



## THEME

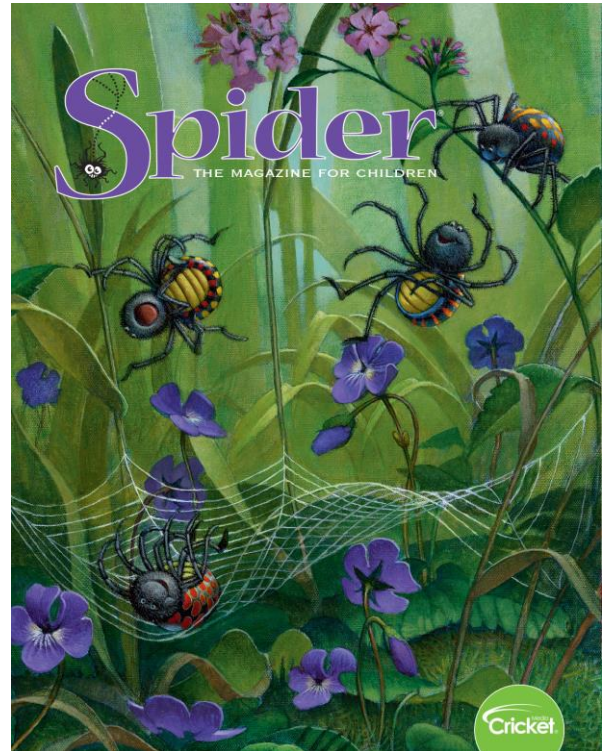
Confronting life's problems is an experience shared by humans of all ages, as well as many story characters. Use the texts covered by this Teacher Guide to discuss problem-solving and to take a closer look at how three individuals confront and solve problems.

## CONVERSATION QUESTION

How do real people and characters solve problems?

## TEACHING OBJECTIVES

- Students will analyze how individuals, events, and ideas develop and interact over the course of a text.
- Students will analyze how point of view shapes the content and style of a text.
- Students will obtain, evaluate, and communicate information.
- Students will identify scientific practices.
- Students will write informative texts.



In addition to supplemental materials focused on core English Language Arts skills, this flexible teaching tool offers vocabulary-building activities, questions for discussion, and cross-curricular activities.

## SELECTIONS

- **The Great Mantis Rescue**  
Realistic Fiction, ~750L
- **Stephanie's Strange Mixture**  
Expository Nonfiction, ~750L
- **Dinner at Blue's**  
Science Fiction, ~650L

# Spider® Teacher Guide: September 2019

## The Great Mantis Rescue

pp. 10–14, Realistic Fiction

Use this story about a bug-loving student and his classmates to help students learn about characters.



## RESOURCES

- Analyze Characters

## OBJECTIVES

- Students will read and analyze a short story.
- Students will analyze how individuals, events, and ideas develop and interact over the course of a text.
- Students will obtain, evaluate, and communicate information.

## KEY VOCABULARY

- attempted** (p. 11) tried to do something
- praying mantis** (p. 11) a large insect with large forelegs folded as if in prayer
- pincers** (p. 13) claws

## ENGAGE

**Conversation Question:** How do real people and characters solve problems?

Remind students that most stories tell about a problem the characters face and how they solve the problem. Discuss favorite book and movie characters, the problems they face, and how they solve those problems. Then tell students to think about the problems in this story and how characters solve them.

## INTRODUCE VOCABULARY

Display the vocabulary words and read them and their definitions aloud. Next, have students work in pairs to write context sentences using the vocabulary words. Invite students to share their sentences. Remind them to look for these words as they read the story.

## READ & DISCUSS

After students have read the story, use the questions below to prompt discussion.

- How do Donald Hawkins's classmates treat him?
- Why did Donald bring the egg case to school?
- What is Richie Melville's attitude about insects?
- How do the students and teacher react to the escaped insects?
- How does Donald solve the insect problem? What other problems are solved in the story?

## SKILL FOCUS: Analyze Characters

**INSTRUCT:** Explain to students that they can learn about characters by paying attention to the things that characters do, say, and think. Tell students to pause as they read to figure out what they learn about characters from these details. Read aloud the text on page 10. Then discuss with students what they learn about Donald Hawkins from the details on this page. (*Donald likes insects and knows a lot about them. Kids make fun of him.*) Have students point out story details that reveal this information. Next, have students work in pairs to reread page 10 and note what they learn about Richie Melville. Discuss responses.

