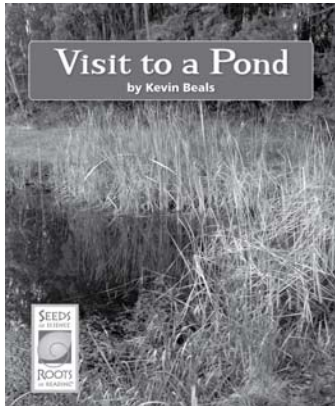


Teaching Scientific Description Writing

with *Visit to a Pond*

from *Seeds of Science/Roots of Reading*[®]



Introduction

This strategy guide introduces an approach for teaching students to write a description. This type of writing is often used in science to share observations that include clear and specific details. Descriptions that are well written allow even those without the same experience to visualize and understand what is being described. This guide includes an introductory section about descriptive writing, an overview of one approach for teaching students to write a description using information found in many science texts, and a plan for teaching descriptive writing with the *Seeds of Science/Roots of Reading*[®] book *Visit to a Pond*.

Book Summary

Visit to a Pond invites readers to consider what they might see on a walk around a typical pond. Although ponds may look peaceful at first glance, careful observation reveals that they are full of buzzing, swimming, and creeping activity. Readers learn that ponds have many nonliving environmental factors, such as the source of the pond water and how much sunlight the pond typically receives. Readers also discover the many organisms in a pond community, such as birds, visiting mammals, insects, turtles, and fish. This book not only engenders excitement, interest, and curiosity about a pond ecosystem, it also offers readers an example of descriptive scientific writing about one of nature's most fascinating places.

Science Background

Ponds are home to many different types of organisms, including dragonflies, snails, algae, different types of birds and fish, turtles, aquatic plants, and much more. A pond is a particular type of ecosystem, or community of organisms living together within its physical surroundings. There are many, many different kinds of ecosystems in the world. Aquatic ecosystems have their own unique organisms that have adapted to live in or near a watery environment. These organisms interact with one another and their environment in various ways. Many ponds are full of algae, which give pond water its characteristic green color. Algae are plant-like organisms that live in freshwater or salt water and do not have any flowers or roots. Pond ecosystems also include animals of different sizes, from mammals, such as raccoons, to tiny water fleas to organisms so small they cannot be seen without a microscope. Even though ponds support all this life, they are often relatively small bodies of water, substantially smaller than lakes. Ponds may appear to be very calm at first glance, but they are usually full of life and in constant motion.

About This Book

Reading Level

Guided Reading Level*: R

Key Vocabulary

aquatic, environment, organism, predator, prey

Text Features

bold print, captions, glossary, labels, photographs

*Guided Reading Levels based on the text characteristics from Fountas and Pinnell, *Matching Books to Readers*.

About Scientific Descriptions

Descriptive writing is widely used in science to convey information about something in the natural world. Descriptions include specific, vivid, and clear details so that even readers without the same experiences can understand and visualize what is being described. Descriptive writing in science differs from general descriptive writing in that it focuses on detailed measurements, precise descriptions, and factual information. Descriptions are based on observations. Scientists often take field notes as they are observing in nature. These may take the form of written notes, measurements, and/or sketches, all of which serve as aids for recalling important details. These field notes can later be fleshed out to convey a more thorough picture of what is being described.

Teaching Scientific Description Writing

The following guidelines can be used to teach description writing using information found in many science texts.

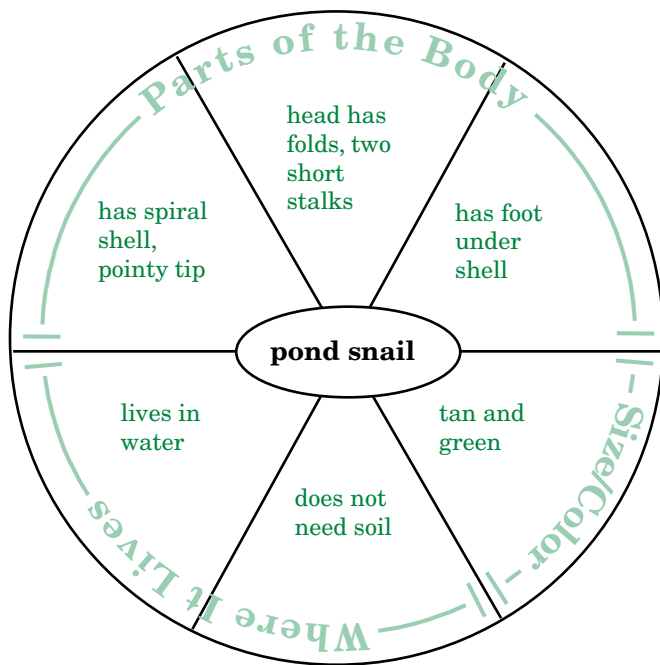
- Select a text that includes descriptive writing and photographs. Good choices include texts that describe different types of living or nonliving things in nature.
- Draw a graphic organizer on the board that can be used to record notes from observations that students will make about one of the photographs in the text. A sample graphic organizer for descriptive writing is included on page 3. Also, make a chart listing transition words, using the box on this page as a guide.
- Explain to students that the text they will read will include descriptions. Say that the purpose of descriptive writing in science is to convey detailed, factual information about the world. Descriptive writing also helps the reader visualize what is being described.
- As students read the text you selected, ask them to notice specific details that are used. Have them think about the language that is included in the description.
- Explain that a graphic organizer is a tool for recording observations and organizing ideas before writing. You will use the graphic

