

### Strand: Energy

### Theme: Motion

**Purpose for Reading:** To develop understandings of how push and pull forces make bicycles move.

**Comprehension Strategies:** Identifying cause and effect, applying knowledge, recognizing chronological and sequential order.

### Vocabulary

*Dictionary Words:* brake, chain, handlebar, helmet, pedal

*Vocabulary Words:* boy, position

*High-Frequency Words:* away, did, do, down, from, get, has, his, if, make, not, of, one, out, want, when, where, will, with, would, your

### Before Reading

- Invite students to talk about riding a bicycle. Ask them to explain how to ride a bike to someone who has never ridden. Record these steps in order on the board.
- Read the title and invite students to discuss the cover photo. *Where does this boy look like he is riding his bike? What protective gear is he wearing? What is he holding onto? What are the silver handles attached to the handlebars?*
- Read the title page and invite students to talk about the photo.

### Introduce the Picture Dictionary

- Ask students to turn to the picture dictionary. Read and discuss the photos and labels. Ask students to discuss the item in each photo. Ask questions such as, *What is this called? What does it do? Do all bikes have this?*

### Take a Photo Walk

- Pages 4–5: Invite students to look at these pages and discuss what this boy is going to do. Read the caption and ask students what the boy is doing to change the position of his bike. *Is he pulling the bike or pushing it?*
- Pages 6–7: Ask students to look at the picture and talk about what the boy will do next. Read the caption. *What is he pushing against? Which direction is he pushing the bike, forward or backward?*
- Pages 8–9: Invite students to look at this photo and discuss what the boy is doing now. Read the caption and ask students what the boy is pushing against now. *What does the bike do when you push the pedals? What part of the bike do the pedals move? Which direction does the bike go when the boy uses a push force?*
- Pages 10–11: Have students look at page 11 and read the label and caption. *What does the chain do? What are the things that create the push force? What do you think would happen if the chain broke? Could the boy ride the bike?*
- Pages 12–13: Ask students to look at this photo and read the label and caption. *What does a brake do? Besides a bike, what else has a brake to make it stop? If a push force makes the bike go forward, what kind of force makes the bike stop?* Read the caption aloud together if needed and discuss the answer.
- Pages 14–15: Have students look carefully at this photo to work out what the boy is trying to do. Read the caption. *How is he trying to change direction?*

## Read the Book

- Ask students to turn to the cover and 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 point if you need help to check.*
- Ask students to continue reading the book independently. Provide support as needed.

## After Reading

### Comprehension

- Walk through the book, revisiting the steps needed to ride a bike. Add any extra steps that were omitted before reading.
- Have students revisit the photos in the book and talk about how the boy in the photo is making his bike go. Prompt with questions such as, *How did the boy get his bike out of the garage? What sort of force did he use to move it forwards?* Have students stand up with a partner. Have one partner spread their arms like handlebars while the other partner uses push force to move them. Swap turns. *What happened when your partner used push force on your arms when they were outstretched? When the boy sits on the bike, how does he make the push force?*
- Have students apply their knowledge of push and pull forces outside the book. Have them think of ways they could demonstrate pull force with their partner. Share students' responses and try them out.

### Vocabulary and Word Recognition

- Have students find the word *push* on page 4. Have them say the word. Write the word on the board and have students use the word *push* in sentences.

Write the sentences on the board. Invite students to write the word *push* in each sentence. Have students write the word *push* five times, saying it as they write it.

- Repeat for the word *pull*.
- Have students search through the book tallying up the number of times *push* and *pull* appear.

### Oral Language

- Have students work with a partner to describe when to use push and pull forces when riding a bike.

### Writing

- Have students write one sentence about when to use a push force when riding a bike, and one sentence about when to use a pull force when riding a bike.

### Creative Extension Activities

- Have students draw two pictures of themselves riding a bike. The first picture should show them using a push force and the second picture should show them using a pull force. Tell students to use arrows and the labels *push force* and *pull force* to make their picture easy to read.
- Have students work with a partner to think of all the ways they use push and pull forces. Have them record their responses on a table.

### Independent Follow-Up Activities

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

Name: \_\_\_\_\_

Write about riding a bike.

Write what you like, dislike, and find interesting.

Write your reasons in each box.

Like:	Dislike:
Find interesting:	

Name: \_\_\_\_\_

How do you keep safe when you play sports?  
Read the words. Draw pictures. Write a sentence  
about how each thing keeps you safe.

Knee pads

Shin pads

Elbow pads

Helmet