Name_____ Date_____

Physical Science

Section: Conservation of Energy

WHERE DOES THE ENERGY GO?

Write the letter **of the best answer for each question.**

1. Which force opposes motion between two surfaces that are touching?
   - **a.** friction
   - **b.** kinetic energy
   - **c.** potential energy
   - **d.** current
2. When a roller coaster moves, what helps to overcome friction?
   - **a.** friction
   - **b.** current
   - **c.** energy
   - **d.** movement
3. On a roller coaster, where is the potential energy the greatest?
   - **a.** at the bottom of the first hill
   - **b.** at the top of the first hill
   - **c.** at the bottom of the second hill
   - **d.** at the top of the second hill

NO CONVERSION WITHOUT THERMAL ENERGY

Write the letter **of the best answer for the question.**

8. When energy is converted, what type of energy is wasted?
   - **a.** thermal energy
   - **b.** light energy
   - **c.** kinetic energy
   - **d.** sound energy

Perpetual Motion? No Way

Write the letter **of the best answer for the question.**

9. What is a perpetual motion machine?
   - **a.** a machine that stops running
   - **b.** a machine that runs forever
   - **c.** a machine that slows down
   - **d.** a machine that speeds up

Making Conversions Efficien Write the letter

Read the description. Then, from the dot next to each description to the matching word.

10. energy conversion always results in this type of energy being wasted ●

11. this is a comparison of the amount of energy before a conversion with the amount after ●

12. this helps cars use energy in a more useful way ●

13. this is reduced with a better shaped car ●

a. shape of the car

b. energy efficiency

c. thermal energy

d. friction

ENERGY IS CONSERVED WITHIN A CLOSED SYSTEM

Law of Conservation of Energy

Read the words in the box. Read the sentences. Fill in each blank with the word or phrase that best completes the sentence.

thermal	closed system
law of conservation of energy	energy

4. When a group of objects move energy only to each other, you have a(n) _____.

5. The fact that energy cannot be created or destroyed is the _____.

6. The total amount of _____ in a closed system is always the same.

7. In a light bulb, some energy is changed to _____ energy, making the bulb warm.