Name _____ Date _____ Class _____

Newton's Third Law

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

Use Target Reading Skills

Before you read the section, preview Figure 18. In the graphic organizer, record two questions you have about the figure. As you read the section, look for the answers to your questions and record them in the graphic organizer. Remember to use both the text and the figure captions to find your answers.

Conservation of Momentum

Q.
A.
Q.
A.

Newton's Third Law of Motion

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

_____

_____

_____

_____

2. What is the name given to the force exerted by the first object on a second object? _____
3. What is the name 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 _____.

Newton's Third Law *(continued)*

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

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?

_____

8. What is the unit of measurement for momentum?

_____

Conservation of Momentum

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 hits another train car that is not moving. Explain how momentum is conserved after the collision.

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