**Name:** _____ **Date:** _____

## Your Super Speedy Scientist Race: 1st Grade Motion Academy

Synthesize motion patterns and design paths to help a lost robot find home using advanced spatial reasoning and kinematic concepts.

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**1. A toy bunny hopped in a straight line to the garden. Then it hopped back to the exact same start. What happened to its total trip distance?**

A. The bunny stayed in one spot.
B. The distance grew as it kept moving.
C. The distance disappeared.
D. The bunny moved backwards in time.

**2. If you want to win a race by changing your velocity, you must change your speed OR your _____.**

A. Color
B. Direction
C. Size
D. Name

**3. True or False: If a rocket is going very fast but never changes its speed or direction, it is NOT accelerating.**

A. True
B. False

**4. You are designing a slide. To make a teddy bear accelerate the most, how should the slide look?**

A. Long and flat like a sidewalk
B. Short and bumpy
C. Very steep like a mountain side
D. Curved upward at the end

**5. A snail travels 2 inches every minute. After 10 minutes, the snail has changed its _____ by 20 inches.**

A. Weight
B. Position
C. Height
D. Acceleration

**6. True or False: A car slowing down as it reaches a red light is a type of acceleration.**

A. True
B. False

**7. If you walk 3 steps North and then 3 steps South, where are you compared to where you started?**

A. 6 steps away

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B. 3 steps away
C. Back at the start
D. In a different room

**8. To describe exactly how a bird flies, you need its speed and its _____.**

A. Direction
B. Color
C. Feather count
D. Song

**9. Imagine a ball being thrown straight up. At the very top before it falls, what happens for a tiny moment?**

A. It goes faster
B. It turns into a bird
C. Its velocity is zero
D. It disappears

**10. True or False: A toy car moving at the same speed in a circle is accelerating because its direction is changing.**

A. True
B. False