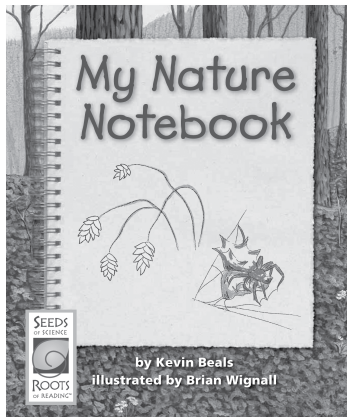


Taking Notes Based on Observations

with *My Nature Notebook*
from *Seeds of Science/Roots of Reading*[™]



Introduction

This strategy guide introduces an approach for teaching students to take notes based on observations. In science, recording observations is the foundation for learning about the natural world. This guide includes an introductory section about taking notes based on observations, a general overview of how to teach this strategy with many science texts, and a plan for teaching students to take notes based on observations with the *Seeds of Science/Roots of Reading*[™] book, *My Nature Notebook*.

Book Summary

In *My Nature Notebook*, a child observes and records naturally occurring changes in one spot in the woods. The young scientist records observations of the soil, plants, and animals over a period of several months. He notes the decomposition of fallen leaves and a dead bird, the slow growth of a young oak tree, grasses sprouting, and evidence of the small animals that live in the habitat. He poses questions about his observations, many of which are answered by further observation. Readers learn about the subtle changes in a forest-floor environment and the importance of careful observation and recording in science. In this book, big and small changes in the environment are captured through descriptive writing, drawings, and measurements.

About This Book

Reading Level

Guided Reading Level*: K

Text Features

book description, glossary, headings, about the author, bold print, diagrams, illustrations, tables

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

Science Background

The natural world around us changes every day. The big changes are noticeable, but most changes are less obvious. Scientists ask questions about the changes that happen in nature, and they often use observations to answer those questions. When scientists make careful observations, they use one or more of their senses. The use of scientific tools and technology, such as a magnifying lens or microscope, can enhance what they are able to observe. Scientists document subtle changes in an environment over time. This allows them to make predictions and inferences about why change occurs. They record their observations and other notes, often in a notebook or on a computer. The notebook format is an authentic tool in science for biologists and earth scientists, for example, who are often out in the field making observations, as well as for chemists and many others who record their ideas, experiments, and results in lab notebooks. For scientists who study habitats, observations often center around changes in the temperature of the air, composition of the soil, changes in plant growth, and evidence of insects and other animals. Observations can be recorded as illustrations, descriptions, and measurements. Observational notes can be used as evidence to help answer questions about the natural world.

About Taking Notes Based on Observations

The ability to observe carefully and take notes is critical in science. When students learn how to observe, they use one or more of their five senses to take notice of what might otherwise go undetected. Making careful observations involves note taking, which creates a record of the observations. Note taking is a process used to record descriptions of objects and phenomena in the world. Scientists record their observations in a number of ways, including making lists, describing, creating drawings with labels, and taking photographs. These notes can be shared with others as a means of learning more about something. Implementing a note-taking strategy across the curriculum extends valuable practice that helps students learn how to carefully observe. Repeated use of this strategy also helps students improve their ability to use descriptive words and make their observations easy to visualize.

Teaching How to Take Notes Based on Observations

The following guidelines can be used to teach observation and note taking with any content-rich text.

- Choose a text. Texts that include detailed images, illustrations, or photographs prompt rich observations and lend themselves to making detailed notes.
- Emphasize how taking notes based on observations is useful in science and in reading. Point out that scientists observe things in the natural world, and good readers carefully observe the illustrations and photos found in books.
- Model how to make careful observations by recording your observations about a classroom object (such as a plant, rock, or handful of marbles) while thinking aloud. Show students different forms that notes often take, including narrative descriptions, tables, measurements, labeled drawings, or any combination of these elements. As you model recording observations, point out that notes do not have to be written in complete sentences.

