

# Physics Grade 3 Quiz

## Teacher's Answer Key

1. What is Newton's Third Law of Motion? (For every action, there is an equal and opposite reaction.)
2. What is velocity? (It's the measure of speed combined with the direction an object is traveling.)
3. Which forces can be attractive or repulsive? Do their sizes depend on the magnitudes of the charges? Give an example. (Electric and magnetic, and yes it does – the currents, or magnetic strengths depend on the distances between the interacting objects. Two magnets can interact without touching – one can push on the other when the same poles are facing each other.)
4. Gravitational forces are always: attractive, repulsive, or both? (Attractive.)
5. True or false? Gravity pulls on all things equally. (False!)
6. True or false? Gravity accelerates all things equally. (True!)
7. How is acceleration different from speed and velocity? (Speed is distance per unit time, velocity is speed and direction, and acceleration is the change in velocity, which means a change in the speed or a change in the direction.)
8. What is Newton's First Law? (Objects at rest stay at rest, and an object in motion stays in motion with the same speed and in the same direction unless acted upon by an unbalanced force.)

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Name\_\_\_\_\_

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8. What is Newton's First Law?