

About the Book

Text Type: Nonfiction/Informational Page Count: 16 Word Count: 437

Book Summary

Did you know that some plants can move to scare away an enemy, while others disguise themselves in their natural environment for protection? Plants might look helpless at first, but they have powerful defenses for survival. *Plant Defenses* is a wonderful introduction to the fascinating defense mechanisms of plants. Detailed and varied photographs support this informative text.

About the Lesson

Targeted Reading Strategy

- Summarize

Objectives

- Summarize
- Identify main idea and details
- Identify initial and final consonant *st*-blends
- Recognize and use pronouns
- Identify and use antonyms

Materials

Green text indicates resources are available on the website.

- Book—*Plant Defenses* (copy for each student)
- Chalkboard or dry-erase board
- Sheets of paper
- Dictionary
- Summarize, pronouns, antonyms worksheets
- Discussion cards



Indicates an opportunity for students to mark in the book. (All activities may be demonstrated by projecting the book on an interactive whiteboard or completed with paper and pencil if the books are reused.)

Vocabulary

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

- Content words:

Story critical: **defend** (v.), **fluid** (n.), **poison** (n.), **prickles** (n.), **spines** (n.), **thorns** (n.)

Before Reading

Build Background

- Ask students to name different ways an animal might protect itself if it did not feel safe. Point out to students that some animals might bare their teeth and growl while other animals might freeze or simply run away. Explain to students that there are many ways animals protect, or *defend*, themselves.
- Write the word *defend* on the board. Explain to students that the word *defend* means to resist an attack or to protect. Ask students why an animal might need to defend itself.

- Explain to students that just as animals need to defend themselves against predators and dangers, plants must do the same. Ask students to share ideas about how plants might protect themselves against insects, animals, and people. Record these ideas on the board. Point out to students that they will be reading a book about the many ways plants defend themselves.

Book Walk

Introduce the Book

- Give students their copy of the book. 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 and 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 Comprehension Skill: **Main Idea and Details**

- Have students preview the rest of the book, looking at pictures, captions, and other text features. Show students the glossary and explain the purpose of it.
- Explain to students that a book has a general topic that is the subject of the book, or the *main idea*. The extra information, or the descriptions, that help the reader to better understand the book are the *details*. Point out to students that the main idea and the details are needed in order to fully understand and enjoy the text.
- Write the following list of words on the board: *baseballs, bat, uniform, cleats, mitt*. Ask students to describe what these words refer to (items needed to play baseball). Point out that the definitions of these words help to identify the main idea (there are several items a person needs in order to play in baseball game). The words *baseballs, bat, uniform, cleats, and mitt* are all details that support this main idea.
- Direct students back to the table of contents and discuss with students how it is arranged. Explain that sometimes the amount of information about a topic is so large that it is grouped into sections, and each section has its own main idea. Remind students that it is often useful to pay attention to the section titles for clues about the main idea. This is why engaged readers pay attention to and closely read all section titles.
- Model identifying the main idea and supporting details from the introduction. Read the introduction aloud to students.
Think-aloud: *Each section in this book contains details that support a main idea about plant defenses. The first section is titled "Introduction." In this section I learned that animals defend themselves with sharp claws, teeth, or horns and that plants cannot defend themselves in this way. The main idea of this section is: plants and animals have many ways to protect themselves. Details that support this main idea include the following: some animals have sharp claws, teeth, or horns; some animals change color, hide, or run away; and plants cannot bite, fight, or run away, so they must protect themselves in other ways. As I read each section of this book, I will remember to pause and identify the main idea and supporting details.*
- As students read, encourage them to use other reading strategies in addition to the targeted strategy presented in this section.

Introduce the Reading Strategy: **Summarize**

- Explain to students that one way to understand and remember information in a book is to write a summary, or a brief overview, of the most important information in the text. Point out that a summary includes the main idea and one or two supporting details. It often answers the questions *who, what, where, why, and how*.

- Model summarizing the main idea and details from the first section.
Think-aloud: *To summarize, I decide which information is most important to the meaning of a section. To do this, I can identify the main idea and important details and then organize that information into a few sentences. When I consider the main idea and supporting details, a summary of this section might be: Both plants and animals must defend themselves. Because plants cannot bite, fight, or run away, they have other ways of protecting themselves.*
- Introduce and explain the **summarize worksheet**. Draw a similar chart on the board. Say: *I can use this chart to help me keep track of the main idea and details of each section of the book, and I can use this information to create a summary. I will use the section headings as a strong clue to the main idea for each section.*

