Name _____ Date _____ Period _____

Energy Ws #1: Reaction Rates

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

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

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

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

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

6. Draw an energy diagram for a reaction. (label the axis)
   Potential energy of reactants = 350 KJ/mole
   Activation energy = 100 KJ/mole
   Potential energy of products = 250 KJ/mole

7. Is the reaction in # 6 exothermic or endothermic? Explain.

8. How could you lower the activation energy for the reaction in #6?