Dougherty Valley HS Chemistry
Types of a Reactions Lab

Worksheet #6

Name: **Period:** **Seat#:**

Required Sections: (Refer to R-5 for guidelines and requirements. Make note of any specific changes given by your teacher in class)

Prelab: *All written in your lab notebook* – Answer Pre-Lab Questions, Materials, Reagent Table, Procedures,

During Lab: *Data Tables are part of the actual Lab Handout this time!*

Post-lab: - *The written equations on the actual Lab Handout are the post lab questions this time!*

Introduction

Most reactions fall into one of five categories that we have discussed in class. In this lab, you will be completing several different types of reactions. For EACH reaction you investigate, you must predict the products, identify the type of reaction, and write both the word equation AND the balanced formula equation.

Pre-Lab Questions

1. What are the five main categories of reactions?
2. Describe how to predict the products for each type of reaction.

Reaction #1	
Materials • $CuSO_4$ • Paperclip • Test tube • 50mL beaker • Pipette	**Procedure** **1)** Add a little $CuSO_4$ to a test tube. $CuSO_4$ is toxic. Handle it with care! **2)** Open a paper clip (source of Fe, iron) and hang it over the edge of a test tube reaching ~ 2cm into the $CuSO_4$. Observe the paper clip for 5 to 8 minutes. **3)** Remove the paper clip and place it on a piece of white scratch paper. When finished, throw out the paper clip and recycle the copper sulfate in the container at the front desk.
Observations	
Type of Reaction	
Word Equation *(assume Fe^{2+} is formed*	
Balanced Equation with phases included *(assume Fe^{2+} is formed*	
Net Ionic Equation *(if applicable)*	

Reaction #2

Materials

- 0.15M $SrCl_2$
- 0.25M Na_2CO_3
- One 150mL beaker
- Two 50mL beakers
- Two pipettes
- Graduated Cylinder
- Wash bottle with distilled H_2O

Procedure

1) Using a graduated cylinder, measure 15ml of $SrCl_2$ and put into the 100mL beaker.
2) Rinse the graduated cylinder with the wash bottle with distilled H2O so nothing reacts in the graduated cylinder when you measure the next chemical.
3) Measure 15mL of $Na2CO_3$ and add to the $SrCl_2$ in your 100mL beaker.
4) Record your observations in the chart below.

Observations	
Type of Reaction	
Word Equation	
Balanced Equation with phases included	
Net Ionic Equation *(if applicable)*	

<table>
<tr><th colspan="3">Reaction #3</th></tr>
<tr><td colspan="2"><u>Materials</u>
• Steel wool
• Bunsen burner
• Bunsen burner hose
• Tongs</td><td><u>Procedure</u>
1) Burn a small sample of steel wool (source of iron) over the Bunsen burner.</td></tr>
<tr><td>Observations</td><td colspan="2"></td></tr>
<tr><td>Type of Reaction</td><td colspan="2"></td></tr>
<tr><td>Word Equation
(assume Fe^{3+} is formed)</td><td colspan="2"></td></tr>
<tr><td>Balanced Equation with phases included
(assume Fe^{3+} is formed)</td><td colspan="2"></td></tr>
<tr><td>Net Ionic Equation <u>(if applicable)</u></td><td colspan="2"></td></tr>
</table>

Reaction #4	
Materials • Gold paper reading on lab table	**Procedure** **1)** Examine the "Decomposition Reactions of Acids" on the gold paper on your table. Carbonic acid (H_2CO_3) is a component of most carbonated sodas.
Observations	
Type of Reaction	
Word Equation *(assume Fe^{3+} is formed)*	
Balanced Equation with phases included *(assume Fe^{3+} is formed)*	
Net Ionic Equation *(if applicable)*	