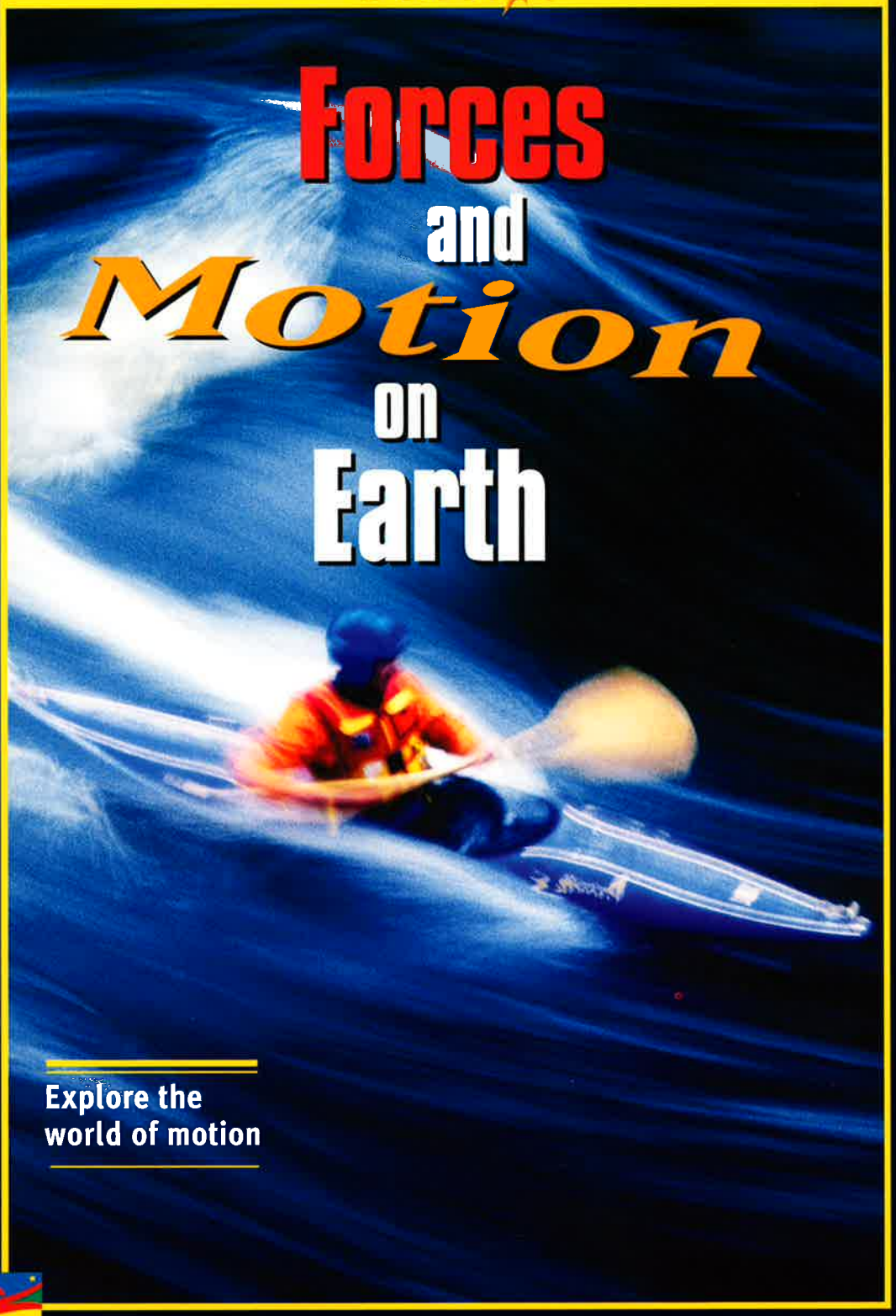
BRIDGES™

Forces and Motion on Earth



Explore the world of motion

GLEN PHELAN

Benchmark EDUCATION

For teachers' inspection ONLY

SCIENCE
Forces and Motion
Level 40 R

READING
Comprehension Skill:
Draw Conclusions

As you read, look for many clues and pieces of evidence that help you draw conclusions. Conclusions are not stated in the book but have enough evidence to be proven.

Phonics/Word Study:
r-controlled **e, i, u**

As you read, look for words with an **r**-controlled **e**, **i**, or **u**, like **pattern**, **circles**, and **curtain**. This sound in a syllable rhymes with the word **her**.

Look for these text and graphic features.

