Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block: \_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_

DIRECTIONS: Select the letter of the best answer for each question.

**ENERGY CONVERSIONS**

\_\_\_\_\_ 1. What is a change from one form of energy to another?

a. electrical energy b. energy conversion c. kinetic energy d. potential energy

KINETIC ENERGY AND POTENTIAL ENERGY

\_\_\_\_\_\_ 2. When the skateboarder is on top of the half-pipe, which energy is at its peak?

a. mechanical energy b. kinetic energy c. potential energy d. elastic potential energy

\_\_\_\_\_\_ 3. As the skateboarder reaches the bottom of the half-pipe, which energy is at its peak?

a. mechanical energy b. kinetic energy c. potential energy d. elastic potential energy

\_\_\_\_\_\_ 4. Which energy is present in the wound-up rubber band in a toy airplane?

a. mechanical energy b. kinetic energy c. potential energy d. elastic potential energy

CONVERSIONS INVOLVING CHEMICAL ENERGY

\_\_\_\_\_ 5. What type of energy is in the food you eat?

a. chemical energy b. thermal energy c. light energy d. nuclear energy

\_\_\_\_\_\_ 6. In photosynthesis, which energy do plants use to make chemical energy?

a. chemical energy b. thermal energy c. light energy d. nuclear energy

\_\_\_\_\_ 7. What energy conversion takes place when you eat food?

a. chemical energy to light energy b. chemical energy to kinetic energy

c. light energy to kinetic energy d. light energy to potential energy

a. photosynthesis b. kinetic c. light d. thermal e. chemical

\_\_\_\_\_ 8. When you are active, chemical energy of food is converted into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy.

\_\_\_\_\_ 9. Body temperature is maintained through \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy.

\_\_\_\_\_ 10. Plants use \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy to make chemical energy.

\_\_\_\_\_ 11. Plants use energy from the sun during \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

\_\_\_\_\_ 12. Breakfast is an important meal because it gives our body \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy.

WHY ENERGY CONVERSIONS ARE IMPORTANT

\_\_\_\_\_ 13. When the wires in a hair dryer heat up, which energy change takes place?

a. electrical energy to kinetic energy b. electrical energy to light energy

c. electrical energy to thermal energy d. electrical energy to sound energy

\_\_\_\_\_ 14. What kind of energy do you use to make toast?

a. thermal energy b. chemical energy c. electrical energy d. light energy

ENERGY AND MACHINES

a. machine b. kinetic c. sound

\_\_\_\_\_ 15. On a bike, your legs transfer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy to the pedals.

\_\_\_\_\_ 16. Work is made easier when you use a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

\_\_\_\_\_ 17. When you hear a walnut crack, the nutcracker has made \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy.

\_\_\_\_\_ 18. What can measure energy from the sun?

a. a radiometer b. photosynthesis

c. potential energy d. thermometer

**CONSERVATION OF ENERGY**

\_\_\_\_\_ 19. Which force opposes motion between two surfacesthat are touching?

a. friction b. kinetic energy

c. potential energy d. current

\_\_\_\_\_ 20. When a roller coaster moves, what helps to overcome friction?

a. friction b. current

c. energy d. movement

\_\_\_\_\_ 21. 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

ENERGY IS CONSERVED WITHIN A CLOSED SYSTEM

a. thermal b. closed system c. law of conservation of energy d. energy

\_\_\_\_\_ 22. When a group of objects move energy only to each other, you have a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

\_\_\_\_\_ 23. The fact that energy cannot be created or destroyed is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

\_\_\_\_\_ 24. The total amount of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in a closed system is always the same.

\_\_\_\_\_ 25. In a light bulb, some energy is changed to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy, making the bulb warm.

NO CONVERSION WITHOUT THERMAL ENERGY

\_\_\_\_\_ 26. When energy is converted, what type of energy is wasted?

a. thermal energy b. light energy c. kinetic energy d. sound energy

\_\_\_\_\_ 27. 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 EFFICIENT

a. shape of the car b. energy efficiency c. thermal energy

\_\_\_\_\_ 28. energy conversion always results in this type of energy being wasted

\_\_\_\_\_ 29. this is a comparison of the amount of energy before a conversion with the amount after

\_\_\_\_\_ 30. this helps cars use energy in a more useful way