



Name \_\_\_\_\_ Period \_\_\_\_\_

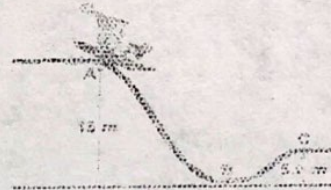
## Science Test Review: Energy + Heat

1. Define Energy: \_\_\_\_\_

2. Two Main Types of Energy are \_\_\_\_\_ and \_\_\_\_\_.

3. Define Potential Energy: \_\_\_\_\_

4. In the diagram to the right, at which point does the sled have the greatest potential energy? \_\_\_\_\_



5. Define Kinetic Energy: \_\_\_\_\_

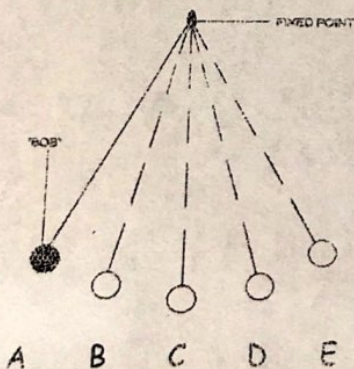
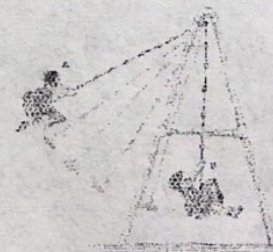
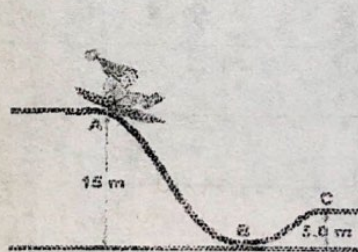
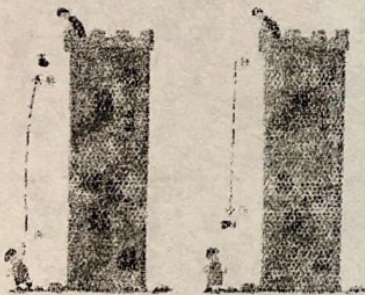
6. The amount of Kinetic energy a moving object has depends on its \_\_\_\_\_ and \_\_\_\_\_.

7. In each of the following pairs, CIRCLE which would have more kinetic energy rolling down a hill:

- A marble or a boulder
- A beach ball or bowling ball
- A Toy car or a Hummer

Explain why you chose the ones you chose? \_\_\_\_\_

8. In the diagrams below, identify the **greatest Kinetic** and **greatest potential** energy



9. What is pictured to the left? \_\_\_\_\_

10. At which points does the pendulum have the most potential energy? \_\_\_\_\_

11. At which point does the pendulum have the most kinetic energy? \_\_\_\_\_

12. At which points on the pendulum are the kinetic and potential energy equal? \_\_\_\_\_

13. If you place a block at point C, what would happen to the block? \_\_\_\_\_  
 Why? \_\_\_\_\_

**Define the Forms of Potential Energy:**

14. Chemical Energy: \_\_\_\_\_

Example: \_\_\_\_\_

15. Nuclear Energy: \_\_\_\_\_

Example: \_\_\_\_\_

List two ways nuclear energy is produced: \_\_\_\_\_

16. Gravitational Potential Energy: \_\_\_\_\_

Example: \_\_\_\_\_

17. Stored Mechanical: \_\_\_\_\_

Example: \_\_\_\_\_

*\* Review KE + PE math from your practice WS + quiz.*

**Define the Forms of Kinetic Energy:**

18. Radiant Energy: \_\_\_\_\_

Example: \_\_\_\_\_

\*List the different forms of Radiant Energy: \_\_\_\_\_

19. Thermal Energy: \_\_\_\_\_

Example: \_\_\_\_\_

20. Motion or Mechanical Energy: \_\_\_\_\_

Example: \_\_\_\_\_

21. Sound Energy: \_\_\_\_\_

Example: \_\_\_\_\_

22. Electrical Energy: \_\_\_\_\_

Example: \_\_\_\_\_

23. Energy of microwaves, radio waves, x-rays, ultraviolet rays, and light waves are all forms of \_\_\_\_\_ energy

**Energy Transformations (Conversions)**

24. Define Energy transformation: \_\_\_\_\_

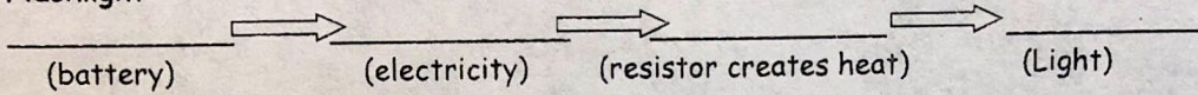
25. What does the law of conservation of energy state? \_\_\_\_\_

Give an example: \_\_\_\_\_

26. In every energy conversion, some energy is always converted into \_\_\_\_\_, due to friction.

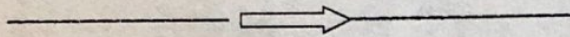
27. What is the energy transformation for a resource to produce electricity?

Flashlight:

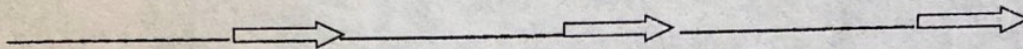


28. Using number 27, diagram the energy transformations that occur in the following:

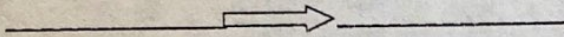
Hot Plate



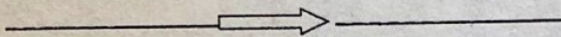
Windmill



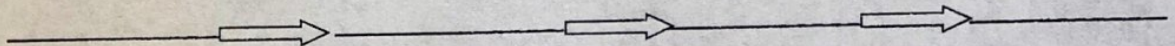
Toaster



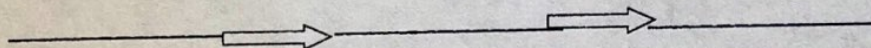
Gas Stove



Car Engine



Hair Dryer



29. \_\_\_\_\_ energy in the sugars and starches of food fuels all your body functions and movements, and provides the thermal energy that keeps your body temperature constant.

### Heat/Thermal Energy Transfer

DEFINE:

30. convection- \_\_\_\_\_

31. conduction- \_\_\_\_\_

32. radiation- \_\_\_\_\_

33. Identify the following examples as convection, conduction or radiation:

\*Ice in a soft drink melts due to \_\_\_\_\_

\*Boiling an egg in water \_\_\_\_\_

\*A pot touching a hot stove \_\_\_\_\_

\*A small heater heating a bathroom \_\_\_\_\_

\*A cold blooded reptile warming itself from the sun \_\_\_\_\_

34. Explain how heat moves through liquids during convection. \_\_\_\_\_

~Draw a picture showing this.

\* Review specific heat and the math that goes with it from practice ws.