

**Science Studies Weekly—Challenger (Grade 5)**  
**Teacher Resource Book**

**Name:** \_\_\_\_\_  
**Science Studies Weekly: Challenger (5<sup>th</sup> Grade)**

**Date:** \_\_\_\_\_  
**Week 7, 1st Quarter**

Read each question and the answer choices. Fill in the circle that goes with the correct answer.

- 1 Standing still is an example of
  - Ⓐ potential energy
  - Ⓑ electric energy
  - Ⓒ light energy
  - Ⓓ kinetic energy
  
- 2 Jumping up and down is an example of
  - Ⓐ electric energy
  - Ⓑ potential energy
  - Ⓒ light energy
  - Ⓓ kinetic energy
  
- 3 Newton's first law says an object in motion will keep moving in a straight line unless acted upon by another force. What is the force that causes a ball thrown into the air to return to Earth?
  - Ⓐ friction
  - Ⓑ potential energy
  - Ⓒ kinetic energy
  - Ⓓ gravity

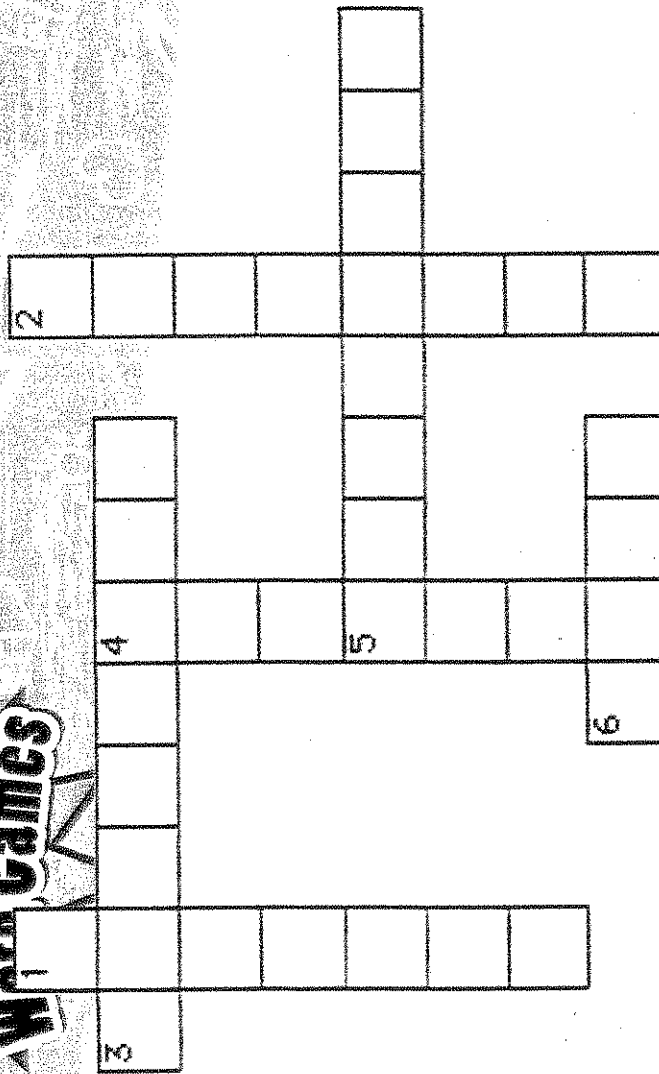
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- 4 Why would a ball thrown in outer space continue to move in a straight line?
- Ⓕ Its mass would be different.
  - Ⓖ Inertia would keep it moving.
  - Ⓗ There is no gravity or friction in outer space.
  - Ⓙ Centrifugal force would keep it moving.
- 5 The amount of matter that an object contains is its
- Ⓐ shape
  - Ⓑ size
  - Ⓒ mass
  - Ⓓ velocity
- 6 Speed is the rate an object travels in a certain time. Velocity is the rate an object is traveling in a certain
- Ⓕ direction
  - Ⓖ force
  - Ⓗ time
  - Ⓙ speed
- 7 What is the force that makes you less likely to fall down on a dry sidewalk than on a slick sidewalk on a rainy day?
- Ⓐ potential energy
  - Ⓑ friction
  - Ⓒ kinetic energy
  - Ⓓ gravity

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- 8 According to Newton's second law, what will determine the velocity and the distance traveled of a baseball hit by a baseball bat?
- Ⓕ the speed of the pitched ball
  - Ⓖ the power of the force that hits the ball
  - Ⓗ gravity
  - Ⓙ friction
- 9 What is the name of Stephen Hawking's discovery that stars and objects in space can be so dense they collapse?
- Ⓐ centrifugal force
  - Ⓑ black holes
  - Ⓒ centripetal force
  - Ⓓ neutron stars
- 10 Stephen Hawking holds the same honored position at Cambridge University in England that what other famous scientist once held?
- Ⓕ Alexander Graham Bell
  - Ⓖ Thomas Edison
  - Ⓗ Benjamin Franklin
  - Ⓙ Isaac Newton

# Vocabulary and Word Games



## Across

3. a force that slows down airplanes
5. To every action, there is an equal and opposite \_\_\_\_\_.
6. the amount of matter in something

## Down

1. a force that keeps objects in motion from going on forever
2. Motion is \_\_\_\_\_.
4. Centrifugal force is \_\_\_\_\_ at work.

## Mini-Lab Motion

Gravity is a wonderful thing. Did you know that gravity pulls everything down to Earth at the same speed, regardless of weight? Astound your family and friends with this easy experiment!

1.

