Name _____ Date _____ Period _____

Energy Ws #1: Reaction Rates

Energy, Heat and Temperature: World of Chemistry: Chapter 10

1. Energy is the ability to do _____ or produce _____.
2. The law of conservation of energy states that energy can be _____ from one form to another but can be neither _____ nor _____.
3. _____ is a measure of the random motions of the components of a substance.
4. _____ is the flow of energy due to a temperature difference.
5. When a process results in the evolution of heat, it is said to be _____.
6. Processes that absorb energy from the surroundings are said to be _____.

Reaction Rates: World of Chemistry: Chapter 17

7. Chemical reactions occur when reactants collide. For what reasons may a collision fail to produce a chemical reaction?

8. If every collision between reactants led to a reaction, what determines the rate at which the reaction occurs?

9. What is the activation energy of a reaction, and how is this energy related to the activated complex of the reaction?

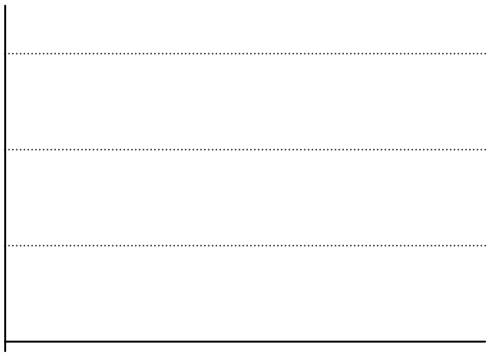
10. What is a catalyst?

11. What happens when a catalyst is used in a reaction?

12. Name 4 things that will speed up or slow down a chemical reaction.

13. Draw an energy diagram for the reaction. (label the axis)

    Potential energy of reactants = 350 KJ/mole
    Activation energy = 100 KJ/mole
    Potential energy of products = 250 KJ/mole



14. Is the reaction in #13 exothermic or endothermic? Explain.

15. How could you lower the activation energy for the reaction in #13?