Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pd: \_\_\_\_\_ Ast: \_\_\_\_\_

**M/J Physical Science Adv.**

**Chemical Reactions Study Guide**

1. **Chemical Bonds**
   1. What is formed when atoms bond together?
   2. How are valence electrons involved in chemical bonding? (mention the octet rule)
   3. Explain the key difference between an ionic bond and a covalent bond.
2. **Chemical Reactions**
3. Explain what a chemical reaction is.
4. Identify evidence that a chemical reaction has occurred.
5. Describe a chemical reaction you have observed in this class and provide evidence that it was a chemical reaction.
6. Describe the role of “reactants” and “products” during a chemical reaction.
7. **Law of Conservation of Mass**
8. How do the reactants compare to the products in a chemical reaction?
9. What does the law of conservation of mass state?
10. How does a chemical equation show that mass is conserved during a chemical reaction?
11. **Controlling Chemical Reactions**
12. How can chemists use temperature to control the rate of a chemical reaction?
13. Why does the temperature of reactants affect the reaction rate?