Transition Words

for example	especially
for instance	namely
in particular	in other words
in this case	to illustrate
for one thing	specifically
such as	thus

organizer on the board to record students' observations of one photograph.

- Give students time to observe the photograph you selected from the text and to share their observations with a partner. Then, ask volunteers to share observations. Record notes on the graphic organizer, grouping like ideas together. Have students help you label the different categories of observations.
- Use shared writing to construct a description together. First, explain that descriptions begin with a topic sentence that introduces the main idea. Write a topic sentence on the board with help from the class. [Many species of plants and animals are found in the rainforest.]
- Have students help you turn the notes from the graphic organizer into a descriptive paragraph. Prompt students to provide specific details that will help readers visualize. [Rainforests are lush and full of life. In particular, the upper layer, or canopy, is made of tall trees with broad leaves that shield the under layers from harsh, tropical storms. Underneath the canopy, there are layers of smaller trees, shrubs, and climbing plants.]
- As you write the paragraph with help from the class, point out that transition words can be used to connect one idea with another. Use the chart that you created as a reference and have students help you add appropriate transitions as you move from one idea to another.
- Find opportunities to write descriptions throughout a unit of study or in different science units. You may want to use the Descriptive Writing copymaster, included in this guide, to support students' writing as you give them more independence.



Teaching Scientific Description Writing with *Visit to a Pond*

Getting Ready

1. Using the graphic organizer above as a guide, draw a graphic organizer on the board. Write “pond snail” in the center. You will fill in the remainder of the graphic organizer with students during class; sample responses are shown in green.
2. Make a class chart that lists transition words, using the box on page 2 as a reference.
3. Make a copy of the Descriptive Writing copymaster for each student.

During Class

1. Read *Visit to a Pond* in a way that is consistent with your classroom routines, giving students as much independence as possible.
2. After reading, have students turn to page 8. Ask students to reread the description of the pond snail and look at the photograph to find out about its body parts and where it lives.
3. Have students share their observations with a partner. Have a few volunteers share their observations with the class. Record students’ observations in the graphic organizer you created on the board, grouping like ideas together.

4. With students’ help, label categories of observations, such as “Parts of the Body,” “Where It Lives,” and “Size/Color.”
5. Distribute a Descriptive Writing student sheet to each student. As a class, construct a topic sentence that introduces the description of pond snails. [Pond snails are very interesting organisms.] Have students record the topic sentence that the class brainstormed on their student sheets in the space indicated.
6. Next, ask students to write at least one sentence that describes their observations in each of the three categories. Have students use the graphic organizer on the board as a guide. Encourage students to turn the notes from the graphic organizer into sentences, referring back to the photograph and information on page 8 of the book as needed. [Specifically, we observed a pond snail that has a tan and green spiral shell with a pointy tip. The pond snail’s head sticks out of its shell while the rest of its body remains inside. An especially interesting part of the pond snail’s body is its head, which has folds in the middle and one short stalk on each side. The pond snail also has a foot under its shell that helps it crawl along aquatic plants. The pond snail lives only in water and, thus, does not need soil to survive.]
7. Point out the list of transition words on the class chart. Encourage students to use these or other transition words to connect one idea with another. Have students look over what they have just written to make sure they have included appropriate transition words.
8. As a class, construct a concluding sentence. Ask students to add this to the end of their descriptive paragraphs. [The pond snail is a tiny but fascinating organism.]
9. Ask students to reread their paragraphs to themselves or to a partner. Have students think about how their paragraphs help them visualize a pond snail. Encourage students to suggest other ways that organization, clarity, or word choice can be improved.

