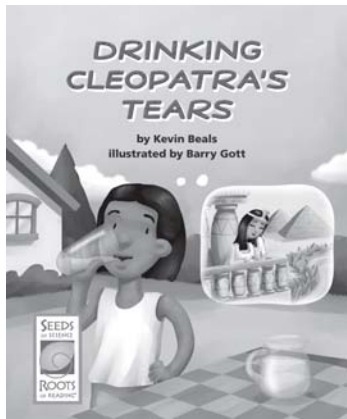


Using the Cognates Strategy

with *Drinking Cleopatra's Tears*
from *Seeds of Science/Roots of Reading*[®]



Introduction

This strategy guide introduces an approach for making students aware of cognates (words that have similar spellings, pronunciations, and meanings across languages) in content-rich 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 *Drinking Cleopatra's Tears*.

Book Summary

Drinking Cleopatra's Tears introduces the water cycle using humorous examples of how Earth's water is recycled over time. As students consider if they may be drinking some of Cleopatra's tears, breathing a puddle, or brushing their teeth with an iceberg, they review phase change and follow water through four steps in the water cycle: evaporation, condensation, precipitation, and runoff. The book explains that water is always moving and changing. Liquid water evaporates to become water vapor, water vapor condenses into liquid water in clouds, the water in clouds falls as precipitation, and water that flows across the land as runoff ends up in groundwater, lakes, and the ocean. *Drinking Cleopatra's Tears* demonstrates to readers that water on Earth is not lost over time.

About This Book

Reading Level

Guided Reading Level*: O

Key Vocabulary

condense, evaporate, precipitate, runoff, water cycle

Text Features

bold print, diagrams, glossary, headings, illustrations, labels

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

Science Background

The water we drink, brush our teeth with, or bathe in has existed on Earth for billions of years. The water on Earth is constantly moving between the atmosphere, Earth's surface, and underground in an endless cycle called the water cycle. Water exists in three phases: it can be a *solid*, such as the ice in icebergs; it can be a *liquid*, as it is in lakes, rivers, and the ocean; and it can be a *gas*, such as the invisible water vapor in the air we breathe. As water moves through the water cycle, it changes from one phase to another. Energy from the Sun heats liquid water in the ocean, rivers, and lakes, causing it to evaporate and become water vapor. As water vapor in the atmosphere rises and cools, it can condense into tiny droplets of liquid water, forming clouds. If these droplets become large enough, they will fall to the ground as precipitation. This precipitation can travel over the ground as runoff or soak into the ground to become groundwater. Evaporation, condensation, precipitation, and runoff are all parts of the water cycle. At any given time, nearly all water on Earth is found in the ocean (about 96.5%). Most of the remainder is underground (about 1.7%) or frozen in ice caps (about 1.7%). Only a small percentage is found as fresh surface water (0.01%) or water in the atmosphere (0.001%).

About the Cognates Strategy

Cognates are words that have similar spellings, pronunciations, and meanings across two or more languages. When students are taught to recognize words as cognates, they are better able to access unfamiliar English words and understand what they read. The cognates strategy supports English Language Learners (ELLs) in using their native languages as a resource for learning new academic words in English. The cognates strategy is most helpful for students who speak Latin-based languages, such as Spanish, French, Italian, Portuguese, and Romanian. Connecting students' native languages to the scientific language they are learning in school is a powerful way to support the development of academic English. In addition, many science words in English are a special kind of cognate in Spanish—the Spanish version of the word is a common word, and the English version is a more specialized science word (e.g., *soll/solar*; *ácido/acid*). While the cognates strategy supports ELLs, this strategy is also useful for English-only students. Since the origins of many science words are Latin, cognates can help students identify shared roots or affixes.

Teaching the Cognates Strategy

The following guidelines can be used to teach the cognates strategy with any science text.

- Select a text and identify several cognates. If necessary, have a bilingual colleague help you compile a list of these words and model correct pronunciation. Focus on those cognates that are most related to the main ideas in the text.
- Before reading, tell students that cognates are words that have similar spellings, pronunciations, and meanings in two or more languages. Point out that recognizing cognates can help students understand English words.
- Write a Latin-based language cognate on the board (see the box on this page for ideas) 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. [Invent.]
- Have students think about what the word means in each language. Ask ELLs to use each word in a sentence (in both languages) to demonstrate its usage.

English–Spanish Cognates

English	Spanish
invent	inventar
dentist	dentista
map	mapa
necessary	necesario

- Ask students to think about the meaning of related English words (e.g., *inventions*, *inventor*) and to provide examples.
- Practice identifying cognates in the text you have selected, using one of the following approaches:
 - a. On the board, write a list of cognates from the text. If you have an ELL who can read the cognates in his native language, ask this student to read the words aloud. Have all students search through the text for the English counterparts. Discuss the words' shared meaning.
 - b. Have ELLs find as many cognates as they can in the text. Remind students to listen to the pronunciation of each word and look at its spelling to identify the word as a cognate. Have students use the Cognates copymaster included in 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.
- Begin a class list of cognates. Include cognates from different languages spoken by the students in your class. The list can serve as a reference for ELLs. Have students add to the list over time.
- Once students are familiar with cognates, 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). Note that very few words are false cognates, but it is still important for students to know about them. Invite ELLs to create sentences (in both of their languages) in which each of the false cognates is used.

