

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

Period: \_\_\_\_\_

## ***Energy Transformations***

*Directions:* Read pages S142-S143 in your book and answer the following questions.

1. Scientists know that all physical and chemical changes involve \_\_\_\_\_.
2. Every change that occurs in the universe involves an \_\_\_\_\_.
3. The change of energy from one form to another is called \_\_\_\_\_.
4. Define **energy transformation**.
5. The \_\_\_\_\_ energy of the water at the top of these falls is converted into \_\_\_\_\_ energy as the water falls.

### *Transformation of Energy from the Sun*

6. Where does much of the energy on Earth originally come from? \_\_\_\_\_
7. In the sun, matter is converted into \_\_\_\_\_ and \_\_\_\_\_ energy.
8. What does the sun's radiant energy do to the planet's surface? \_\_\_\_\_
9. This warming determines Earth's \_\_\_\_\_.
10. Almost all \_\_\_\_\_ depend on the sun for their energy.
10. Plants and animals that lived long ago have become what 3 things that we now use as fuels?  
\_\_\_\_\_
11. This energy can be transformed into \_\_\_\_\_ energy to run generators, which can power our machines and appliances.

### *Conservation of Energy*

12. The chemical energy of gasoline is first transformed into \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ as it's burned.

13. During an energy transformation, the total amount of energy involved remains the same, or the energy is \_\_\_\_\_.

14. Define **law of conservation of energy**.

15. Why does a bouncing ball lose its bounce after each bounce?

16. This means the energy is not \_\_\_\_\_; it is simply \_\_\_\_\_ into other forms of energy.

### *Decrease in Useful Energy*

17. Every time energy in a system changes from one form to another, the amount of \_\_\_\_\_ energy decreases.

18. In any energy transformation, some useful energy is converted into \_\_\_\_\_ that cannot be used to do work.