

**Forces** ▪ *Reading/Notetaking Guide*

## Newton's Third Law (pp. 393–399)

*This section explains Newton's third law of motion. It also explains a law about moving objects.*

### Use Target Reading Skills

*As you read, fill in the notetaking graphic organizer. Under "Notes," write key ideas, using phrases and abbreviations. Include a few important details. Use your notes to write a summary statement for each red heading. Under "Recall Clues and Questions," write study questions that your notes help you answer. Some notes for the first red heading are provided.*

#### Newton's Third Law

Recall Clues and Questions	Notes
What is Newton's Third Law of Motion?	IF . . . one object exerts a force on another object THEN  Example:  <u>Summary Statement:</u>

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**Newton's Third Law** *(continued)*

**Newton's Third Law of Motion** (pp. 393–395)

1. What is Newton's third law of motion?

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2. What is the name often given to the force exerted by the first object on a second object? \_\_\_\_\_

3. What is the name often given to the force exerted by the second object back on the first object? \_\_\_\_\_

4. The action and reaction forces in any situation will always be \_\_\_\_\_ and \_\_\_\_\_.

5. Explain why the equal action and reaction forces do not cancel each other when one person hits a ball.

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**Momentum** (pp. 396–397)

6. The product of an object's mass and velocity is its \_\_\_\_\_.

7. What is the equation you use to determine the momentum of an object?

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8. What is the unit of measurement for momentum?

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**Conservation of Momentum** (pp. 397–399)

9. What does the law of conservation of momentum state?

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10. Suppose a train car moving down a track at 10 m/s collides with another train car that is not moving. Explain how momentum is conserved after the collision.

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