

About the Book

Text Type: Nonfiction/Informational Page Count: 20 Word Count: 894

Book Summary

Tsunamis is an informative book that tells about the 2004 Indian Ocean tsunami. Additionally, it provides a history of tsunamis, explains their causes, outlines vulnerable areas, and tells about the warning systems in place. A checklist tells how to survive a tsunami. Photos, maps, diagrams, and illustrations support the text.

About the Lesson

Targeted Reading Strategy

- Visualize

Objectives

- Use the reading strategy of visualizing
- Identify cause-and-effect relationships
- Understand how to read symbols within numbers
- Recognize and use content vocabulary

Materials

Green text indicates resources available on the website

- Book—*Tsunamis* (copy for each student)
- Chalkboard or dry erase board
- **Cause and effect, symbols, vocabulary 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

Content words:

Story critical: *devastating (adj.), earthquake (n.), evacuation (n.), fault (n.), siren (n.), tsunami (n.)*

Enrichment: *buoy (n.), magnitude (n.), meteor (n.), Richter scale (n.), tidal (adj.), volcano (n.)*

Before Reading

Build Background

- Give students a copy of the book and have them preview the front and back covers and read the title. Have students discuss what they see on the covers and offer ideas as to what kind of book this is and what it might be about.
- Invite students to preview the rest of the book by looking at the maps, photos, diagrams, and illustrations. Tell students to look at the glossary and index at the back of the book and review their uses. Point out that the words are listed in alphabetical order and have page numbers after them to tell readers where to go to find out more information. Ask what page tells about the Richter scale (page 8). Ask a volunteer to tell the difference between a glossary and an index (a glossary also gives a definition for the word).

Introduce the Reading Strategy: **Visualize**

- Explain and model visualizing.
Think-aloud: Whenever I read a book, I always pause after several pages to create a picture in my mind of what the author is describing. This strategy helps me keep track of everything, and it also helps me make sure I understand what is happening. I know that good readers always do this when they read, so I am going to visualize as I read this book.
- As students read, they should use other reading strategies in addition to the targeted strategy presented in this section.

Introduce the Vocabulary


- Remind students of the strategies they can use to work out words they don't know. For example, they can use what they know about letter and sound correspondence to figure out a word. They can look for base words, prefixes, and suffixes. They can use the context to work out meanings of unfamiliar words. Model how to apply word-attack strategies.
- Direct students to page 16. Have them find the word *buoys*. Model how they can use context clues to work out the meaning of an unfamiliar word. Explain that the sentences before it describe the tsunami warning system that is in place on the Pacific Coast. The sentence with the unfamiliar word in it says that there are *buoys* anchored at sea to detect a tsunami. The photograph on that page shows a device floating in a stormy ocean. Tell students that these clues make you think that the word *buoys* means *floating objects anchored in a body of water to warn of danger*. Have students follow along as you reread the sentence on the page to confirm the meaning of the word.
- Remind students that they should check whether a word makes sense by rereading the sentence.

Set the Purpose

- Have students read the book to find out more about tsunamis. Remind students to stop and visualize as they read to help them remember and understand what they're reading.

During Reading

Student Reading

- **Guide the reading:** Have students read to the end of page 10. Ask students if they stopped to visualize, or create a picture in their mind, of any of the images the author described in the book.
Think-aloud: When I read about a giant wall of moving water washing away entire towns, I paused to picture in my mind how that would look. I envisioned what it would look like to see a wave that tall and wide, moving faster than anyone could run. I envisioned a whole town under water after the giant wave hit.
- Have students share the pictures they visualized in their minds while reading.
-  Tell students to make a small question mark in their books beside any word they do not understand or cannot pronounce. These can be addressed in the discussion that follows.

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

- Have students share any other questions they had while they were reading. Ask how using the strategy of visualization helped them understand and remember what they read.
Think-aloud: When I read about how fast a tsunami can move, I paused to picture in my mind a wave moving as fast as a jet plane. I envisioned a jet plane racing in the sky above the ocean, moving at speeds as fast as 500 miles per hour. This picture helped me to understand what I had read and to remember that part of the story.

