

About the Book

Text Type: Nonfiction/Informational Page Count: 16 Word Count: 550

Book Summary

Big Machines introduces readers to machines that are used to do heavy construction work. The book names the machines and describes various settings and uses for them. Photographs support the text.

About the Lesson

Targeted Reading Strategy

- Visualize

Objectives

- Use the reading strategy of visualizing
- Identify main idea and details in text
- Identify digraph *th* in words
- Identify and use adjectives
- Recognize and use antonyms

Materials

Green text indicates resources available on the website

- Book—*Big Machines* (copy for each student)
- Chalkboard or dry erase board
- Main idea and details, consonant digraph *th*, adjectives, antonyms 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:** *barge, bulldozer, cargo, concrete, container ships, crane, cranes, excavators, flatbed, helicopter, machines, ocean liners, passenger, resources, tractor, trailer,*

Before Reading

Build Background

- Ask students what they know about big machines. Ask how big machines help people do work and where a person might go to find one.
- Ask students to close their eyes and visualize, or picture in their mind, a dump truck at work. Ask them to share what they see.

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 and what it might be about.

- Show students the title page. Talk about the information on the page (title, author's name, illustrator's name).
- Preview the table of contents on page 3. Ask students what information they can tell from looking at the section titles. (Accept any answers 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 6.
- Model how to visualize.
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 ideas in the book. For example, on page 6, the author tells us that big machines are used to build tall buildings, bridges, and roads. I have seen huge cranes on construction sites lifting enormous pieces of metal and carrying them toward tall buildings covered in scaffolding. I can picture this happening in my mind. I can also picture big machines moving earth around the area where a new bridge is being built over a freeway. I'm going to remember to stop and visualize what the author is describing if I come across something that's hard for me to understand. This strategy will help me understand and remember the new information I read.*
- As students read, encourage them to 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 the 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. Have students find the word *concrete* on page 8. Tell students that they can look at the letter with which the word begins and then use what they know about syllables and vowels (one vowel sound per syllable) to sound out the rest of the word. Remind students that the silent e at the end of *concrete* makes the other e have the long vowel /e/ sound.
- Tell students to first look for a clue to the word's meaning in the sentence containing the unfamiliar word. Explain that they will not always find a context clue in the same sentence, but that other information in the paragraph explains it.
- Remind students that they should check whether a word makes sense by rereading the sentence.

Set the Purpose


- Have students read the book to learn more about big machines. Remind them to stop and visualize new information as they read to help them understand and remember what they're reading.

During Reading

Student Reading

- **Guide the reading:** Have students read to the end of page 8. Encourage those who finish early to go back and reread. Ask students to share what they visualized as they read the book.
- Model visualizing.
Think-aloud: *When I first read about the large power shovels called excavators, I paused to picture in my mind how huge they are. I visualized a shovel as large as a swimming pool scooping dirt from the earth. Then I pictured the earth emptying out of the huge shovel and pouring into a large pile on the ground.*
- Have students share pictures that they visualized while reading.

- **Check for understanding:** Lead students through a visualization/observation activity. Choose one of the photos in the book. Have them look very closely at the photo for 15 to 20 seconds. At the end of that time, have students close their book and then close their eyes briefly, visualizing the photo they just looked at. Ask what they remember about the picture. Encourage them to give details that go beyond naming the machine. Prompt as necessary, asking questions such as: *Did the loader have tires? Were there any trees in the picture? How many people were in the photo? Were there tire marks on the road?* Next, allow students to look at the photo again. Discuss the details that were remembered and mention the ones that were not. Repeat with other photos, as time allows.

 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

- 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 the skycranes on page 15, I pictured a helicopter moving slowly across the sky with a bulldozer hanging beneath it. Then I visualized the helicopter reaching its destination on a hillside and gently setting down the bulldozer on the ground. In my mind, I see that the hillside has no roads. It looks very isolated so I understand that the skycrane is the only way to get the bulldozer to that place. This helped me understand how skycranes are used, and to remember that part of the book.

Teach the Comprehension Skill: Main idea and details

- **Discussion:** Ask students whether making pictures in their mind helped them understand and remember what they read about big machines. Ask them to share any ideas or concepts they found especially interesting or surprising.
- **Introduce and model:** Review or explain to students that many books are about one thing. Tell students that it is easy to tell what a book like this one is about because the topic, or main idea, is the title of the book. Direct students to the table of contents. Explain that each section in this informational book contains details about big machines. Have students look at the second section title. Explain that the main idea of this section is building tall buildings. It tells details about the types of big machines used to build tall buildings (excavators, bulldozers, dump trucks, concrete trucks, flatbeds, and cranes). Explain to students that finding details and visualizing them are good ways to understand and remember what a book is about.
- **Model how to find the main idea and details on pages 13 and 14.**
Think-aloud: The section title on page 13 is "Big Machines on Water" and the photographs show ships and boats. I know that the main idea in this section is that there are big machines that work on water. When I read the pages, I found details about different kinds of big machines that work on water. For example, I read that tugboats push and pull things over water and oil tankers carry huge amounts of oil from place to place.
- **Check for understanding:** Have students turn to the beginning of section 3 (*Building Roads*). Ask them what the main idea of the section is. Ask students for some examples of details in the section that tell more about building roads (*large scrapers get rid of trees, loaders dig up dirt and rocks, dump trucks carry it all away, graders smooth the roadway, pavers lay the road surface, rollers press down the surface to make it smooth*).
- **Independent practice:** Introduce, explain, and have students complete the [main-idea-and-details worksheet](#). If time allows, discuss their answers.


