# Gas and Air Science

# Level 15

# **Strand: Matter**

**Purpose for Reading:** To develop understandings of how gas and air can move objects or change their shape.

**Comprehension Strategies:** Determining importance, making inferences.

# Vocabulary

Dictionary Words: ball, balloon, leaves, sailboat, water

*Vocabulary Words:* autumn, bread, fruit, glass, soccer ball

*High–Frequency Words:* all, be, but, day, do, down, get, help, his, if, little, made, make, may, no, not, of, one, some, that, them, there, they, too, us, what, when, will, with, your

# **Before Reading**

• Read the title on the cover and invite students to describe what is happening in the cover photo. Ask students to predict what the title means and make a link to the sailboat. Discuss what a sailboat needs so it can move.

• Read the title page and have students discuss the photo. What is going into the balloon? Tell students that people breathe air into their bodies and a gas out of their bodies. Tell students that the balloon is filling up with the gas that the girl is blowing out.

• Tell students that this book is about matter. Matter is the name given to everything around us. The air making the sailboat go and the gas in the balloon are matter. Ask students to suggest other things that are matter.

# **Theme: Physical Properties**

# Introduce the Picture Dictionary

• Ask students to turn to the picture dictionary. Read and discuss the photos and labels. Ask students to describe what is happening in each photo. Tell them that all these things are matter.

# Take a Photo Walk

• Pages 4–5: Invite students to look at the photo and read the caption. Ask students why the water takes the shape of the glass. *Can you see some things in this photo that are matter? What are they?* 

• Pages 6–7: Ask students to read the caption and look at the photo. *How does the air change the shape of the balloon?* 

• Pages 8–9: Have students look at the photo and read the caption. What is the boy pumping into the ball? What does a ball look like before it is pumped up? What happens to the shape of a ball when it is filled with air?

• Pages 10–11: Invite students to look at the photo and read the caption. *What is making the leaves move? Can you see the wind? How do we know it's there?* 

• Pages 12–13: Have students look at the photo and read the caption. *What would happen if the wind was strong? How would the sailboat move? Why?* 

• Pages 14–15: Ask students to look at the illustration and read the title and labels. Ask students if they have seen steam before. *What does it look like?* Talk about how the steam causes condensation on the window. Ask students if they have ever left a cold drink on the table and come

back to find the table wet. Tell them that this is also caused by condensation.

# **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 just point if you need help to check.* 

• Ask students to continue reading the book independently. Provide support as needed.

# After Reading

# ComprehensionInvite students to revisit the book and find the

important information about matter. Walk through the book prompting students with questions or statements such as, *Read the first sentence and find the important words about matter*. Record students' responses on the board.

• Probe students to check understanding. Use questions such as, *How can water take the shape of a glass? How can air change the shape of a ball or balloon?* 

• Have students extend their knowledge beyond the book. Have students think of more examples of matter that can change shape like water can.

# Vocabulary and Word Recognition

• Have students find the word *water* on page 4. Write the word on the board and tell students to look carefully through the word to remember it. Have students think of sentences with the word *water* in them. Write them on the board. Ask students to come out to write the word *water* in each sentence. Ask students to write the word *water* five times, saying it as they write it.

# Oral Language

• Have students work in pairs. Have them take turns thinking of new captions for the pictures.

# Writing

• Have students choose one thing from the picture dictionary and write three sentences about it.

# **Creative Extension Activities**

• Give students balloons to blow up. Let them use their balloons to make papier mâché balls.

• Provide examples of matter that can change shape, for example, play dough, modelling clay, slime, etc. Have students create different shapes with these materials.

# Independent Follow-Up Activities

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

Gas and Air	BLM
Name:	
Write an interesting fact about each of these thir	ngs.
Ball:	
Balloon:	
Leaves:	
Sailboat:	
Water:	

Name:

Complete the activities. Use the book to help you.

What is matter?

Make a list of hard things and soft things.

Hard Things	Soft Things

Write an interesting fact about water.