Name: _____ Date: _____ Period: ____

Honors Chemistry Chemical Reactions Station Lab

All answers and observations MUST be submitted on a separate page.
Do NOT submit any information on this lab sheet

Pre Lab: Answer in complete sentences on a separate page.

1. What are 4 indicators of a chemical reaction?
2. Describe the reactants of a synthesis chemical reaction:
3. Describe the reactants of a decomposition chemical reaction:
4. Describe the reactants of a combustion chemical reaction:
5. Describe the reactants of a single replacement chemical reaction:
6. Describe the reactants of a double replacement chemical reaction:
7. Describe the reactants of a neutralization chemical reaction:
8. Describe the products of a synthesis chemical reaction:
9. Describe the products of a decomposition chemical reaction:
10. Describe the products of a combustion chemical reaction:
11. Describe the products of a single replacement chemical reaction:
12. Describe the products of a double replacement chemical reaction:
13. Describe the products of a neutralization chemical reaction:

Safety

For this lab you will be rotating through different stations each with their own experiment. You will be working with flame, acids, glassware, and other chemicals. Required equipment includes safety glasses / goggles. Lab aprons are highly recommended.

Procedure

1. Create a DATA table for this lab. Must include:
   a. description of color and phases of the reactants
   b. observations during reaction [include indicators of a chemical reaction]
   c. description of color and phases of the products

Station 1 Magnesium and Hydrochloric acid

2. Record observation of the reactants
3. Drop a 2-cm piece of Magnesium ribbon into the white crucible bowl.
4. Add 5-8 ml of Hydrochloric acid to the white crucible bowl
5. Record your observations of reaction
6. Poor products into waste beaker
7. Rinse out the crucible bowl with running water

Station 2 Propane (C_3H_8) and Oxygen

8. Turn on the gas and light the Bunsen burner.
9. Observe the reaction
10. Using your fingers completely cover the window(s) on the base of the Bunsen burner
11. Turn off the gas to the Bunsen burner
12. Record your observations

Station 3 Steel wool (containing Fe) combines with oxygen

13. Remove a small piece of steel wool from the wool pad on the lab bench.
14. Pull it apart so that the wool strands are loosely separated.
15. Use tongs to hold the steel wool in the Bunsen burner flame.
16. Record your observations.
17. Put products in waste beaker.

Station 4 Sodium Sulfite and Copper II Chloride

18. Combine 5-8 drops of each reactant in a test tube.
19. Observe the reaction for 2-3 minutes
20. Record your observations.
21. Poor products in down the drain
22. Rinse out the test tube with running water.

Post Lab: Answer each of the following questions in complete sentences on a separate page.

Station 1 Magnesium and Hydrochloric acid

1. What type of reaction is it?
2. What are the products (name and formula) in the reaction?
3. Write the balanced equation.

Station 2 Propane (C_3H_8) and Oxygen

4. What type of reaction is it?
5. What are the products (name and formula) in the reaction?
6. Write the balanced equation.

Station 3 Steel wool (contains Iron) combines with oxygen

7. What type of reaction is it?
8. What are the products (name and formula) in the reaction? [assume Iron forms a +3 charge]
9. Write the balanced equation.

Station 4 Silver Nitrate and Calcium Chloride

10. What type of reaction is it?
11. What are the products (name and formula) in the reaction?
12. Write the balanced equation.

Additional Items

13. Which product at station 4 do you believe was the precipitate? Why?
14. Which of the six major types of reactions were not represented in this lab?
15. Using your text book, technology or class notes give an example [balanced equation] of the two types of reactions not shown in this lab.

Scoring Rubric: Answer ALL questions in complete sentences.

Pre Lab Question #1 = 2 points
Pre Lab Question #2-13 = 1 point each, 12 points total
Data Table
- Description of reactants 1 pt/station, 4 points total
- Observations from reaction 1 pt/station, 4 points total
- Description of products 1 pt/station, 4 points total

Post Lab
- Type of reaction 1pt/station, 4 points total
- Product(s) formula(s) 1 pt/station, 4 points total
- Product(s) name(s) 1 pt/station, 4 points total
- Balanced Chemical reactions 2 pt/station, 8 points total
- Questions #13-15 = 2 points each, 6 points total

Neat and Organized 3 Points TOTAL: 55 POINTS