

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

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



# GENIUSCHALLENGE

## COLLISIONS

1. What makes things happen? \_\_\_\_\_
2. At what point in a collision does energy transfer occur?  
\_\_\_\_\_
3. True or false: you can hold energy in your hand. \_\_\_\_\_
4. When one object runs into another and energy is transferred, we call that a....  
**a.** explosion      **b.** hit      **c.** strike      **d.** collision
5. True or false: when Dr. Jeff's mom collides with Izzy, they both fly backwards. \_\_\_\_\_
6. How many variables should be changed at a time in a fair test? \_\_\_\_\_
7. Fill in the blank using the word(s) **increases**, **decreases** or **stays the same**.  
*As an object's speed INCREASES, the energy it has to transfer \_\_\_\_\_.*  
*As an object's weight INCREASES, the energy it has to transfer \_\_\_\_\_.*
8. Where is the crumple zone in a car and what is its purpose?  
\_\_\_\_\_
9. How do plexiglass barriers keep people safe at a hockey game? Use the word "energy" in your answer.  
\_\_\_\_\_
10. In a collision some of the energy is transferred into (select all that apply)  
**a.** sound  
**b.** matter  
**c.** heat  
**d.** electricity