Text Features

- Table of Contents
- Introduction
- Sidebars
- Conclusion
- Glossary
- Index
- Information about the author
- Vocabulary words in boldfaced type
- Captions for photos, diagrams, and illustrations
- Bulleted lists. Pages 11, 17
- Checkpoints. Check yourself to see that you understand what you have read. Pages 14, 27

Graphic Features

- Photographs
- Experiments. Pages 11, 15, 17, 23

SCIENCE
The Big Idea:

This book describes forces and motion on Earth. It tells how forces and motion on Earth work and how they affect us.

Look for these special information features.

Content Sidebars

- It's a Fact. Interesting facts about forces and motion. Pages 7, 9, 19
- Solve This. Solve these math problems to learn more about forces and motion. Pages 20, 21, 25
- Everyday Science. See how science is part of your daily life. Page 15
- Careers in Science. Learn about jobs for people interested in forces and motion. Page 29
- They Made a Difference. Meet people who are important to forces and motion. Page 22

Content Vocabulary

air resistance	friction	magnetic field	motion
balanced forces	gravity	magnetism	unbalanced fo
force	magnet	mass	weight

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FORCES AND MOTION ON EARTH

by Glen Phelan

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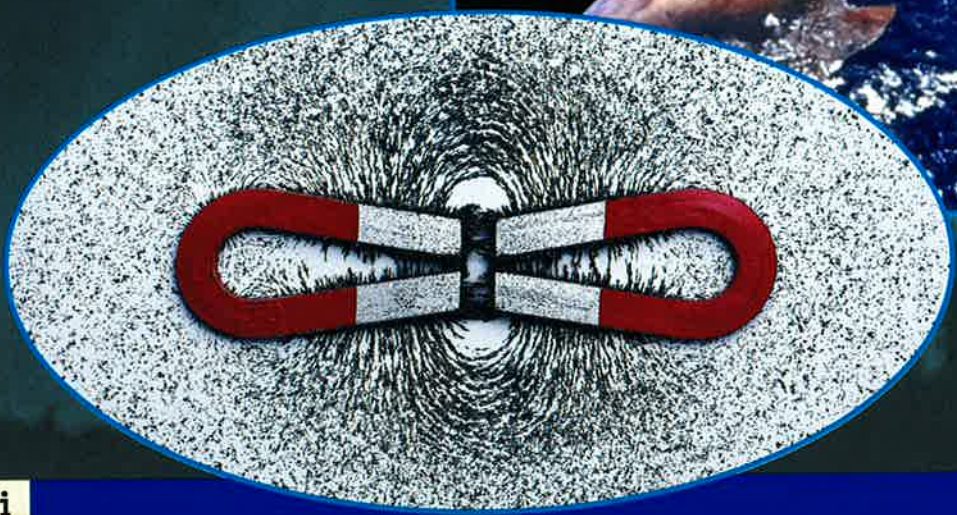
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Pictures To Think About