**ASSESS:** Distribute a copy of the *Analyze Characters* worksheet to each student. Have students work independently to complete this page. Then have them share responses with a partner.

## EXTEND

**Science** Have students use books, articles, and online materials to research the praying mantis. Encourage students to notice the different text features they encounter in their research. Instruct students to create posters with text, drawings, and text features, to share what they learned about the praying mantis.

Name \_\_\_\_\_

### Analyze Characters

In the first column, record information from the story about what characters from “The Great Mantis Rescue” do, say, and think. Be sure to identify the characters you write about. In the second column, explain what you learn about the characters from this information.

Details from the story about what characters do, say, and think	What these details tell me about the character

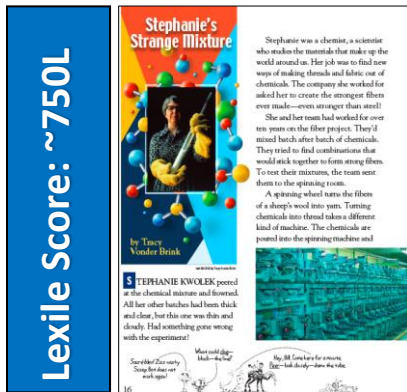
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## Stephanie's Strange

### Mixture

pp. 16–19, Expository Nonfiction

Have students outline and explain the events described in this article that led to an important discovery.



## RESOURCES

- Science Comic Assignment

## OBJECTIVES

- Students will read and analyze a science article.
- Students will analyze how events, individuals, and ideas develop.
- Students will identify scientific practices.

## KEY VOCABULARY

- **chemist** (p. 16) a person who studies or does research in the science of chemistry
- **fibers** (p. 16) thin threads of natural or artificial material
- **batch** (p. 16) an amount of something that is made at one time
- **disaster** (p. 17) something that has a very bad effect or result

## ENGAGE

**Conversation Question:** How do real people and characters solve problems?

Ask students to name and describe different types of scientists, such as chemists, biologists, and oceanographers. Explain that scientists are problem-solvers who try to improve the world and our understanding of it. Discuss ways that scientists have solved problems and helped us to understand our world. Then explain that the next article tells about how one particular scientist solved a problem and improved the world.

## INTRODUCE VOCABULARY

Display the vocabulary words and definitions and read aloud. Have students work in pairs to predict the article's content based on the title, photos, and key words. Tell them to use the vocabulary words in their predictions. Check predictions and underline key words in the reading.

## READ & DISCUSS

After students read, use these questions to prompt discussion:

1. Who is Stephanie Kwolek and what is her job?
2. Describe the two kinds of spinning machines in the article.
3. Why did Stephanie think she should throw out the strange batch?
4. Why didn't the scientist who ran the spinning machine want to test the strange batch?
5. How did Stephanie know that her thread was strong?
6. What is the author's message about how to solve problems?

## SKILL FOCUS: Explain Events

**INSTRUCT:** Point out that this article is part science and part story: it describes the steps Stephanie took to make threads out of chemicals (science) and also the events and interactions that led to her discovery (story). Reread page 16 and the first column of page 17 and work with students to list the steps Stephanie and her team took to make fibers. Next, tell students that the next part of the article tells the story of Stephanie's most important batch. Have pairs list the events in this story, including the different scientists' thoughts and reactions. Tell students they will make comic strips to describe this part of the article.

**ASSESS:** Distribute the *Science Comic Assignment* sheet to all students. Review the directions and then have students work independently to create their strips. Provide comic books for students to refer to as they work.

## EXTEND

**Science** Explain that the scientific method is a series of steps scientists use to solve problems. Review the steps of the scientific method. Then have students reread the article and create a two-column chart that defines each step and describes how Stephanie Kwolek followed it.

Name \_\_\_\_\_

## Science Comic Assignment

Make a comic strip to explain the events that led to Stephanie Kwolek's invention of super-strong thread. Follow the steps below to help you plan and create your comic strip.

