

Strand: Economics/Technology

Theme: Machines

Purpose for Reading: To develop understandings of how sundials and pendulum clocks work.

Comprehension Strategies: Extracting information, comparing and contrasting.

Vocabulary

Dictionary Words: clock front, gears, pendulum, spring, sundial

Vocabulary Words: big hands, case, cities, clocks, gears, gnomon, hour, night hours, pendulum clocks, shadow, small hand, sundial face

High-Frequency Words: an, big, could, day, did, do, from, have, if, make, no, not, of, one, people, put, some, that, their they, too, two, very, was, were, when, with

Before Reading

- Ask students what they know about telling time. *What are the different ways we can tell the time? What could you use if you didn't have a watch or a clock?*
- Read the title and invite students to discuss the clock on the cover. Collect a clock face for the discussion. *Is the clock on the cover digital or analog? Discuss the difference. What does an analog clock look like? Explain that the front of the clock is called the face. What does this clock have on its face? What can you see inside the clock on the cover? Why do you think the people who made this book might want you to see inside it?*
- Read the title page together. Invite students to discuss the clocks in the photo. Prompt them by asking what they notice about the times on the clocks and the names under them. Support students

to build understandings that when it is midday here, the time in other places will be different. Tell them that the time depends on the position of the sun in relation to each place.

Introduce the Picture Dictionary

- Ask students to turn to the picture dictionary. Read and discuss the photos and labels. Ask students to describe what they see in each photo. Support students to build knowledge of the meanings of these words.

Take a Photo Walk

- Pages 4–5: Invite students to look at the illustration and read the title and labels. Tell them that a sundial needs to be in the sun to work. Read the text on page 5.
- Pages 6–7: Have students read the heading on page 6. Read the caption and invite students to discuss what they notice about the clocks in the photo. Explain what a pendulum clock looks like. Tell students that people still use pendulum clocks.
- Pages 8–9: Have students examine the photo and read the caption. Show them how a pendulum swings.
- Pages 10–11: Read the heading, label, and caption. Discuss what a spring is. Tell students that some clocks need to be wound up to work. *As the clock is wound, the spring inside gets tighter. As the spring unwinds it makes the gears turn.*
- Pages 12–13: Have students read the caption and describe what the gears look like. *What else do you*

know of that has gears? Discuss the caption.

- Pages 14–15: Ask students to read the heading and discuss what they notice about the photo. Read the caption and ask students how many minutes there are in one hour. Use the clock face to show some times that are exactly on the hour. Then show times that require reading of the minute hand. Explain to students that each of the notches around the clock face indicates one minute.

Read the Book

- Ask students to read the title independently.
- Turn to pages 2–3. Read the dictionary words and the sentences on page 3.
- Turn to pages 4–5. Ask students to read these pages independently. *Remember to use your eyes, and just point if you need help to check.*
- Ask students to continue reading the book independently. Provide support as needed.

After Reading

Comprehension

- Invite students to revisit the book and discuss the different components of the sundial and pendulum clock that make them work. Make a comparison chart of students' responses. Prompt with questions such as, *Which clock needs to be placed in the sun? Why won't a sundial work in the shade?*
- Support students to extract information from the book. Prompt with questions like, *What gives the pendulum clock its energy? Which part of the pendulum clock has zigzag edges? What do the hands and numbers tell us?*
- Ask students to talk about the type of clock they have at home. Draw a table and have students think of a sentence about each clock in the table.

For example, *In students' homes, there are more digital clocks than pendulum and analog clocks and sundials.*

Vocabulary and Word Recognition

- Ask students to find the word *something* on page 3. Write the word on the board. Ask students to find the two parts of the word they know and clap the syllables. Tell students that if they know how to write each part of this word, it is easy to make this word. Ask students what type of word this is. Have them suggest other compound words. Have students think of sentences with *something* in them. Write them on the board. Ask students to write the word *something*, and then check it. Have them write it five times, saying it as they write it.

Oral Language

- Have students work in pairs. Have one student give a word from the picture dictionary and the other say a sentence about the word using information from the book.

Writing

- Have students write three sentences about clocks.

Creative Extension Activities

- Have students make a clock face using a paper plate, a split pin and one short and one long cardboard strip. Have students add the numerals.
- Have students draw these clocks: digital clock, pendulum clock, sundial, wristwatch.

Independent Follow-Up Activities

- Reread the book to a partner to build fluency.
- Complete the activities on page 16.
- Complete the photocopiable activities.

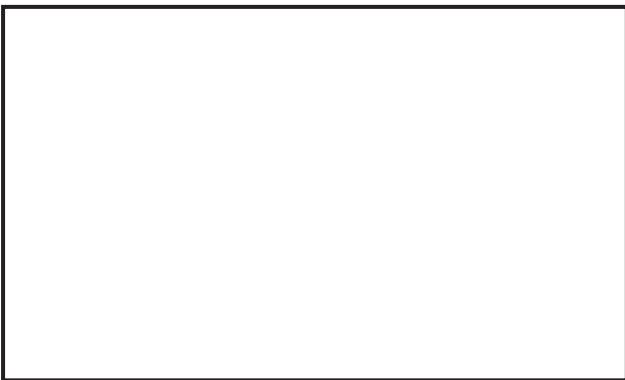
Name: _____

Choose three things from the picture dictionary.

Draw them in the boxes.

Use the book to write a sentence about each thing.







Name: _____

Write what you are doing at these times each day.

Seven o'clock in the morning: _____

Nine o'clock in the morning: _____

Eleven o'clock in the morning: _____

One o'clock in the afternoon: _____

Three o'clock in the afternoon: _____
