

## About the Book

Text Type: Nonfiction/Informational Page Count: 24 Word Count: 2,003

### Book Summary

*Mysterious Caves* is an informational text that educates readers on the many different types of caves that can be found on Earth. From underwater to underground, from karst to primary to erosional caves, this book touches on all their differences. Also examined are the growth, life, adaptation, and disease found inside caves. Famous caves such as Hang Son Doong in Vietnam, Mammoth Cave in Kentucky, and Chauvet Cave in France are described. Photographs, maps, and illustrations support the text.

## About the Lesson

### Targeted Reading Strategy

- Visualize

### Objectives

- Use the reading strategy of visualizing to understand text
- Identify main ideas and details
- Understand the use of a dash as punctuation
- Identify and use homophones

### Materials

Green text indicates resources available on the website

- Book—*Mysterious Caves* (copy for each student)
- Chalkboard or dry erase board
- Index cards
- World map
- Visualize, main idea and details, dashes, homophones worksheets
- Discussion cards



Indicates an opportunity for students to mark in the book. (All activities may be demonstrated by projecting book on interactive whiteboard or completed with paper and pencil if books are reused.)

### Vocabulary

\*Bold vocabulary words also appear in a pre-made lesson for this title on [Vocabulary a-z.com](http://www.readinga-z.com).

#### Content words:

Story critical: *chambers* (n.), *column* (n.), *erosion* (n.), *formations* (n.), *passageways* (n.), *spelunkers* (n.)

Enrichment: *collapsed* (v.), *drapery* (n.), *lava tube* (n.), *primary cave* (n.), *scuba dive* (v.), *stalactite* (n.), *stalagmite* (n.)

## Before Reading

### Build Background

- Show students pictures of different types of caves, including underwater and underground caves. Ask students to tell what they know about caves, such as where they are located and what might be found inside them. Ask volunteers to explain how they think caves are formed.
- Point to Vietnam on a world map, and point out China and the South China Sea. Explain that the first section of the book describes a cave in the country of Vietnam but that caves are found all over the world.

## Preview the Book

### Introduce the Book

- Give students their copy of the book. Guide them to the front and back covers and read the title. Have students discuss what they see on the covers. Encourage them to offer ideas as to what type of book it is (genre, text type, fiction or nonfiction, and so on) and what it might be about.
- Show students the title page. Discuss the information on the page (title of book, author's name).
- Preview the table of contents on page 3. Remind students that the table of contents provides an overview of the book. Ask students what they expect to read about in the book, on the basis of what they see in the table of contents. (Accept all answers that students can justify.)

### Introduce the Reading Strategy: **Visualize**

- Explain to students that good readers often visualize, or create pictures in their mind, while reading. Visualizing is based on what a person already knows about a topic. Explain that one way to visualize is to draw a picture. Read aloud to the end of page 4.
- Model how to visualize using a drawing.  
*Think-aloud: Whenever I read a book, I always pause after a few pages to create a picture in my mind of the information I've read. This helps me organize the important information and understand the facts in the book. For example, on page 4, the author describes what Vietnam looks like. I imagined a long, narrow country with many beautiful bays on the ocean. I imagined dense green jungles, deep rushing rivers, and huge rock formations with the bright sun highlighting their jagged shapes.*
- Introduce and explain the **visualize worksheet**. Have students draw what they visualized from page 4 on their worksheet. Invite students to share their drawings.

### Introduce the Comprehension Skill: **Main idea and details**

- Write the following list of words on the board: *China, Vietnam, France, and Spain*. Ask students to describe what these words refer to (countries). Point out that these words help to identify a main idea (countries of the world). The words *China, Vietnam, France, and Spain* are details that support this main idea.
- Explain that sometimes the amount of information about a topic is so large that it is grouped into sections or chapters, each with its own main idea.
- Model using the table of contents to infer supporting details in the text.  
*Think-aloud: When I look at the table of contents on page 3, I see the words "Types of Caves." I already know the title of the book is Mysterious Caves. I know that there are underground caves and underwater caves and that caves can be found all over the world. I think that finding out about different types of caves is a supporting detail to the main idea, which is the topic of caves. When I read, I know that I will find out even more details about caves. As I read, I will pause after a few pages to review in my mind the important details. This strategy will help me make sure I understand what I'm reading. I know that good readers do this when they read, so I am going to look for supporting details as I read this book.*
- Have students turn to the table of contents and list some of the supporting details they think they will read about when they read the book *Mysterious Caves* (inhabitants, famous, and so on).

### Introduce the Vocabulary

- As students preview the book, ask them to talk about what they see in the photographs, maps, and illustrations. Reinforce the vocabulary words they will encounter in the text.
- Write the following story critical words on the board: *chambers, column, erosion, formation, passageways, and spelunkers*.
- Point out to students that looking for familiar parts within words can help them identify the meanings of new words. For instance, the word *erosion* sounds as though it comes from the base word *erode*. Explain that listening closely to the base sound of a word can help readers when thinking about what new words might mean.