### MATERIALS YOU WILL NEED

- regular and colored pencils
- sticky notes
- drawing paper
- a copy of the article "Stephanie's Strange Mixture"

### PLAN

1. **Reread the story.** Focus on the details of how Stephanie developed her invention. Use sticky notes to mark these details.
2. **Map out your comic strip.** On a blank sheet of paper, draw boxes and make notes about what scene or action each box will show. Plan on showing one image in each box of your strip. Use up to eight boxes.
3. **Plan your speech and thought bubbles.** Review the article again and look for details about Stephanie's thoughts, feelings, and conversations. Mark these details with sticky notes. Write notes about what your bubbles will say and where you will include them in your strip.
4. **Plan your captions.** Use captions at the top or bottom of the boxes in your strip to give facts about Stephanie and the process of making fibers.

### CREATE

- Use a ruler to draw the boxes you will need.
- Use pencil to sketch and write. Then go over this with ink.
- Use colored pencils to color your images.

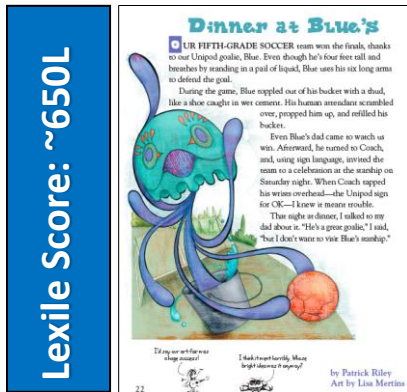
**Be creative and use facts!**

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## Dinner at Blue's

pp. 22–27, Science Fiction

Help students to analyze first-person point of view while enjoying this story about a friendship between a young space alien and a human boy.



## RESOURCES

- Point of View

## OBJECTIVES

- Students will read and analyze a short story.
- Students will analyze how point of view shapes the content and style of a text.
- Students will write informative texts.

## KEY VOCABULARY

- **unipod** (p. 22) something that is created with a single leg or foot; usually refers to a one-legged support for a camera
- **teemed** (p. 24) abundantly filled with
- **attendant** (p. 25) an assistant or helper
- **awkward** (p. 27) clumsy, not graceful

## ENGAGE

**Conversation Question:** How do real people and characters solve problems?

Remind students that even the best of friends can misunderstand each other or have problems getting along. Invite students to share how they solve friendship problems. Explain that the next story is about an unusual friendship with an unusual problem.

## INTRODUCE VOCABULARY

Display the vocabulary words and definitions and read them aloud. Have students draw a picture of each vocabulary word and write the word and its definition as a caption. Invite students to share their work with a partner. Then remind students to look for the words as they read.

## READ & DISCUSS

After students have read the story, use the questions below to prompt discussion.

1. What is unusual about Blue?
2. Where does the story take place?
3. Why is the narrator worried about having dinner on Blue's starship?
4. What does the narrator's dad help him understand?
5. How is the problem solved at the end of the story?
6. Draw a Venn diagram and use it to compare Blue and the narrator.

## SKILL FOCUS: Point of view

**INSTRUCT:** Explain that point of view refers to how a writer decides to narrate, or tell, a story. When a story is told from the first-person point of view, the narrator is a story character who participates in the story's events and uses pronouns such as *I*, *me*, *my*, and *we*. Continue by explaining that first-person narrators often share information about their thoughts and feelings. Ask students to point out information in the story that shows them it is told from the first-person point of view. Then invite students to share something the narrator reveals. Next, distribute the *Point of View* worksheet and have students work in pairs to find and record the narrator's thoughts and feelings in the story.

**ASSESS:** Have students rewrite a short scene in the story from Blue's point of view. Remind them to include details about Blue's thoughts and feelings. Then have students share their work with the class.

## EXTEND

**Writing** Bring in a few examples of field guides to birds and animals. Then tell students to imagine they are creating a field guide to space aliens. Have them create an entry for unipods, based on the information in the story. Remind them to include text, drawings, and headings. Invite students to share their work.

Name \_\_\_\_\_

## Point of View

Explain the narrator's thoughts and feelings about the things shown in the chart. Note the story details that reveal these thoughts and feelings.

<b>his friend Blue</b>	<b>having dinner at Blue's house</b>
<b>the krill in Blue's bucket</b>	<b>being in water</b>

**Narrator's  
thoughts  
and  
feelings**