

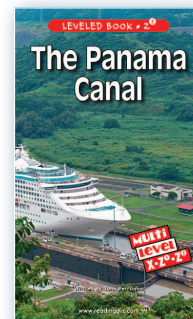
Focus Question:

Why is the Panama Canal considered a colossal engineering feat?

Book Summary

Text Type: Nonfiction/Informational

Celebrated as one of the modern wonders of the world, the Panama Canal forever changed trade and travel in the Americas. *The Panama Canal* provides students a look at the obstacles and triumph in completing this engineering feat. The book can also be used to teach students how to understand cause-and-effect relationships and the proper use of prepositional phrases. The book and lesson are also available for levels X and Z1.



Lesson Essentials

Instructional Focus

- ☐ Summarize to understand text
- ☐ Understand cause-and-effect relationships
- ☐ Describe information provided by maps
- ☐ Recognize and use prepositional phrases
- ☐ Identify and understand synonyms and antonyms

Materials

- ☐ Book: *The Panama Canal* (copy for each student)
- ☐ Cause and effect, prepositional phrases, synonyms and antonyms worksheets
- ☐ Discussion cards
- ☐ Book quiz
- ☐ Retelling rubric

Vocabulary

Boldface vocabulary words also appear in a pre-made lesson for this title on VocabularyA-Z.com.

• Words to Know

Story critical: *canal* (n.), *commerce* (n.), *engineering* (adj.), *ingenuity* (n.), *isthmus* (n.), *locks* (n.)

Enrichment: *accommodate* (v.), *contracted* (v.), *coup* (n.), *malaria* (n.), *marine* (adj.), *morale* (n.), *naval* (adj.), *perished* (v.), *refurbishing* (v.), *scale* (v.), *stalled* (v.), *transcontinental* (adj.)

- **Academic vocabulary:** *difficult* (adj.), *problem* (n.), *project* (n.), *resolve* (v.), *series* (n.), *support* (v.)

Guiding the Reading

Before Reading

Build Background

- Discuss with students the early American pioneers and settlers. Ask students to share what they know about transportation at this time. Explain to students that in the 1800s, many Americans were beginning to move out West and that this journey was very difficult because of limited modes of transportation. Have students give examples of available transportation at this time.
- Show students a map of the world and identify the United States, Central America, and South America on the map. Explain to students that one mode of transportation for early Americans was to take a ship from the East Coast of the United States around the southernmost tip of South America and all the way up to California. Show students this route on the map and point out Cape Horn. Have students share their ideas about the benefits and drawbacks of this journey.

Introduce the Book

- Give students their copy of *The Panama Canal*. 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, 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: Summarize

Explain to students that one way to understand and remember information in a book is to write a summary, or brief overview, of the most important information in each section or chapter. Point out that a summary often answers the questions *who*, *what*, *when*, *where*, and *why*. Have students read page 4

Guiding the Reading (cont.)

with a partner. Ask students to summarize what they read in groups. Invite volunteers to share their summaries with the rest of the class.

Introduce the Comprehension Skill:

Cause and effect

- Discuss cause-and-effect relationships. Explain that a *cause* is an action or event that makes something happen and an *effect* is what happens because of, or as a result of, an action or event.
- Explain to students that there can be more than one effect from a cause. Copy the top of the cause-and-effect worksheet on the board, and write *didn't study for my test* in the *Cause* box and *wasn't confident during my test* in the top *Effect* box. Ask students what else can happen when you don't study for a test. Record responses.
- Explain to students that they will be looking for cause-and-effect relationships as they read the book.

Vocabulary

Have students turn to the "Words to Know" box on the copyright page. Discuss each word with students. Then, have students turn to the glossary on page 19. Explain that the glossary provides definitions for the vocabulary words in the book. Point out the use of each content word and academic vocabulary word in the book, and then use each word in a different model sentence. Have students work in groups to create posters for these words. Have them include on each poster the word and its part of speech, the definition, the word in an example sentence, and a picture illustrating the meaning of the word.

Set the Purpose

- Have students read to find out more about why the Panama Canal is considered a colossal engineering feat. Write the Focus Question on the board. Invite students to look for evidence in the book to support their answer to the question.
- Have students make a small question mark in their book beside any word they do not understand or cannot pronounce. These can be addressed in a future discussion.

During Reading

Text-Dependent Questions

As students read the book, monitor their understanding with the following questions. Encourage students to support their answers by citing evidence from the book.