- Explain to students that, while using context clues to define an unfamiliar word is a very good strategy, sometimes they will not find any context clues to help them. Model how students can use the glossary or a dictionary to locate a word's meaning. Have a volunteer read the definition for *formation* in the glossary. Have students follow along on page 4 as you read the sentence in which the word *formation* is found to confirm the meaning of the word.
- Point out the word *spelunkers* in bold on page 4. Have a volunteer read the pronunciation key in parentheses after the word. Work together as a class to read the word *spelunkers* aloud, using the correct pronunciation. Point out that the middle syllable is written in capital letters, signifying that it receives the emphasis when saying the word aloud.
- Have students locate each of the remaining content vocabulary words in the glossary. Read and discuss each of the definitions as a class.

### Set the Purpose


- Have students read to find out more about caves. Remind them to stop after every few pages to visualize the most important information and to draw on their worksheet what they visualized about it.



### During Reading

#### Student Reading



**Guide the reading:** Have students read to the end of page 8. Ask them to put an asterisk or a star next to information where they visualized. Encourage students who finish before everyone else to go back and reread.

- Model visualizing.  
**Think-aloud:** *When I read about Hang Son Doong, I imagined a single passage inside the cave that was over 4 kilometers long and 180 meters high—higher than the full length of a football field! I envisioned a football field on its end, reaching up into the sky. I pictured a city block of 40-story buildings fitting inside that cave. That's a lot of skyscrapers in one place! I thought about how humongous the cave must feel and imagined what it would be like to stand inside the darkness, marveling at the fact that all that space was completely underground.*
- Have students draw on their worksheet what they visualized as they read the first part of the book.
- Model identifying the main idea and details for a specific section.  
**Think-aloud:** *I read that in 2009, a farmer named Ho Khanh led a group of spelunkers into a cave that only he knew about. Its amazing size was eventually discovered, and now it is the largest cave known to exist. I read that one single passage was over 90 meters wide, 180 meters high, and 4 kilometers long. I also read that the cave contains a 60-meter cliff and dense secret jungles. On the basis of what I've read, I think the main idea of the section is: A cave named Hang Son Doong is the largest ever found on Earth.*
- Write the main idea on the board. Ask students to identify details that support this main idea (180 meters high, dense jungles, 60-meter cliff, and so on). Write these details on the board.
- **Check for understanding:** Have students read to the end of page 11. Have them visualize the information on those pages. Discuss what they visualized. Ask students to use their worksheet to add to their drawings as they visualize the information in the book. Point out that they can use their drawings to identify the important details on the pages.
-  Have students reread the section titled "Types of Caves" and underline the most important information. Invite them to work with a partner to identify the main idea of the section. Have them write the main idea in the margin of their book or on a separate piece of paper. Check individual responses for understanding.
- Have students read to the end of page 14. Have them discuss with a partner what they read and then together draw, on a separate sheet of paper, what they visualized the inside of a karst cave to look like.

-  Have students read the remainder of the book. Remind them to visualize as they read, and have them continue to put an asterisk or a star next to information where they visualized.
-  Have students make a question mark in their book beside any word they do not understand or cannot pronounce. Encourage them to use the strategies they have learned to read each word and figure out its meaning.

## After Reading

- Ask students what words, if any, they marked in their book. Use this opportunity to model how they can read these words using decoding strategies and context clues.

### Reflect on the Reading Strategy

- Ask students to explain or show how the strategy of visualizing helped them understand and remember important events in the story.  
*Think-aloud: When I read about the formation of stalactites and stalagmites, I pictured water slowly and continuously dripping inside a cave. I imagined the drips slowly evaporating, leaving behind little bits of limestone. I pictured the limestone building up, year after year, until a small stalactite formed from the ceiling. I envisioned this happening over many thousands of years until a large column was formed. Visualizing helped me to understand the formation of stalactites and stalagmites and to remember that part of the book.*
- **Independent practice:** Have students complete the visualize worksheet. If time allows, have them share their pictures when they have finished.

### Reflect on the Comprehension Skill

- **Discussion:** Talk about how stopping to review the important details helped students remember the facts and better understand the information in the book. Ask them to use the important details they identified to confirm or refine the main idea of the book.
- Have students reread pages 12 and 13, looking for supporting details about the main idea. Write the details about “Inside Caves” on the board (entrance, twilight zone, dark zone, stalactites, stalagmites, column). Ask students how this information supports the main idea of the section (Caves have three main areas and different types of formations). Write the main idea on the board above the supporting details.
- **Independent practice:** Introduce, explain, and have students complete the [main-idea-and-details worksheet](#). When students have finished working, discuss their answers.
- **Enduring understanding:** In this book, you learned about the different types of caves, how they’re formed, and what lives inside them. Now that you know this information, do you think it’s important for scientists to continue exploring Earth to discover new caves? Why or why not?

