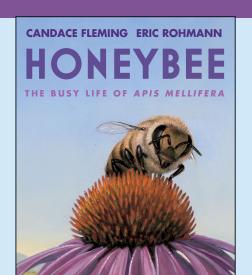
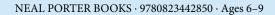
HOLIDAY HOUSE | LESSON PLAN





HONEYBEE

THE BUSY LIFE OF APIS MELLIFERA BY CANDACE FLEMING, ILLUSTRATED BY ERIC ROHMANN

★ ★ SEVEN STARRED REVIEWS! ★ ★

***** "Like its subject, a wonder to behold."

-Kirkus Reviews, Starred Review

"Fleming and Rohmann, the team behind 'Giant Squid,' offer a fascinating up-close view of the stages of a honeybee's life. . . . The drama and suspense are positively riveting."

-New York Times

ABOUT THE BOOK

Get up close and personal with Apis, one honeybee, as she embarks on her journey through life. Discover the life cycle of the hardworking honeybee in this poetically written, thoroughly researched picture book, complete with exquisitely detailed illustrations, a stunning gatefold, and an essay on the plight of honeybees.

Learning objectives: Identify the main idea and details; the life cycle of a honeybee; cause-and-effect relationships; summarize new information.

Next Generation Science Standards:

5–PS3: Energy, 5–LS1: From Molecules to Organisms: Structures and Processes, 5–LS2: Ecosystems: Interactions, Energy, and Dynamics, 5-ESS3: Earth and Human Activity,3-5: ETS1: Engineering Design

Guided Reading Level: S Grade Level Equivalent: 4 Interest Level: 3–5

Create Student Worksheets:*

- **KWL**
- Vocabulary Log
- Main Idea and Details: Honeybees
- Cause-and-Effect Relationships:
- Writing Using Imagery

BEFORE READING

Essential Questions

- 1. What is cooperation?
- 2. How does cooperation help people?
- 3. What is the role that "cooperative effort" plays in the lifestyle of honeybees?
- 4. What is instinct?
- 5. What are the instinctive behaviors of honeybees?
- 6. How are honeybees beneficial insects?
- 7. *Discuss and fill out the "K" and "W" in the KWL worksheet.



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DURING READING

Story Elements

As you read the book, think about:

- Who is the story about? What kind of bee does the book discuss?
- What happens in the story?
- Where does the story take place?
- When does the honeybee begin its journey?
- Why is the honeybee important?
- How do the paintings enhance the meaning and tone of the story?
- Why do you think Candace Fleming wrote this book?
- *Fill out the Vocabulary Log.

Figurative language: literal from non-literal meanings

What is Candace Fleming referring to when she writes the following phrases?

- "Soft, fuzzy and female—like all newly emerged worker bees."
- "Pearly white. Half the size of a grain of rice. Each will grow into a bee."
- "She folds and unfolds, folds and unfolds, folds and unfolds her mouth."
- "They do not smell like members of her colony."
- "Her antennae taste the breeze."
- "The sugary fluid does not go into her belly."
- "Her work is done."
- "And back in the nest, a brand-new honeybee squirms, pushes, chews through the wax cap of her solitary cell."

AFTER READING

Go back to the book and find information on each:

- *Fill out the Main Idea & Details worksheet.
- 2. Summarize each section:
 - New bee
- Food handling
- Cleaning
- Guarding
- Nursing
- Flying
- Queen tending
- Dancing
- Comb building
- Finally
- *Fill out the Cause-and-Effect worksheet.
- Write about the seven parts of a honeybee. Describe the function of each.

Think about the following questions with the class and discuss in small groups. Take notes and share.

- What important roles do honeybees play in our lives?
- How does diversity play a role?
- How can we help?
- *What did you learn? Fill out the "L" on your KWL chart.

Compare and contrast the following members of the honeybee colony. Create a PowerPoint presentation.

Worker

Drone

Queen

Art

Plan, design, and produce a diagram or model showing the life cycle of a honeybee. Use different materials. Be creative!



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Investigate the problems and brainstorm solutions.

Bees, Humans, and the Environment:

Pesticides

There are different kinds of pesticides, but many are toxic to bees, either killing them directly or harming young bees when brought back to the hive.

Diseases

There are a few different diseases bees can contract, such as bacterial, fungal, and viral diseases and dysentery.

Pests, Parasites, and Predators

Pests include bee lice, wax moths, ants, and mice.

Parasites include *Varroa* mites and tracheal mites.

Predators include small hive beetles, giant European wasps, skunks, and bears.

Colony Collapse Disorder

Colony collapse disorder is a mass disappearance of worker bees in the hive, resulting in the collapse of the hive due to not having enough workers to support honey and comb production or care of the brood.

Writing Using the Senses

- 1. *Author Candace Fleming uses descriptive language requiring the reader to use their senses. Do the same with the Writing Using Imagery worksheet to describe your room.
- 2. Write a second paragraph describing the honeybee's cell/nest in the story.

Inside the honeybee nest is a densely packed group of hexagon-shaped cells made of beeswax, called a **honeycomb**. The **bees** use the **cells** to store food and to house the brood—eggs, larvae, and pupae.



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