

### About the Book

Text Type: Nonfiction/Informational Page Count: 24 Word Count: 2,135

#### Book Summary

High-speed trains are a very popular and efficient mode of transportation in many parts of the world. This book introduces readers to three types of high-speed trains, including where they came from and how they work. Hop on board for a very fast ride!

### About the Lesson

#### Targeted Reading Strategy

- Summarize

#### Objectives

- Use the reading strategy of summarizing to understand text
- Understand and identify cause-and-effect relationships
- Identify and use proper nouns
- Arrange words in alphabetical order

#### Materials

Green text indicates resources available on the website

- Book—*High-Speed Trains* (copy for each student)
- Chalkboard or dry erase board
- 5" x 7" index cards
- Cause and effect, summarize, proper nouns, alphabetical order 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 [VocabularyA-Z.com](http://VocabularyA-Z.com).

- Content words:

Story critical: *axles* (n.), *engineer* (n.), *fuel efficient* (adj.), *network* (n.), *obstacles* (n.), *sustainable* (adj.)

Enrichment: *convenient* (adj.), *destination* (n.), *economic* (adj.), *fossil fuels* (n.), *generator* (n.), *greenhouse gases* (n.), *sensors* (n.), *viaducts* (n.)

### Before Reading

#### Build Background

- Ask how many students have ever ridden on a train. Ask volunteers to share any background knowledge.
- Take an informal poll of students to find out their preferred mode of transportation when traveling a long distance—car, airplane, or train. Ask individuals to give reasons for their choice.

## 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).

### 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 a brief overview, of the most important information in a section or chapter. Point out that a summary often answers the questions *who*, *what*, *when*, *where*, and *why*.
- Create a chart on the board with the headings *Who*, *What*, *When*, *Where*, and *Why*. Read page 4 aloud to students and model summarizing.  
*Think-aloud: To summarize, I need to decide which information is the most important to remember in a section. To do this, I can consider who and what the section was about, what happened, and when and why it happened. Then I can organize that information into a few sentences. This page introduces me to high-speed trains. Since this page does not mention any people, I will leave the Who category blank. Under the What heading, I will write high-speed trains; Under the Where heading, I will write France, and I will also write countries around the world because the second paragraph mentions that other countries are using or plan to use high-speed trains. When I organize all this information, a summary of this first page might be: High-speed trains are used in France and other countries around the world. Many more countries are planning to build high-speed trains to meet their transportation needs.*
- As students read, encourage them to use other reading strategies in addition to the targeted strategy presented in this section.

### 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 the *effect* is what happens because of, or as a result of, the action or event.
- *Think-aloud: I know that there are reasons, or causes for events to happen. When the temperature outside is very cold and it drops below 32 degrees Fahrenheit (0 degrees Celsius), a puddle of water will freeze. The cause is the temperature dropping; the effect is the puddle freezing.*
- Explain to students that there can be more than one effect resulting from a cause. Ask students what else can happen when the temperature drops below 32 degrees Fahrenheit.
- Tell students that they will be looking for cause-and-effect relationships as they read the book.

### Introduce the Vocabulary

- Model strategies that students can use to work out words they don't know. For example, they can use what they know about letters and sounds, base words, prefixes, and suffixes. They can also use the context to work out meanings of unfamiliar words.
- Have students find the word *axles* on page 5. Ask how they might read this word if they don't already know it. Suggest that they look at how it starts and where a syllable break might be. They might recognize the schwa sound of the letters */e*.
- Remind students to look for clues to a word's meaning in the sentence that contains the unfamiliar word, as well as in sentences before and after. Read aloud the paragraph on page 5 and ask students to infer what the word *axles* might mean (for example, it is something that turns).
- Explain to students that sometimes they will not find any context clues that define an unfamiliar word. Point out the glossary at the back of the book. Review or explain that a glossary contains a list of words from the book and their definitions. Model how students can use the glossary to locate a word's meaning. Have a volunteer read the definition for *axles* in the glossary. Compare the glossary definition to the sentence on page 4 that contains it.

## Lesson Plan *(continued)*

## High-Speed Trains


- Have students locate other content vocabulary words in the glossary and text. Read and discuss their definitions as a class.

### Set the Purpose

- Have students read to find out more about high-speed trains. Remind them to stop after each section to summarize what they've read.