- *When did the Panama Canal open?* (level 1) page 4
- *How would you summarize traveling from New York to San Francisco before the Panama Canal?* (level 2) pages 6 and 7

- *Why wasn't de Lesseps was much of an engineer?* (level 3) page 9
- *What conclusions can you draw about President Theodore Roosevelt?* (level 3) pages 10, 11, and 12
- *What do you think would have happened if Gorgas never combated the spread of mosquito-borne diseases?* (level 3) page 12
- *What facts would you select to support the idea that Stevens solved many of the canal's problems?* (level 3) pages 14 and 15
- *How did the Panama Canal affect transportation across Panama?* (level 2) page 16
- *How would you test the new \$5.25 billion project to resolve the problem of traffic jams?* (level 3) page 18

Text Features: Maps

Explain that maps help readers understand where places are in the world. Have students work with a partner to review the map on page 5. Ask students: *How does the map support its title? How does a trip through the Panama Canal compare to a trip around Cape Horn? How could you use the scale on the map?* Have students review the other map in the book and discuss in groups what the map shows and why. Invite volunteers to share their thoughts with the rest of the class.

Skill Review

- Model for students how you summarize as you read, and direct them to stop at several points during reading to write a summary for each section. Invite volunteers to share their summaries with the rest of the class. Discuss with students how their summaries compare.
- Have students work in groups to periodically review the cause-and-effect relationships in the book. Have groups discuss these relationships and how they affect outcomes in the book.
- Model evaluating details to understand cause-and-effect relationships in the book.
Think-aloud: *The book is providing me with information about the cause-and-effect relationships of the Panama Canal. I read on page 6 that it was dangerous and took months to get from the Atlantic Ocean to the Pacific Ocean. This caused early Spanish explorers to want to link the Atlantic and Pacific Oceans. This is one of many cause-and-effect relationships I read about in the book.*
- Model how to complete the **cause-and-effect worksheet**. Have students identify details from the book and circle them. Then, have students discuss the details with a partner and determine the cause-and-effect relationships in the book.

Guiding the Reading (cont.)

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.

Skill Review

Worksheet: Cause and effect

Review the cause-and-effect worksheet that students completed. Have students share their work in groups. Invite volunteers to share with the rest of the class the relationships they chose. Point out that sometimes one effect leads to another and so on. Ask students why it is important to understand cause-and-effect relationships when considering a historic event or series of events.

Comprehension Extension

Discussion cards covering comprehension skills and strategies not explicitly taught with the book are provided for extension activities.

Response to Focus Question

Have students cite specific evidence from the book to answer the Focus Question. (Answers will vary. Reasons should include characteristics that make the Panama Canal unique. Samples: *The Panama Canal is considered a colossal engineering feat because the world had never seen anything like it before. Although many nations tried to link the Atlantic and Pacific Oceans, the United States accomplished this in 1914. Workers endured treacherous conditions, and the project took ten years. The fifty-mile-long canal used an innovative design of lakes and locks to connect ships to separate elevations of water, instead of connecting ships at sea level.*)

Comprehension Checks

- **Book quiz**
- **Retelling rubric**

Book Extension Activities

Build Skills

Grammar and Mechanics: Prepositional phrases

- Have students find and point to at least one preposition on page 7. Review with students that *prepositions* are words that show relationships between things. Ask students to identify possible prepositions that identify where, when, how, why, or with what something happens. Record students' examples on the board.

- Explain that a *phrase* is a short group of words and that a *prepositional phrase* is a group of words beginning with a preposition and ending with the word that is the object of the preposition. Write this sentence on the board: *In the mid-1800s, a group of Americans thought a railroad across Panama would make the journey easier.* Ask a student to come up to the board and circle the prepositional phrase and tell the type of information it provides (*In the mid-1800s, when*).
- **Check for understanding:** Have students look through the book to locate prepositional phrases. Ask them to share with a partner the type of information each prepositional phrase provides (how, when, why, and so on) and how each one links a word in the sentence.
- **Independent practice:** Introduce, explain, and have students complete the **prepositional phrases worksheet**. If time allows, discuss their answers.

Word Work: Synonyms and antonyms

- Write the word *difficult* on the board. Ask students to suggest a word that means almost the same thing (*challenging, hard, and so on*). Review or explain that a word that means the same or almost the same as another word is called a *synonym*. Ask students to suggest a word that means the opposite of *difficult* (*easy, effortless, and so on*). Review or explain that a word that means the opposite of another word is called an *antonym*.
- Have students turn to page 8 and locate the first sentence in the second paragraph. Read the sentence aloud and record it on the board: *In 1879, a group of French businessmen formed a company to dig a canal across Panama, with the experienced de Lesseps at the helm.* Circle the word *experienced*. Ask students to suggest a word that means the same or almost the same as *experienced* (*knowledgeable, skillful*). Ask students to suggest a word that means the opposite of *experienced* (*novice, untrained*).
- **Check for understanding:** Give pairs of students a thesaurus. Ask them to find the word *experienced* and have them name the synonyms listed. Have them also find antonyms for *experienced*. If needed, provide additional practice using the thesaurus.
- **Independent practice:** Introduce, explain, and have students complete the **synonyms-and-antonyms worksheet**. If time allows, discuss their answers.

Connections

- See the back of the book for cross-curricular extension ideas.