Teach the Comprehension Skill: **Cause and effect**

- **Discussion:** Discuss cause-and-effect relationships. Explain that a *cause* makes something happen, and the *effect* is what happens because of, or as the result of, the action or event. For example, if the temperature drops below 32 degrees a puddle will freeze. The *cause* is the temperature dropping; the *effect* is the puddle freezing.
- **Introduce and model:** To illustrate a cause-and-effect relationship from the text, have students turn to page 10. Ask what the cause of an earthquake is (sections of Earth's crust suddenly sliding against each other). Ask what the effect of an earthquake on the ocean floor is (a tsunami).
- **Check for understanding:** Have students review the text to find and circle the cause of loud sirens on the Pacific coastline (buoys detecting a tsunami) and the effect of the warning (people evacuating a community and fleeing to safety). Allow time for students to share their findings.
- **Independent practice:** Have students practice identifying cause-and-effect relationships by completing the [cause-and-effect worksheet](#). When they have finished, have students discuss their work and explain their answers with references to the text.
- **Extend the discussion:** Ask students what they thought of *Tsunamis*. Ask if they think that the world should invest in installing early tsunami detection devices along coastlines that don't already have them. Invite students to share their ideas.

Build Skills

Grammar and Mechanics: **Reading symbols within numbers**

- Direct students to the second paragraph on page 8. Ask them find the numbers that give measurements of earthquakes (6.75 and 9.0). Review or explain that when reading these numbers aloud, the decimal is read as *point* and the numbers are said separately, as in *seven five* instead of *seventy-five*. Practice saying the numbers with the class: *six point seven five, nine point zero*.
- Ask students to read the box at the bottom of the page entitled *How Strong Is It?* Practice reading the decimals within numbers (two point zero, four point five, six point zero, five point zero).
- Direct students to page 12. Ask them to find the numbers that identify a tsunami's top speed (200–500 miles per hour, 321–643 kph). Review or explain that when reading these numbers aloud, the dash is read as *to* and *kph* is read as *kilometers per hour*. Point out that sometimes miles per hour is written as *mph*. Practice saying the numbers with the class: *200 to 500 miles per hour, 321 to 643 kilometers per hour*.
- **Check for understanding:** Write the following on the board and ask volunteers to read them aloud:
 100–150 mph
 4.5
 9.75
 50–80 kph
 7.0
- **Independent practice:** Give students the [symbols worksheet](#). Discuss their answers aloud when everyone has completed their work independently.

Word Work: **Content vocabulary**

- Tell students that many of the words in the book are used to tell about tsunamis and earthquakes. Talk about content words such as *magnitude* and *devastating*.
- **Check for understanding:** Provide opportunities for students to say the new vocabulary words as they are used in the book and to use the words in their own sentences.
- **Independent practice:** Give students the [vocabulary worksheet](#). Each worksheet gives students the opportunity to work with two vocabulary words. Supply multiple copies for students to continue working on more words from the text if they have time.

Build Fluency

Independent Reading

- Allow students to read their books independently or with a partner. Encourage repeated timed readings of a specific section of the book. Additionally, partners can take turns reading parts of the book.

Home Connection

- Give students their books to take home to read with parents, caregivers, siblings, or friends.

Extend the Reading

Writing Connection

Have students write a first-person narrative about surviving a tsunami. Remind students of the tsunami survivor stories found on page 6 of the book. Ask them to include facts they have learned about tsunamis.

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

Social Studies Connection

Provide print and Internet resources for students to research the 2004 Indian Ocean tsunami of 2004. Have them locate the hardest hit areas on a world map and find information on the enormous waves, the changing coastlines, the death toll, and the destruction of property.

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:

- use the reading strategy of visualizing to better comprehend and remember events in nonfiction text
- accurately recognize and explain cause-and-effect relationships
- understand and read symbols within numbers
- recognize and use content vocabulary

Comprehension Checks

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