## Build Skills

### Grammar and Mechanics: Dashes

- Review or explain that a dash (—) is a punctuation mark used to indicate a break or omission. It is also used to clarify information within a sentence or sometimes to add an additional thought to the end of the sentence.
- Direct students to page 14 in the book. Write the following sentence on the board: *It takes a very long time to build a formation, drop by drop—many thousands of years.* Ask students how the dash is used in this instance (to clarify how much time it takes to build a formation).
- Have students return to page 14 in the book. Write the following sentence on the board: *Over time, the limestone deposits build up and form thin layers—just like a pearl.* Ask students how the dash is used in this instance (to add another thought to the end of the sentence). Discuss how these two examples of the use of dashes are different and how they are alike.

- Review or explain that hyphens are different from dashes and are used in compound adjectives, such as *world-famous* on page 20 in the book. Point out that hyphens are shorter in length and are used to connect two words. Remind students not to confuse a dash with a hyphen.



**Check for understanding:** Have students find and circle the dashes on page 20. Have them write how the dash is used in each instance on the page.

- **Independent practice:** Introduce, explain, and have students complete the [dashes worksheet](#). If time allows, discuss their responses.

### Word Work: Homophones



Have students turn to page 19. Read the following sentence aloud: *Scientists have identified a fungus that causes White Nose Syndrome, but they don't know how to cure it.* Have them circle the word *know*. Ask students to explain what the word means (to understand).



Have students turn to page 18. Read the following sentence aloud: *Many have almost no contact with the world outside.* Have them circle the word *no*. Ask students to explain what the word *no* means (not any).

- Ask students to identify which words in the sentences sound the same but are spelled differently and have different meanings (*know*, *no*). Write these words on the board. Explain that words that sound the same but are spelled differently and have different meanings are called *homophones*.
- Repeat the exercise for *there* (page 6: *There is also a 60-meter cliff they named the "Great Wall of Vietnam."*) and *their* (page 6: *They returned with equipment to scale the cliff, and continued their journey into the interior.*). Ask students for an example of another homophone that sounds like these two words but has a different meaning and spelling (*they're*). Have students think of a sentence of their own that contains the word *they're*. Encourage volunteers to share their examples.



Have students turn to page 11 and find and circle all the words that they know have homophone pairs. Have them write the homophones in the right-hand margin of the book (*in/inn, Sun/son, some/sum, which/witch, through/threw, you/ewe, way/weigh, or/ore, sea/see, rose/rows*). Write these pairs on the board.

- **Check for understanding:** Write the homophones *write* and *right* on the board. Have students use each word in a sentence on a separate piece of paper. Invite them to share their sentences aloud.
- **Independent practice:** Introduce, explain, and have students complete the [homophones worksheet](#). Discuss answers aloud after students finish.

## Build Fluency

### Independent Reading

- Allow students to read their book independently. Additionally, partners can take turns reading parts of the book to each other.

### Home Connection

- Give students their book to take home to read with parents, caregivers, siblings, or friends. Have them visualize with someone at home as they read.

## Extend the Reading

### Informational Writing Connection

Have students utilize Internet sources to find more information about a chosen topic from the following list: *Hang Son Doong*, *Lascaux Cave*, or *Mammoth Cave*. Have them search for answers to such questions as: *In which country was it discovered and when? How big is the cave? What plants and animals call this cave home? Have there been any new discoveries inside? What other interesting facts are there about this cave?* Have students write an informational paragraph with a main idea sentence at the beginning followed by many supporting details. Encourage students to incorporate photographs and/or illustrations, complete with captions.

Visit [Writing A–Z](#) for a lesson and leveled materials on expository writing.

### Science Connection

Provide print and Internet resources for students to learn more about White Nose Syndrome and its threat to the world's bat population. Give students index cards to record their facts and have them participate in a roundtable discussion about the facts and repercussions of this epidemic. Lead the discussion from a scientific viewpoint, reminding students of the circle of life and its interdependent nature.

### Skill Review

[Discussion cards](#) covering comprehension skills and strategies not explicitly taught with the book are provided as an extension activity. The following is a list of some ways these cards can be used with students:

- Use as discussion starters for literature circles.
- Have students choose one or more cards and write a response, either as an essay or as a journal entry.
- Distribute before reading the book and have students use one of the questions as a purpose for reading.
- Cut apart and use the cards as game cards with a board game.
- Conduct a class discussion as a review before the book quiz.

## Assessment

### Monitor students to determine if they can:

- consistently use the strategy of visualizing to comprehend the text during discussion and on a worksheet
- identify the main idea and supporting details to better understand the text in discussion and on a worksheet
- correctly identify the use of dashes as punctuation; distinguish dashes from hyphens during discussion and on a worksheet
- accurately identify and understand the use of homophones during discussion and on a worksheet

### Comprehension Checks

- [Book Quiz](#)
- [Retelling Rubric](#)