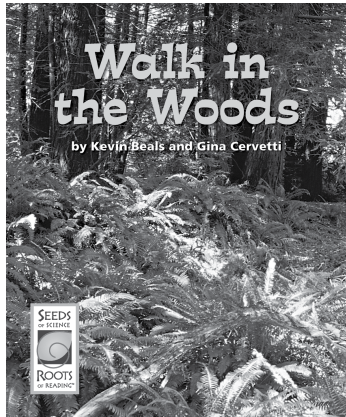


Using the Cognates Strategy

with *Walk in the Woods*

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



Introduction

This strategy guide introduces an approach for making students aware of cognates (words that have a similar spelling, pronunciation, and meaning across languages) in content-area texts. The ability to use cognates is a particularly powerful strategy for helping Spanish-speaking English language learners access information in text and build English fluency. This guide includes an introductory section about the strategy of using cognates, a general overview of how to teach this strategy with many science texts, and a plan for introducing cognates with the *Seeds of Science / Roots of Reading*[™] book, *Walk in the Woods*.

Book Summary

In *Walk in the Woods*, readers accompany a soil scientist named Asmeret Asefaw Berhe as she walks through the forest searching for evidence to answer the question: Where does soil come from? As Asmeret guides readers through the woods, they learn that soil is made from living and nonliving things, such as rocks, dead organisms, and water. Readers also learn about the process of decomposition and about decomposers, the small organisms that help break down dead plants and animals and add nutrients to the soil. Asmeret finds evidence of decomposition in many different forest settings. *Walk in the Woods* shows readers how scientists look for evidence to help answer questions about the natural world.

About This Book

Reading Level

Guided Reading Level*: L

Text Features

book description, glossary, about the author, bold print, illustrations

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

Science Background

Soil serves as the habitat for numerous forms of life. It is a very important earth material, composed of a mixture of minerals, air, water, and living and dead organisms. Living things interact with the soil by creating tunnels in the soil for water and air, recycling nutrients, and mixing mineral particles throughout the soil. Organisms such as earthworms, isopods, bacteria, and fungi help to decompose dead plants and animals. This process of decomposition—the breaking down and decaying of plant and animal matter—is central to the continuance of life. Bacteria are the most prevalent decomposers found in soil. When plants and animals decompose, new nutrients are added to the soil. These nutrients help to nourish new growth, such as plants. Plants, in turn, provide food for animals, including humans, and the cycle of life and death continues. How quickly something decomposes is dependent on many things, such as temperature, exposure to air, and the presence of decomposers. When a plant or animal begins to decompose, it starts to smell, then a liquid appears, and finally the plant or animal matter breaks down. Eventually the decomposed plant or animal becomes part of the soil and helps to nourish new life.

About the Cognates Strategy

Using the cognates strategy supports English language learners in using their home language as a resource for learning new academic words in English. It is particularly helpful for students who speak Latin-based languages, such as Spanish, French, Italian, Portuguese, and Romanian. Cognates are words that have a similar spelling, pronunciation, and meaning across two or more languages. When students recognize words as cognates, they can access unfamiliar English words and better understand what they read. Furthermore, some English science words are a special kind of cognate in Spanish, where the Spanish version of the word is a common word, and the English version is a more specialized science word (e.g., *sol/solar*; *ácido/acid*).

Connecting students' home language to the scientific language they are learning in school is a powerful way to help students learn academic English. While the cognates strategy is designed to support English language learners, the same principle applies to English-only students. That is, understanding the origins of science words, many of which are Latin, can help them understand other words with shared roots or affixes.

Teaching the Cognates Strategy

The following guidelines can be used to teach the cognates strategy with any content-rich text.

- Select a text and identify a small set of cognates. If necessary, have a bilingual colleague help you compile a list of these words. If you have too many words, select those that are most related to the main ideas in the text.
- Before reading, introduce cognates to students. Explain that cognates are words that have a similar spelling, pronunciation, and meaning in two or more languages. Tell students that recognizing cognates can help them understand English words.
- Write a Latin-based language cognate on the board and ask a student to read it aloud (e.g., the Spanish word, *inventar*). Ask students to think of an English word that looks and sounds like the cognate (e.g., *invent*).