Guidelines for Taking Notes Based on Observations

1. Focus your attention on what you are observing.
 2. Use as many of your senses as possible to observe (sight, hearing, touch, smell, and taste).
 3. Write down only what you observe, not what you imagine.
 4. Use scientific language when possible (e.g., *observe* instead of *see*).
 5. Be specific and detailed in order to create a picture with words.
 6. Include the date and time of your observations and any measurements you took.
 7. When possible, draw a picture of what you observe and include labels.
- As a class, brainstorm a list of guidelines for taking notes based on observations. (See the box on this page for ideas you may want to make sure are included.)
 - Plan opportunities for students to practice taking notes based on observations. Invite students to observe a new object or phenomenon (e.g., a caterpillar, melting ice). Emphasize using more than one sense and encourage the use of words that describe texture, color, odor, size, shape, and so on. You can provide each student with a copy of the Observation Notes copymaster included with this guide for taking notes.
 - As a class, discuss more models of observation and note taking. Carefully choose student-generated examples that include narrative notes as well as pictures. Discuss how these examples reflect the guidelines. You can also generate examples that lack details or include things that may have been imagined but not observed. Ask students to identify which examples follow the guidelines and which do not. Guide students in modifying the notes you created that do not follow the guidelines.
 - Becoming an expert at observation and note taking requires ongoing practice. Incorporate as many opportunities as possible for students to apply this strategy across many different instructional contexts.

Taking Notes Based on Observations with *My Nature Notebook*

My Nature Notebook models the process of taking notes based on observations and provides opportunities for students to practice this strategy.

Getting Ready

1. Make a copy of the Observation Notes copymaster (provided with this guide) for each student.
2. Create a class chart. Write the Guidelines for Taking Notes Based on Observations (see the box on page 2) on the board or on a piece of chart paper.

During Class

1. Tell students that in *My Nature Notebook* they will read about a child who makes observations in the woods and takes notes just as a scientist would. Activate prior knowledge before reading by asking students to describe experiences they have had observing nature in a garden, park, or yard.
2. Read *My Nature Notebook* in a way that is consistent with your classroom routines, giving students as much independence as possible.
3. Go over the Guidelines for Taking Notes Based on Observations class chart. Ask students to find examples of how the child in the book has followed the guidelines. [Focus your attention on what you are observing, page 4; use as many of your senses as possible, page 6; include measurements, page 14.]
4. Lead a class discussion about the observations and how the child's notes are presented in the book. Discuss the ways the data is organized using the following examples:
 - Ask students to turn to page 6 and look carefully at the child's drawing of the leaf and the plant. Point out that this is an example of taking notes using a detailed drawing.
 - Reread page 6 as a class. Tell students that scientists often use both drawings and words to take notes on their observations.
 - Have students turn to page 22 and examine the table. Tell students that scientists may

also organize observations in ways that help them see a lot of information at once. Often, this information is in a table or chart. Ask, "What could you learn from this table?" [How fast different plants grew, how tall plants were at certain dates.]

5. Ask students to look at the illustration of the woods on pages 22–23. Tell them that they will practice observing using the illustration on this page. Then, they will help you write some notes about what they observed. Point out that since they will be observing a picture, they will only be able to use one sense—sight. Ask, "If you were really out in the woods, how could you use your other senses to observe?" [Smelling the leaves, listening for birds or other animals, feeling the ground.] Allow a few minutes for students to observe the illustration and discuss what they see with a partner. Then, ask volunteers to share some observations. Record these on the board as notes.
6. Distribute an Observation Notes student sheet to each student. Ask students to turn to pages 24–25 in the book. Ask students to carefully observe the scene and then record notes about their observations. Direct students to write notes using words and then draw a detailed, labeled picture of one of their observations. [Two sets of tracks in the snow, brown grass surrounding a log, a chewed acorn in the path of the tracks.] Remind students of the Guidelines for Taking Notes Based on Observations class chart.
7. Ask students to share what they observed with the class. Point out descriptive words and details that they included in their notes.

Independent Extension

Have students look back through the notebook pages in the book to find examples of the following:

- an observation about how something looked
- an observation about how something smelled
- an observation about how something felt
- an observation about how something sounded
- a measurement