Introduce the Vocabulary

- While previewing the book, reinforce the vocabulary words students will encounter. For example, while looking at page 4, you might say: *As I read the first sentence on this page, I notice the word defend is used. As I read this sentence, I notice a clue in the sentence that helps me to remember the meaning of the word defend.* Invite students to discuss and locate the word in the first sentence on page 4 helps to define *defend* (*safe*). Point out that the word *safe* is a clue to the meaning of the word *defend*.
- Guide students to the glossary. Have students locate the definition of the word *defend* and confirm the definition.
- Write the following story-critical words on the board: *poison, thorns, spines, fluid*.
- Point out that these words can be found in the story and that they give information about plant defenses. Divide students into pairs, and give each group four sheets of blank paper. Have students write one word at the top of each sheet of paper. For each word, have them write or draw what they know about the word. Create a definition for each word using students' prior knowledge.
- Model how students can use a dictionary to find a word's meaning. Have them locate the word *poison* in the dictionary. Invite a volunteer to read the definition for *poison*. Have students compare the dictionary definition with the glossary definition. Have them compare these with their prior knowledge of the word.
- Have students follow along on page 11 as you read the sentence in which the word *poison* is found to confirm the meaning of the word. Repeat the exercise with the remaining vocabulary words.

Set the Purpose

- Have students read to find out more about plant defenses. Remind them to think about the main idea and supporting details for each section as they read.

During Reading

Student Reading

- **Guide the reading:** Have students read pages 5 through 8. Encourage those who finish early to go back and reread.
- Model identifying the main idea and supporting details.
Think-aloud: *While reading, I make sure to stop after each section to review in my mind the important details. First, I remind myself of the main idea of this book: plants have many different kinds of defenses. The first thing I noticed on page 5 was the section title "Thorns, Prickles, and Spines." This gives me a clue about the main idea of this section. As I read, I notice that the author gives important details about the differences between thorns, prickles, and spines. The paragraph mentions that thorns usually grow on trees or large shrubs, and prickles are on small shrubs and flowering plants. Thorns can scratch or cut an animal that tries to eat the plant. Spines are a special kind of leaf that are found on plants in hot climates. On the basis of this information, I think that the main idea of this section is plants use thorns, prickles, and spines to protect themselves. A detail that supports the main idea is an animal can be cut or scratched when trying to eat a plant with thorns, prickles, or spines.*

Lesson Plan *(continued)*

Plant Defenses

- Record the main idea and details of this section on the board using a similar chart as the summarize worksheet.
- Review how to create a summary on the basis of the main idea and supporting details. Discuss and create a summary for the section “Thorns, Prickles, and Spines” as a class. Record this summary in the chart on the board. (Plants use thorns, prickles, and spines to protect themselves. Thorns are found on trees and large shrubs while prickles are on smaller shrubs and flowering plants. Spines are a special kind of leaf that are found on cacti and keep the plant from being eaten.)
- Check for understanding:** Have students read pages 9 and 10 with a partner. Ask students to identify the main idea and supporting details in the section “Stinging Plants.” Then, have each student create a summary of the section on the basis of the main idea and details. Have each group share their findings with the class, including their summaries.
- Have students read pages 7 through 10.
- Independent Practice:** Have students independently read the section titled “Poison Plants” on page 11. Ask them to identify the main idea and supporting details from the section. Have students complete the summarize worksheet. Have students share their responses with the class.
- Check worksheets for individual understanding. Encourage additions or deletions to accurately record the most important details.
- Have students read the remainder of the book. Remind them to read the section headings and to consider the main idea and supporting details in each section.



Have students make a question mark in their book beside any word they do not understand or cannot pronounce. Encourage them to use the strategies they have learned to read each word and figure out its meaning.

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.

Reflect on the Comprehension Skill

- Discussion:** Talk about how stopping to review the important details helped students remember facts and better understand the information.
- Independent practice:** Have students reread the section “Other Defenses” on pages 13 and 14. Ask them to identify the main idea and at least two supporting details. Have them work in pairs to check their work.
- Enduring understanding:** In this book, you learned about ways plants defend themselves. How are plant defenses similar to animal defenses? How are they different?

Reflect on the Reading Strategy


- Review with students how the main idea and details of each section can be used to develop a summary. Discuss with them the benefits of summarizing information they read (to understand the main point of a larger piece of writing). Model instances in which summarizing might be helpful.
- Think-aloud:** *I know that summarizing keeps me actively involved in what I’m reading and helps me remember what I’ve read so far. I know that I will remember more about plant defenses because I summarized as I read the book.*
- Independent practice:** Have students work with a partner to create a summary for the section titled “Other Defenses” on pages 13 and 14. Remind students to include at least two supporting details in their summaries. Have students create a brief summary of the book. Invite them to share their summaries with the class.

Build Skills

Phonics: Initial and final consonant *st*-blends


- Write the word *stick* on the board and say it aloud with students.