Sample Cognates	
English	Spanish
invent	inventar
dentist	dentista
map	mapa
necessary	necesario

- Have students think about what the word means in each language. Ask English language learners to use each word in a sentence (in both languages) to demonstrate its usage.
- Ask students to think about the meaning of related English words (e.g., *inventions*, *inventor*) and to provide examples (e.g., of inventors or inventions).
- Discuss a few more examples in a similar manner. (See the Sample Cognates box on this page.)
- Practice identifying cognates in the text you have selected, using one of the following approaches:
 - a. Write a list of Latin-based language cognates from the text on the board. Ask an English language learner to read the words aloud. Have all students search through the text for the English counterpart. Discuss the words' shared meaning.
 - b. Have English language learners find as many cognates as they can in the text. Remind students to listen to the pronunciation of the word and look at the spelling of the word to identify the word as a cognate. You may wish to have students use the Cognates Table copymaster included with this guide to record cognates they find. If students do not mention the conceptually important words you identified from a given text, introduce those as well.
- Post a class list of cognates on the wall and include cognates from different languages spoken by the students in your class. The list can serve as a reference for English language learners. Have students add to the list over time.

- Once students are familiar with the cognates strategy, address false cognates—words that sound and look the same, but do not share a similar meaning (e.g., in Spanish *carpeta* means *folder*, not *carpet*; *once* means *eleven*, not *one time*). Invite English language learners to create sentences (in both languages) in which each of these false cognates is used in context.

Using the Cognates Strategy with *Walk in the Woods*

Walk in the Woods provides opportunities for Spanish-speaking English language learners to practice using cognates as a resource for understanding science concepts and learning new science words.

Getting Ready

- Make a copy of the Cognates Table copymaster for each student.
- On the board, make a table that lists the Spanish cognates as they appear in *Walk in the Woods*, as shown below. Leave the left column for English words blank and cover the list until students have read the book once through.

English–Spanish Cognates in <i>Walk in the Woods</i>	
English	Spanish
evidence	evidencia
scientist	científico
study	estudiar
natural	natural
air	aire
organism	organismo
rocks	rocas
mix	mixto
part	parte
nutrient	nutriente
animal	animal
plant	planta
millipede	milpiés
bacteria	bacteria
imagine	imaginar
observe	observar
investigate	investigar

During Class

- Tell students that *Walk in the Woods* will take them on a walk with a soil scientist. Asmeret Berhe, the scientist in the book, will show them where soil comes from. Tell the Spanish-speaking English language learners that they will notice some words in the book that look and sound like Spanish words.
- Read *Walk in the Woods* in a way that is consistent with your classroom routines, giving students as much independence as possible.
- Reveal the list of Spanish cognates. Point to the first word, *evidencia*. Have students think about an English word that looks and sounds like the Spanish cognate (*evidence*). Ask students to turn to page 4 and read the sentence that uses the word *evidence*. Provide the word in a different context: “If you saw an apple core on someone’s desk, that is probably evidence that the person sitting there just ate an apple.” Have students think about what the word means in Spanish and English.
- Ask students to think about the meaning of each of the next three Spanish cognates on the list (*científico*, *estudiar*, *natural*). Ask students to locate and read the English words on page 4 of the book.
- Distribute a copy of the Cognates Table student sheet to each student. Have students read and record each of the remaining Spanish words from the list on the board. Students should then search through *Walk in the Woods* for each word’s English counterpart and write it in the appropriate column on their student sheets. They should also record the page number where they found the English word.
- After students read, ask them to reflect on how using cognates helped them understand the ideas in the book. Emphasize that this strategy can be useful whenever they read science books.

Independent Extension

Challenge students to write a sentence that tells an important idea from *Walk in the Woods* using at least two of the cognates from the book. Have them write the sentence in their home language and in English.

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.seedsofscience.org



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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