English word	Spanish word
millions	millones
recycled	reciclado
solid	sólido
liquid	líquido
gas	gas
vapor	vapor
atmosphere	atmósfera
evaporation	evaporación
humid	húmedo
ocean	océano
condensation	condensación
precipitation	precipitación
cycle	ciclo

Using the Cognates Strategy with *Drinking Cleopatra's Tears*

Drinking Cleopatra's Tears provides opportunities for Spanish-speaking ELLs to practice using cognates as a resource for understanding science concepts and learning new science words.

Getting Ready

1. Make a copy of the Cognates copymaster for each student.
2. On the board, create a table like the one shown above, filling in only the “Spanish word” column. Leave the “English word” column blank. Cover the list until students have read the book once through.

During Class

1. Introduce *Drinking Cleopatra's Tears* by explaining to students that water on Earth is always being recycled and that the book will give examples of this process. Tell the Spanish-speaking English Language Learners that they may notice some words in the book that look and sound like Spanish words.
2. Read *Drinking Cleopatra's Tears* in a way that is consistent with your classroom routines, giving students as much independence as possible.
3. Reveal the list of Spanish cognates. Point to the first word, *millones*. Have students think about an English word that looks and

sounds like the Spanish cognate. [Millions.] Ask students to turn to page 5 and read the sentence that uses the word *millions*. Provide a different context for the word, such as *Mexico City is one of the biggest cities in the world; millions of people live there*. Have students think about what the word means in Spanish and English. On the board, write “millions” in the “English word” column.

4. Ask students to think about the meaning of the next Spanish cognate on the list (*reciclado*). Ask a Spanish-speaking English Language Learner to use *reciclado* in a sentence in Spanish. Have that student or another student translate the sentence into English.
5. Ask students to locate and read the sentence with the English cognate on page 5. Discuss what *reciclado* and *recycled* mean and point out how knowing what the word means in Spanish can help you understand the idea in the book—that water goes through a cycle over and over and that the same water can get used again and again. Write “recycled” in the “English word” column on the board.
6. Distribute a Cognates student sheet to each student. Have students read and record each of the remaining Spanish words from the list on the board onto their student sheets. Students should then search through *Drinking Cleopatra's Tears* for each word’s English counterpart and write it in the appropriate space on their student sheets. They should also record the page number on which they found each English word.
7. 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, using at least two of the cognates from *Drinking Cleopatra's Tears*. The sentence should convey an important idea from the book. Ask English Language Learners to write the sentence in their native languages *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* Web site (www.seedsofscience.org/strategyguides.html).

Student Books for Grades 3–4

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.

Digestion and Body Systems	
Strategy	Student Book
Analyzing Part-to-Whole Relationships	<i>Systems</i>
Teaching About the Nature and Practices of Science	<i>Secrets of the Stomach</i>
Teaching Process Description Writing	<i>Voyage of a Cracker</i>
Searching for Information in Science Texts	<i>Handbook of Body Systems</i>
Making Sense of Data in Science Texts	<i>What's the Diagnosis?</i>
Variation and Adaptation	
Strategy	Student Book
Teaching Scientific Comparison Writing	<i>Blue Whales and Buttercups</i>
Using Discourse Circles	<i>The Code</i>
Using Visual Evidence to Make Inferences	<i>Mystery Mouths</i>
Teaching About the Nature and Practices of Science	<i>Evidence from the Past</i>
Weather and Water	
Strategy	Student Book
Teaching About the Nature and Practices of Science	<i>Tornado! A Meteorologist and Her Prediction</i>
Teaching About Multiple Meaning Words	<i>Falling Through the Atmosphere</i>
Gathering Information from Science Texts	<i>Weather Encyclopedia</i>
Teaching Text Structure	<i>Water in the Desert</i>
Using the Cognates Strategy	<i>Drinking Cleopatra's Tears</i>
Connecting Science Words and Everyday Words	<i>Go with the Flow: Making Models of Streams</i>
Taking Notes Based on Observations	<i>Sky Notebook</i>
Teaching Text Features	<i>Wet Weather Handbook</i>
Making Sense of Data in Science Texts	<i>What's Going on with the Weather?</i>
Light Energy	
Strategy	Student Book
Teaching About Idioms	<i>Can You See in the Dark?</i>
Teaching Summary Writing	<i>The Speed of Light</i>
Teaching About the Nature and Practices of Science	<i>Why Do Scientists Disagree?</i>
Using Discourse Routines with Science Texts	<i>I See What You Mean</i>
Searching for Information in Science Texts	<i>Handbook of Light Interactions</i>
Teaching Scientific Explanation Writing	<i>Light Strikes!</i>
Teaching Vocabulary with Science Texts	<i>Cameras, Eyes, and Glasses</i>
Teaching Concept Mapping	<i>It's All Energy</i>
Interpreting Visual Representations	<i>Sunlight and Showers</i>