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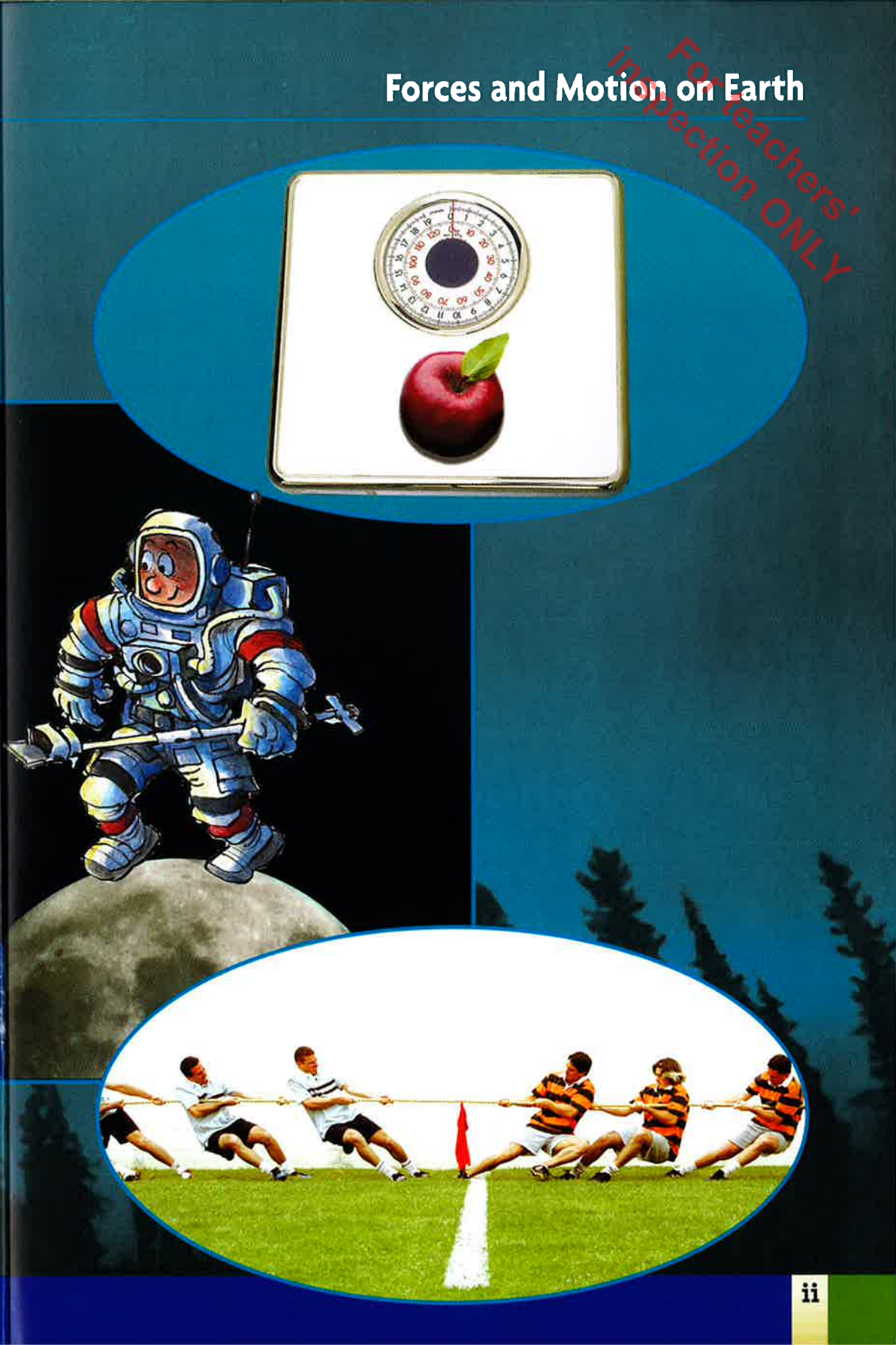






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Words To Think About

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Characteristics

- a force
- happens when things rub together
- ?

friction

What do you think the word **friction** means?

Examples

- tire pressing against road
- pencil writing on paper
- ?

gravity

What do you think the word **gravity** means?

- Latin: **gravis** (heavy)
- Latin: **-ity** (degree of)

Read for More Clues
friction, page 6
gravity, page 18
mass, page 19

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mass

What do you think the word **mass** means in this book?

Meaning 1
amount of matter in an object (noun)

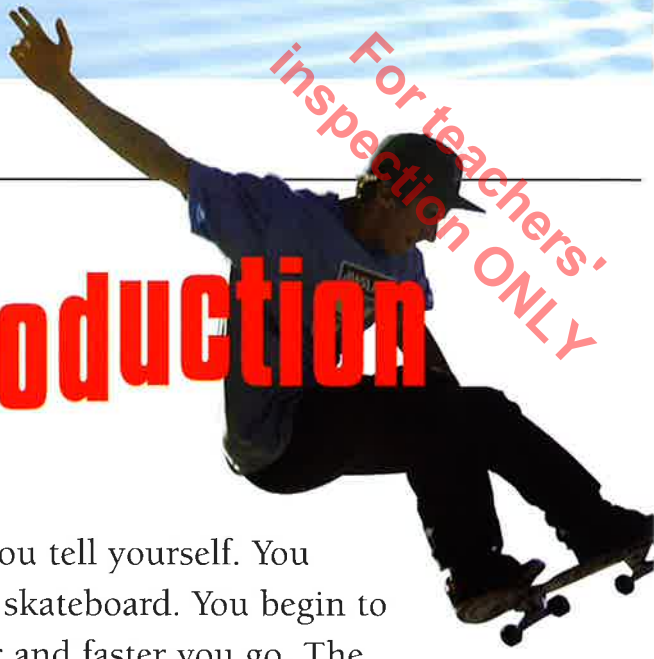
Meaning 2
large group of people (noun)

Meaning 3
main part of something (noun)



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Introduction



"Keep your balance," you tell yourself. You crouch low on your skateboard. You begin to roll downhill. Faster and faster you go. The wind is blowing hard in your face now. Will you make it up the other side of the ramp? Yes!

What a wild ride! What a fun way to explore the science of **motion** (MOH-shun). Motion is any change in an object's position. You may not be a skateboarder, but you make different motions every day. When you raise your hand in class, you move it. That is a motion. When a flag waves in the wind, it changes position. That is also a motion.

Look around you on your way home from school. You might notice a hundred things moving. Why do they move? How do they move?

