Name_____Date_____Hour_____

Guided Reading Chapter 9-1 Reactions and Equations

1. Define the following key terms
    a. Chemical reaction
    b. Reactant
    c. Product
    d. Chemical equation
    e. Coefficient

2. What specific evidence can you look for to signal that a chemical change is happening or has happened?

3. Why do we use a arrow instead of an equal sign in a chemical equation?

4. What 3 words can the arrow of a chemical equation be read as?

5. Examine Table 1, what symbol do we use in the following situations
    a. To show a reaction is reversible
    b. To show the products are solids
    c. To show that one of the substances is dissolved in water

6. How would you translate the following chemical equations into word equations?
    a. $Al_{(s)} + Br_{2(l)} \rightarrow AlBr_{3(s)}$

b. $H_{2(g)} + O_{2(g)} \rightarrow H_2O_{(l)}$

c. $Na_{(s)} + Cl_{2(g)} \rightarrow NaCl_{(s)}$

7. What is a skeleton equation?

8. What would the skeleton equation for the reaction of carbon and sulfur to form carbon disulfide?

9. Complete Practice problems 1 and 2 at the bottom of page 284

10. Think back to our topics of naming and writing formulas, why do you think it is important to know how to properly name and write formulas for various chemical compounds.

11. What must be true to accurately represent a chemical reaction as a chemical equation?

12. What is a coefficient used for in a chemical equation? Examine figure 5, what are the coefficients used to balance the chemical equation showing aluminum and bromine combining to form aluminum bromide?

13. Think back to your answer for number 11, what law does this idea support?