

Name _____

Period: _____

Date: _____

Motion Test Retake Ticket

Go to **Edulastic.com** and click the “Grades” tab in the upper-left. Go through your Motion Post Test.

1. What percent score did you get on the Motion Post Test? ____% What score out of 4 is this? ____/4
2. What is your goal for the retake? ____% What goal out of 4 is this? ____/4
3. Look at question 1. What are the correct three variables that can cause a train car to slow down?
 1. _____
 2. _____
 3. _____
4. Look at question 2. What’s the key variable allowing someone to influence the rate a train car slows down?

5. Look at question 3 and your journal. What are the four required components of all scientific conclusions?
 1. _____
 2. _____
 3. _____
 4. _____

Now go through your entire Motion Pre Test in **Edulastic.com**.

6. What percent score did you get on the Motion Pre Test? _____% What score out of 4 is this? ____/4
7. How many percentage points did you increase from your Motion Pre to Post Test? _____
8. Look at question 2. What is the key difference between the two rail cars that allowed one to be moved?

9. Look at the “Stationary Rail Car” tab on the left-side in questions 1-6. Observe the two data tables for “Amount of Force (Newtons)” applied and “Movement?”.

What type of rail car is the first (top) data table for? _____

What type of rail car is the second (bottom) data table for? _____

What happened to the box car when 2,500 N of force was applied? _____

What happened to the tanker car when 2,500 N of force was applied? _____

Look at our class website (**stevens.portangelesschools.org/science8**), your class journal prompts and notes.

10. What are Newton’s 3 Laws of Motion?
 1. _____
 2. _____
 3. _____
11. Which of Newton’s 3 laws best explains why the strongman could move the box car but not the tanker car?

12. How does this explain why the strongman couldn’t move the tanker car?

Shoot 3 different-massed rockets off a stomp rocket launcher using the same stomping technique and measure the speed as the rocket comes the launcher with a motion sensor. They were trying to answer this question: What's the effect of a stomp rocket's mass on its speed when launched?

13. Independent Variable:

14. Dependent Variable: _____

15. Controlled Variable: _____

	Speed of rocket off the launcher (m/s)			
Mass of rocket	Trial 1	Trial 2	Trial 3	Average
5g	20	19	21.5	20
10 g	11.5	9	10.2	10
50 g	2.2	1.7	2.1	2

Question: What's the effect of a stomp rocket's mass on its speed when launched?

16. Write a **conclusion (claim, evidence, reasoning)** for this question. Make sure you include:

- A **claim** about how mass of rocket affects the speed of the rocket off the launcher
- **Evidence** from the data table above to support your claim
- **Reasoning**: Give scientific reason(s) to explain how the evidence supports your claim.

[illegible]