### During Reading

#### Student Reading

- **Guide the reading:** Have students read to the end of page 5. Encourage those who finish early to go back and reread.
  - Model summarizing important information in the book.  
*Think-aloud: I made sure to stop reading at the end of this page to summarize what I'd read so far. First, I thought about the information that answered the questions who, what, when, where, and why. Then, in my mind, I organized the important information into a few sentences. In this section, I read that high-speed trains have been around since the 1930s. These early trains used diesel fuel, which powered a generator to turn the axle. Then, in 1964, Japan introduced the Shinkansen, or "bullet train," to the world at the Olympic Games. It went 135 miles per hour and ran completely on electricity.*
  - Invite students to assist you in filling in this information on the chart on the board. Have them decide which facts go in the various boxes of the chart. Point out that sometimes not all of the questions (*who, what, when, where, and why*) are answered in every section.
  - Create a summary with students for this page, on the basis of the information in the chart. (High-speed trains have been around since the 1930s and mostly ran on diesel fuel. The first totally electric high-speed train, the Shinkansen, was introduced in Japan at the 1964 Olympic Games. It could travel at 135 miles per hour.)
  - Create a two-column cause-and-effect chart on the board. Write *Airplanes not yet a common form of transportation* under the *Cause* heading. Ask students to use the text on page 5 to identify the effect of this cause (*most people rode trains to go long distances*). Write this information under the *Effect* heading.
  - Introduce and explain the [cause-and-effect worksheet](#). Ask students to write the information from the board on their worksheet. Have them read page 6 and then identify and write on their worksheet a cause-and-effect relationship that happened as a result of the Chunnel being completed (people can now travel from London to Paris in just 2 hours and 15 minutes).
  - **Check for understanding:** Have students read to the end of page 10. When they have finished reading, have them work with a partner to identify the important information for the section titled "How High-Speed Trains Work." (*Who*: blank; *What*: Most high-speed trains have a streamlined shape; they are powered by electricity and hook up to a pantograph; tracks are welded together and are as straight as possible; trains use computerized control systems; *Why*: shape helps them go faster and cuts down on drag; tracks are straight so trains won't have to slow down for curves; computerized systems used for safety; *Where*: blank).
  - Have students work together to create a summary of this section on a separate piece of paper.
  - Have students identify and write on their worksheet a cause-and-effect relationship that would happen if the tracks for the train were curved too tightly. (*Cause*: tracks curve too tightly; *Effect*: trains would have to slow down or risk coming off the track)
  - Have students read the remainder of the book. Encourage them to stop after each section and think about *Who, What, When, Where, and Why* for the information they just read. Remind them to also continue thinking about cause-and-effect relationships.
-  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

- After reading page 11, divide students into three small groups. Assign each group one of the following subsections of the book: “Shinkasen,” “TGV,” or “Maglev.” Have each group read and discuss the important information in their assigned subsection. Have them use the information to write a group summary of the subsection, making sure to include information about *Who, What, When, Where, and Why*.
- **Independent practice:** Explain and distribute the [summarize worksheet](#) to students and have them complete it on their own using one of the remaining sections of the book. Invite volunteers to read their summary if time allows.
- **Think-aloud:** *I know that summarizing keeps me actively involved in what I’m reading and helps me remember what I’ve read. I know that I will remember more about high-speed trains because I summarized as I read the book.*

## Reflect on the Comprehension Skill

- **Discussion:** Discuss with students the information on their cause-and-effect worksheet. Point out that sometimes one effect leads to another, and so on.
- **Independent practice:** Have students complete their cause-and-effect worksheet by identifying at least one more cause-and-effect relationship. If time allows, have them share their findings.
- **Enduring understanding:** In this book, you learned about the development of high-speed trains, how they work, and their advantages. Now that you know this information, would you prefer a high-speed train to other modes of transportation?

## Build Skills

### Grammar and Mechanics: Proper nouns

- Review or explain that a *noun* is a *person, place, or thing*. Ask students to turn to page 5 and give examples of nouns from the text (*trains, airplanes, people*, and so on).
- Review or explain that a *proper noun* is the name of a specific person, place, or thing. A proper noun always begins with a capital letter. Write examples of proper nouns from page 5 on the board (*Japan, Olympic Games, Shinkasen*, and so on).
- Remind students not to confuse a proper noun with the capital letter used at the beginning of a sentence or in the title of a section. Point out instances in the book where capitals are used but a proper noun is not present.
- **Check for understanding:** Write the following nouns in a column on the board: *country, city, train*. Ask volunteers to give examples of proper nouns for each noun, and write them on the board (*country: France; city: London; train: Maglev*).
- **Independent practice:** Introduce, explain, and have students complete the [proper nouns worksheet](#). If time allows, discuss their answers.

### Word Work: Alphabetical order

- Review or explain the process of putting a list of words in alphabetical order. Remind students that if the first letter of two words is the same, they must compare the next two letters instead.
- Write the words *airplane* and *train* on the board. Have a volunteer explain which word would appear first in alphabetical order (*airplane*) and why (because *a* comes before *t* in the alphabet).
- Write the words *economic* and *engineer* on the board. Point out that the words begin with the same letter (*e*). Ask a volunteer to tell which word would appear first in alphabetical order and to explain his or her thinking (*economic*, because the second letter, *c*, in *economic* comes before the second letter, *n*, in *engineer*).

- Write the words *Friday* and *France* on the board. Have a volunteer explain which word would appear first in alphabetical order (*France*) and why.
- **Check for understanding:** Write the words *transport* and *transportation* on the board. Have students write the words in alphabetical order and explain their thinking on a separate piece of paper.
- **Independent practice:** Introduce, explain, and have students complete the [alphabetical order worksheet](#). Discuss their answers aloud after they are finished.

## 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 students orally summarize each section of the book for someone at home.

## Extend the Reading

### Informational Writing Connection

Provide student pairs with additional print and Internet resources to further research one of the three high-speed trains mentioned in the book. Have them each create a 5" x 7" index card with important facts, such as where the line is located, when it was built, and so on. Ask student pairs to present their fact cards, including a map, if possible.

Visit [WritingA-Z.com](http://WritingA-Z.com) for a lesson and leveled materials on informational report writing.

### Social Studies Connection

Allow students, in pairs or small groups, to research the efforts being made to create high-speed rail lines in North America. Ask them to find out which cities will be connected, when the lines will be completed, estimated costs, and so on. Facilitate a discussion if time allows.

### 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 summarizing to comprehend the text during discussion and on a worksheet
- accurately identify cause-and-effect relationships in the text during discussion, and on a worksheet
- accurately recognize and use proper nouns during discussion and on a worksheet
- understand the process of arranging words in alphabetical order during discussion and on a worksheet

### Comprehension Checks

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