Independent Extension

Ask students to create an illustration or labeled diagram to accompany their descriptive writing. Encourage students to also provide a title or caption.

Name _____ Date _____

Descriptive Writing

Title of book: _____

(Topic sentence)

(Descriptive details)

(Conclusion)

About Strategy Guides

A six-page strategy guide is available for each *Seeds of Science / Roots of Reading*® student book. These strategies support students in becoming better readers and writers. They help students read science texts with greater understanding, learn and use new vocabulary, and discuss important ideas about the natural world and the nature of science. Many of these strategies can be used with multiple titles in the *Seeds / Roots* series. For more information, as well as for additional instructional resources, visit the *Seeds / Roots* Web site (www.seedsofscience.org/strategyguides.html).

Student Books for Grades 4–5

Twenty-seven engaging student books are available, each with a corresponding strategy guide. The books are part of the *Seeds of Science/Roots of Reading*® curriculum program described on page 6.

Aquatic Ecosystems	
Strategy	Student Book
Teaching Scientific Description Writing	<i>Visit to a Pond</i>
Gathering Information from Science Texts	<i>Tabletop Pond Guide</i>
Interpreting Visual Representations	<i>Investigating Crayfish</i>
Using Roundtable Discussions	<i>Dragonfly Explanations</i>
Making Sense of Data in Science Texts	<i>Eat and Be Eaten: How an Ecologist Uses Food Webs</i>
Teaching Concept Mapping	<i>What Makes Living Things Go?</i>
Teaching Scientific Comparison Writing	<i>Ecosystems Around the World</i>
Teaching Text Structure	<i>Ecosystem News</i>
Teaching Vocabulary with Science Texts	<i>Making a Difference</i>
Planets and Moons	
Strategy	Student Book
Connecting Science Words and Everyday Words	<i>Exploring Planets and Moons</i>
Using Science Text to Visualize	<i>Spinning Through Space</i>
Taking Notes Based on Observations	<i>Observing the Moon</i>
Using the Cognates Strategy	<i>How Big Is Big? How Far Is Far?</i>
Teaching Scientific Comparison Writing	<i>Handbook of Planets and Moons</i>
Using Discourse Circles	<i>What About Pluto?</i>
Teaching About How Scientists Use Models	<i>Planetary Scientist</i>
Using Anticipation Guides	<i>Tomato Landers</i>
Promoting Word Consciousness	<i>Technology for Exploration</i>
Chemical Changes	
Strategy	Student Book
Teaching Scientific Explanation Writing	<i>Chemical Reactions Everywhere</i>
Posing Investigation Questions	<i>Handbook of Chemical Investigations</i>
Teaching Text Structure	<i>What Happens to the Atoms?</i>
Teaching Procedural Writing	<i>Bursting Bubbles: The Story of an Improved Investigation</i>
Promoting Word Consciousness	<i>Communicating Chemistry</i>
Models of Matter	
Strategy	Student Book
Teaching Summary Writing	<i>Made of Matter</i>
Using Roundtable Discussions	<i>Break It Down: How Scientists Separate Mixtures</i>
Interpreting Visual Representations	<i>Phase Change at Extremes</i>
Teaching About How Scientists Make Inferences	<i>Science You Can't See</i>

Extend Learning with *Seeds of Science/Roots of Reading*®

The strategy featured in this guide is drawn from the *Seeds of Science/Roots of Reading*® curriculum program. *Seeds/Roots* is an innovative, fully integrated science and literacy program.

The program employs a multimodal instructional model called “Do-it, Talk-it, Read-it, Write-it.” This approach provides rich and varied opportunities for students to learn science as they *investigate* through firsthand inquiry, *talk* with others about their investigations, *read* content-rich books, and *write* to record and reflect on their learning.

Take advantage of the natural synergies between science and literacy instruction.

- Improve students’ abilities to read and write in the context of science.
- Excite students with active hands-on investigation.
- Optimize instructional time by addressing goals in two subject areas at the same time.

To learn more about *Seeds of Science/Roots of Reading*® products, pricing, and purchasing information, visit www.deltaeducation.com



Aquatic Ecosystems Science and Literacy Kit



Developed at Lawrence Hall of Science and the Graduate School of Education at the University of California at Berkeley.

Seeds of Science/Roots of Reading® is a collaboration of a science team led by **Jacqueline Barber** and a literacy team led by **P. David Pearson** and **Gina Cervetti**.

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