

**SPEEDERS AND ACCELERATORS PRE-LAB**

In class we have discussed the differences of a speeder and an accelerator and we have learned how to use the awesome program, LoggerPro. Tomorrow we are going to combine the two to create graphs that help us understand how a speeder moves versus how an accelerator moves. After all, this is physics class and we like to chart how objects are going to move.

**PREDICTION #1**

A speeder is defined as something that moves at the same speed the entire time.

- What would the graph of this object's velocity (or speed) vs. time look like?

**PREDICTION #2**

Now let's talk about how far it will move... If a car has a velocity of 1 m/s (that is pretty slow!) that means the car is moving 1 meter for every one second.

- How many meters has it moved after 1 second? \_\_\_\_\_
- How many meters did the car move between the first and the second second? \_\_\_\_\_
- Therefore how many total meters has the car moved after two seconds? \_\_\_\_\_

(HINT!!! Just add the previous two answers)

- Using what we just did try to fill in the chart:

Then try to figure out what the graph of this car's distance vs time would look like and draw it next to the table.

Time Passed	Distance Traveled
1 second	
2 seconds	
3 seconds	
4 seconds	

**PREDICTION #3**

Velocity is measured in meters/second which means how many meters a car or object will travel per second. Acceleration is measured in meters/second/second.

- What does acceleration measure?

**PREDICTION #4**

- How will the distance vs. time graph for an accelerator be different from the one you created in Prediction #2? You can explain in words or try to draw one.