

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Hour: \_\_\_\_\_

### Speed Lab

**Formulas to use:**

$$v = \frac{d}{t}$$

$$d = vt$$

$$t = \frac{d}{v}$$

**Purpose:** To practice making measurements and working with formulas to calculate speeds in a linear fashion.

**Materials:** Each group will need a meterstick and a stopwatch or timer.

**Location:** In the hallway or outside of the school building (behind the school) measure off a 10 meter track. Mark the starting line, 5m distance, and finish line at 10m.

**Procedure:** Each group member will need to perform the tasks in the table. This means each group member has to rotate jobs (timing, recording, performing the task, etc.) so that all group members can gather data. Record the time it takes to do each task.

Record times to the nearest tenth of a second. Don't forget your units!

Task	Distance	Time	Speed
Hopping	5m		
	10m		
Walking Backwards	5m		
	10m		
Walking Normally	5m		
	10m		
Speed Walking	5m		
	10m		

Speed Walking means going as fast as you can without jogging or running.

1. What action resulted in the greatest speed? What was your speed?

2. What action resulted in the slowest speed? What was your speed?
  
3. How far could you speed walk in 10 minutes based upon your speed for the 10m trial? Remember to show your work and write down which formula you would use.
  
4. How far could you travel walking normally in 20 minutes using your 5m time? What formula would you use? Remember to show your work!
  
5. How long would it take walking backwards 15m based upon your 10m trial? What formula would you use? Remember to show your work!
  
6. How long would it take you to hop 25m based on your speed for the 5m trial? Show your work! What formula would you use?
  
7. Is the data that was collected accurate? What could be a source of error?