Name Period Date

Motion Graphing

**Starter:** How is speed measured? What units of measure do you use when talking about speed?

**Graphing Predictions:**

Toward sensor Away from sensor Stopping Faster Slower

**Motion Game Instructions:** Have one person in your group close his/her eyes while another person moves in front of the sensor (The sensor cannot detect movements like jumping jacks. It can only detect forward, backward, faster, slower, and not moving). Then have the person who had their eyes closed now takes their turn and tries to move the same way the other person did by looking at and following the motion graph. Take turns so that everyone has an opportunity to either be the person with their eyes closed or the person making the motion graph.

**Questions to answer while playing the game:**

1. What does the graph look like when you are moving toward the sensor?

2. What does the graph look like when you move away from the sensor?

3. What does the graph look like when you stop moving?

4. Does the distance move to zero when you stop moving?

5. How do you change the slope of the line in the graph (make it more or less steep)?

**Debriefing the Activity:**

How can you figure out the speed of an object by using a distance vs. time graph?

Write a story to go along with this motion graph: