Speed it Up!

Name:
Period:
Date:

Go to trackstar.4teachers.org (no "www"). Click View Track # <u>394284</u>. Click "View in Frames."

** <u>Site 1: Reference Point</u>

1. Using the word "**reference point**", explain why motion is *different* depending on where you are standing (on the platform or on the train). _____

_____

_____

** <u>Site 2: What is Speed?</u>

2. **Speed** is _____.

3. What are the **2** things we need to know in order to calculate the **speed** of an object?

_____ and _____

** <u>Site 3: How fast is fast?</u>

4. Below, write the **speed** of the **<u>fastest</u>** train and the **<u>fastest</u>** helicopter. Circle the one that has a **greater** speed.

Fastest Train: _____   Fastest Helicopter: _____

Don't forget to circle the one that is fastest!

** <u>Site 4: A Day at the Races</u>

5. **CHANGE** the settings by entering the information **BELOW** and click "GO":

I'd like my first object to be a
Big Red Truck.

Start it at **position** 10 m

Give it a **speed** of
2.5 meters/second

Give it an **acceleration** of
0 meters/second*second

I'd like my second object to be a
Scooter.

Start it at **position** 1 m

Give it a **speed** of
5 meters/second

Give it an **acceleration** of
0 meters/second*second

a. Another word for "starting position" is: _____

b. Using the words "**reference point**" and "**speed**", explain <u>why</u> the Scooter finished before the Big Red Truck. _____

_____

_____

_____

c. What do you think "**acceleration**" means? _____

d. Predict what would happen if you changed the *acceleration* for the Big Red Truck.

_____

_____

6. Change the settings to **two different** objects that have the **same speed** and the **same starting position**. Do the objects reach the finish line at the **same** time or at **different** times? Why? _____
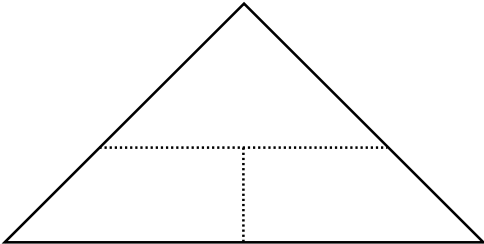
_____

_____

_____

_____

Teacher's Initials _____

Stop & get Ms. Salzburg's initials here when done with Site 4!!

** On the Board: Magic Triangle and Speed Equation

7. Find the "Magic Triangle" on the board. Draw it in the box below. In the other box, write the equation for speed.

The Magic Triangle	The Speed Equation
s = d = t =	Speed = _____

8. Imagine that a car traveled 100 meters in 5 seconds. What is the average speed of the car? Be sure to show the five steps below! ☺

	STEP BY STEP DIRECTIONS	SHOW YOUR WORK
Step 1		
Step 2		
Step 3		
Step 4		
Step 5		