 **Extend the discussion:** On the inside back cover of their book, have students write a short paragraph telling something interesting they learned about big machines, using a main idea and giving supporting details.

Build Skills

Phonics: Identify digraph *th*

- Write the words *thing*, *another*, and *earth* on the board and say them aloud with students.
- Have students say the /th/ sound aloud. Then run your finger under the letters in the words as students say the whole word aloud. Ask students to identify which letters represent the /th/ sound in the words *thing*, *another*, and *earth*.
- Circle the *th* letter combination in each word. Explain to students that the letters *t* and *h* together represent the /th/ sound, which can appear in the beginning, middle, or end of words.
- Have students practice writing the *th* letter combination on a separate piece of paper as they say the sound the letters represent.
- **Check for understanding:** Write the following words on the board that contain the /th/ sound, leaving out the *th* digraph: *other*, *third*, *teeth*. Say each word aloud. Have students complete and write each word on a separate piece of paper. Then have them read the words to a partner.
- **Independent practice:** Introduce, explain, and have students complete the [consonant digraph *th* worksheet](#). If time allows, discuss their responses.

Grammar and Mechanics: Adjectives

- Write the following sentence on the board: *Big machines are used to move heavy things*. Ask students to find two describing words (*big*, *heavy*). Review or explain that describing words are called *adjectives* and an adjective describes a noun. Ask students to tell the nouns the adjectives are describing in the sentence (*machines*, *things*). Have them turn to page 6 and find another adjective and the noun it describes (*tall*, *buildings*).
-  **Check for understanding:** Have students work in pairs, looking through the book to page 10 and circling adjectives in one color and the nouns they describe in another color. Invite them to share the adjectives and nouns they circled.
- **Independent practice:** Introduce, explain, and have students complete the [adjectives worksheet](#). If time allows, discuss their answers.

Word Work: Antonyms

- Write the word *big* on the board. Ask students to suggest a word that means the opposite of *big* (*small*, *tiny*). Review or explain that a word that means the opposite of another word is called an *antonym*.
- Have students turn to page 10 to find the words *smooth* and *flat*. Ask students to suggest a word that means the opposite of *smooth* (*bumpy*, *rough*). Ask students to suggest a word that means the opposite of *flat* (*uneven*, *wrinkly*).
- Show students a thesaurus. Review or explain how a thesaurus is used. Model how to look up the word *smooth* and point out the antonyms given. Tell students that synonyms are also listed with each entry. Remind students that *synonyms* mean the same or nearly the same thing as the entry word. Point out that antonyms are usually listed after synonyms in a thesaurus.
- **Check for understanding:** Give pairs of students a thesaurus. Ask them to find the word *simple* and have them confirm the antonyms. If needed, provide additional practice using a thesaurus.
- **Independent practice:** Introduce, explain, and have students complete the [antonyms worksheet](#). Tell them to confirm the antonyms by looking in a thesaurus. If time allows, discuss their answers.
- **Extend the discussion:** Give every student a slip of paper with one of the words from the following antonym list written on it: *simple*, *difficult*, *deep*, *shallow*, *out*, *in*, *giant*, *tiny*, *up*, *down*, *smooth*,

bumpy, pull, push, long, short. (Hand out two slips of paper for each word.) Allow students to walk around the class until they locate their antonym partner. Next, have partners sit together and make sentences using each of their words. Ask partners to stand up together, say their antonyms aloud, then read their sentences.

Build Fluency

Independent Reading

- Allow students to read their book independently. Additionally, allow partners to 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.

Extend the Reading

Writing and Art Connection

Have students look at the photo on page 11. Tell them to make up a name and purpose for this big machine. Next, have students write and illustrate at least two creative paragraphs about the machine, telling how it works, where it is found, and what it does. Remind them to include a main idea and supporting details for each paragraph. Allow students to share their writing with the class.

Movement Connection

Have students use interpretive body movements to depict various machines included in the book. For example, one student might play the part of the tugboat and pull three other students who are linking arms (depicting the barge). Students could use a whirling arm motion to depict the helicopter blades, or make the scooping motion of a power bucket. Ask them to make up their own interpretive movements to depict other machines explained in the text. For extra fun, have students add sound effects.

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 understand and remember information in text
- accurately identify the main idea and supporting details in text during discussion and on a worksheet
- correctly identify consonant digraph *th* in words during discussion and on a worksheet
- accurately identify adjectives and the nouns they describe during discussion and on a worksheet
- accurately identify and use antonyms during discussion and on a worksheet

Comprehension Checks

- Book Quiz
- Retelling Rubric