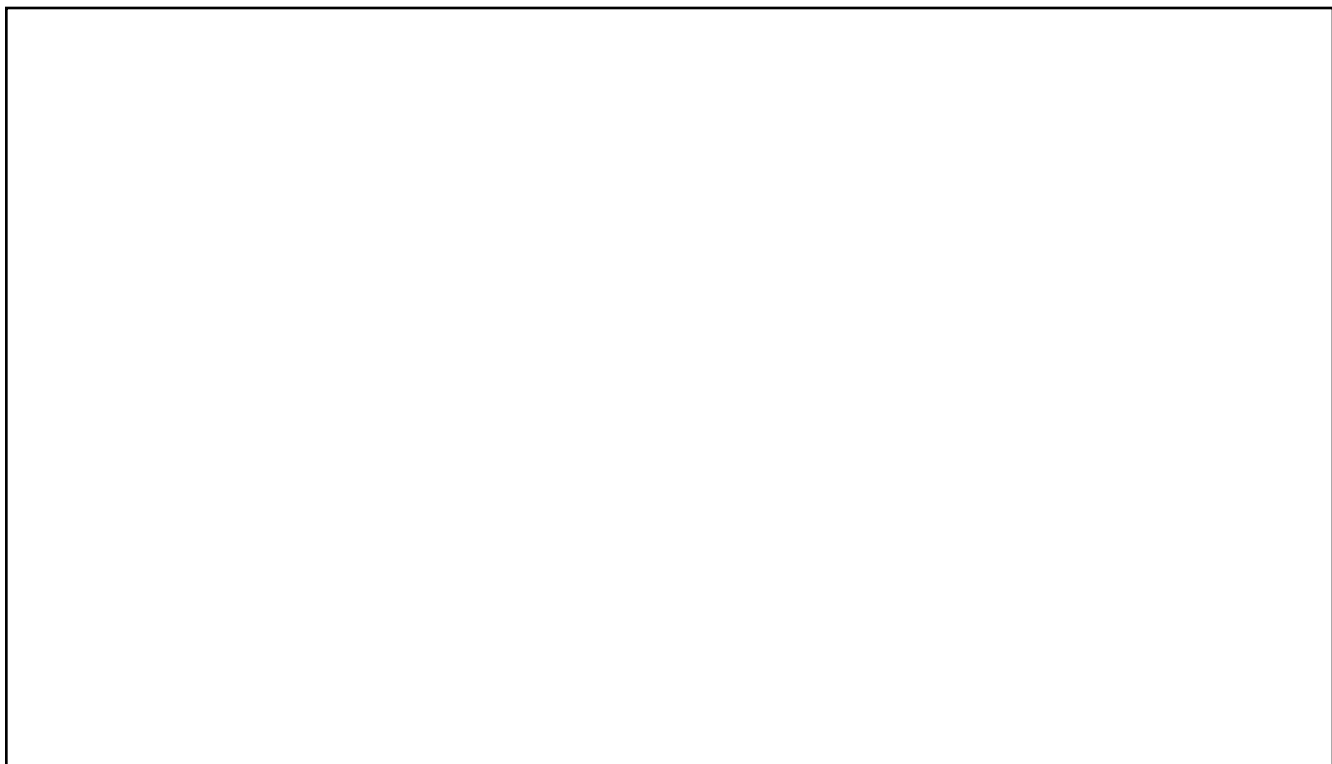
Have students list each observation and the page number on which they found it.

Name _____ Date _____

Observation Notes

Write notes about your observations. _____

Draw and label one of your observations.



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* website (<http://www.seedsofscience.org/strategyguides.html>).

Available Student Books for Grades 2–3

Twenty-three engaging student books are now 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. Four *Gravity and Magnetism* student books and strategy guides will be available in 2009.

Soil Habitats	
Strategy	Student Book
Using Discourse Routines with Science Texts	<i>Into the Soil</i>
Using the Cognates Strategy	<i>Walk in the Woods</i>
Connecting Science Words and Everyday Words	<i>What Are Roots?</i>
Teaching About the Nature of Science	<i>Talking with a Habitat Scientist</i>
Teaching Text Structure	<i>Handbook of Forest Floor Animals</i>
Using Text Features	<i>Earthworms Underground</i>
Taking Notes Based on Observations	<i>My Nature Notebook</i>
Making Sense of Data in Science Texts	<i>Snail Investigations</i>
Using Discourse Circles	<i>Without Soil</i>
Shoreline Science	
Strategy	Student Book
Teaching Vocabulary with Science Texts	<i>Beach Postcards</i>
Teaching Concept Mapping	<i>What Belongs on a Beach?</i>
Teaching Scientific Explanations	<i>Gary's Sand Journal</i>
Interpreting Visual Representations	<i>What's Stronger? The Forces That Cause Erosion</i>
Using Text Features	<i>What Lives on a Sandy Beach?</i>
Teaching About Multiple Meaning Words	<i>My Sea Otter Report</i>
Searching for Information in Science Texts	<i>Handbook of Sandy Beach Organisms</i>
Teaching Text Structure	<i>The Black Tide</i>
Teaching About the Nature of Science	<i>Shoreline Scientist</i>
Designing Mixtures	
Strategy	Student Book
Using Discourse Circles	<i>What If Rain Boots Were Made of Paper?</i>
Using Anticipation Guides	<i>Solving Dissolving</i>
Teaching Scientific Explanations	<i>Handbook of Interesting Ingredients</i>
Teaching Text Structure	<i>Jelly Bean Scientist</i>
Teaching About the Nature of Science	<i>Jess Makes Hair Gel</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



Soil Habitats 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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