- Have students say the /st/ sound aloud. Then, run your finger under the letters in the word as students say the whole word aloud. Ask students to identify which letters represent the /st/ sound in the word *stick*.
- Write the word *rest* on the board and say it aloud with students.
- Have students say the /st/ sound aloud. Then, run your finger under the letters in the word as students say the whole word aloud. Ask students to identify which letters represent the /st/ sound in the word *rest*.
- **Check for understanding:** Write the following words with the initial consonant *st*-blend on the board, leaving off the initial consonant blend: *start*, *stump*, *stack*, *still*. Say each word, one at a time, and have volunteers come to the board and add the initial consonant *st*-blend to each word. Write the following words with the final consonant *st*-blend on the board, leaving off the final consonant blend: *mist*, *crust*, *must*, and *trust*. Say each word, one at a time, and have volunteers come to the board and add the final consonant *st*-blend to each word.

 **Independent practice:** Have students reread the book with a partner and circle all the initial and final consonant *st*-blends.

Grammar and Mechanics: **Pronouns**


- Write the following words on the board: *they*, *themselves*. Explain to students that *pronouns* refer to and replace nouns. Pronouns are used in talking or writing so the name of a person, place, or thing does not have to be repeated too many times.
- Have students turn to page 4. Invite a volunteer read the first sentence of the last paragraph aloud: *Plants can't bite, fight, or run away*. Ask another volunteer to read the next sentence aloud: *However, they have many other ways to protect themselves*. Record these sentences on the board and underline the words *they* and *themselves*. Invite a student to come to the board and underline the word that the pronouns *they* and *themselves* are referring to (*plants*). Point out to students that the word *they* is a pronoun for the word *plants*, and the word *themselves* is used to emphasize the pronoun *they*.

 **Check for understanding:** Have students turn to page 7. Ask a volunteer to read the page aloud. Invite students to circle the pronouns *themselves* and *they*. Then, have students underline the nouns that the pronouns replace (*plants*).

- **Independent practice:** Introduce and explain the [pronouns worksheet](#). If time allows, discuss their answers aloud after they are finished.

Word Work: **Antonyms**

- Review or explain that a word that means the opposite of another word is called an *antonym*. Have students reread the first sentence on page 4 and ask them to identify the word *safe*. Ask volunteers to suggest words that mean the opposite of *safe*. Invite students to locate a word on page 4 that means the opposite of *safe* (*danger*). Have students turn to a partner and use the word *danger* in a complete sentence. Write the words *safe* and *danger* on the board.
- Write the following words on the board: *fast*, *careful*, *happy*, *bored*. Invite volunteers to come to the board and record an antonym for each word. Then, have students turn to a partner and use each antonym in a complete sentence.

 **Check for understanding:** Have students read page 8. Ask them to circle the following words: *soft*, *often*, *small*, *large*. In the margins of the page, have students record at least one antonym for each word. Then, have students work with a partner to use each antonym in a complete sentence.

- **Independent practice:** Introduce, explain, and have students complete the [antonyms worksheet](#). If time allows, discuss their answers aloud after they are finished.

Build Fluency

Independent Reading

- Allow students to read their book independently. Additionally, partners can take turns reading parts of the book to each other.

Home Connection

- Give students their book to take home to read with parents, caregivers, siblings, or friends. Have them demonstrate how a reader summarizes the text with someone at home.

Extend the Reading

Social Studies Connection

Discuss and review with students the various plants discussed in the text. Provide students with a map of the United States. Have students use the map to locate where in the United States some of the plants listed in the text may be found. Discuss with students the varying climates within the United States and how this affects plant and animal life. Assign each student the name of a state. Provide Internet and text research sources and invite students to investigate the plant life in their assigned state. Have students find three examples of plants from the state and be sure students can identify each plant's defense mechanism. Invite students to share their findings with the class.

Science Connection

Explain to students that just as plants have fascinating ways to protect themselves, animals do as well. Invite students to share examples of how an animal might protect itself. Provide Internet and text resources and invite students to identify one animal with a particularly interesting way of defending itself. Have students gather information and organize it into a presentation for the class.

Skill Review

Discussion cards covering comprehension skills and strategies not explicitly taught with the book are provided as an extension activity. The following is a list of some ways these cards can be used with students:

- Use as discussion starters for literature circles.
- Have students choose one or more cards and write a response, either as an essay or as a journal entry.
- Distribute before reading the book and have students use one of the questions as a purpose for reading.
- Cut apart and use the cards as game cards with a board game.
- Conduct a class discussion as a review before the book quiz.

Assessment

Monitor students to determine if they can:

- consistently use the strategy of summarizing to understand text during discussion and on a worksheet;
- accurately identify details that support a main idea during discussion and in the text;
- identify and write the letter symbols that represent initial and final consonant *st*-blends in text and during discussion;
- correctly identify pronouns during discussion, in the text, and on a worksheet;
- accurately recognize and use antonyms during discussion and on a worksheet.

Comprehension Checks

- [Book Quiz](#)
- [Retelling Rubric](#)