**Name: Period: Seat#:**

**Worksheet #7**

**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!*

**Pre-Lab Questions**

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

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| **Reaction #1** | | | | | | |
| **Materials**   * Steel wool * Bunsen burner w/ hose * Tongs | | | | | **Procedure**   1. Burn a small sample of steel wool (source of iron) over the Bunsen burner.   *\* Oxygen gas in the air is needed for this reaction to occur.*  *\* Assume Fe3+ is formed as part of the product compound.* | |
| **Observations** | | | | | | **Type of Reaction** |
| **Word Equation** | |  | | | | |
| **Balanced Eq. with phases** | |  | | | | |
| **Reaction #2** | | | | | | |
| **Procedure -** Read the paragraph below and watch the video. Take notes on the video.  *Certain acids decompose into nonmetal oxides and water. Carbonic acid is unstable and decomposes  readily at room temperature to produce carbon dioxide and water. This is how the bubbles form in your  soda. This also plays a role in ocean acidification. As the amount of carbon dioxide increases in the air,  the more acidic the oceans become. This has negative impacts on ocean life.*   * [*https://youtu.be/kxPwbhFeZSw*](https://youtu.be/kxPwbhFeZSw) | | | | | | |
| **Notes on video** | | | | | | |
| **Write the balanced equation for each scenario given below. Include phases.**  In your soda, aqueous carbonic acid (hydrogen carbonate) breaks down into carbon dioxide bubbles and water.  In the oceans, carbon dioxide gas reacts with water to produce aqueous carbonic acid (hydrogen carbonate). | | | | | | |
| **Reaction #3** | | | | | | |
| **Materials**   * CuSO4 * Paperclip * 50mL beaker * Pipette * Waste container and distilled H2O bottle up front. | | | **Procedure**   1. Add 5 – 10mL of CuSO4 to a small beaker. CuSO4 is toxic. Handle it with care! 2. Put the paper clip in the beaker containing CuSO4. 3. Observe the paper clip for 5 to 8 minutes. 4. When finished, throw out the paper clip and recycle the copper sulfate in the waste container at the front desk. Rinse the beaker with the distilled water bottle that is up front by the waste container, so that it is clean and ready for the next class period.   *\* Assume Fe2+ is formed in the product compound* | | | |
| **Observations** | | | | | | **Type of Reaction** |
| **Word Equation** | |  | | | | |
| **Balanced Eq. with phases** | |  | | | | |
| **Net Ionic Equation** | |  | | | | |
| **Reaction #4** | | | | | | |
| **Materials**   * 0.15M CaCl2 * 0.25M Na2CO3 * 50mL beaker * Two pipettes * Wash bottle with distilled H2O | | | | **Procedure**   1. Pipette ~2 mL (1 pipette full) of CaCl2, and put it in the empty small beaker. 2. Pipette out approximately 2mL (1 pipette full) of Na2CO3, and add it to the small beaker that has the 2mL of CaCl2 already in it. 3. Record your observations in the chart below. 4. Dispose of reaction mixture down the drain with plenty of water, rinse the beaker with distilled water so it is clean and ready for the next class period. | | |
| **Observations** | | | | | | **Type of Reaction** |
| **Word Equation** |  | | | | | |
| **Balanced Eq. with phases** |  | | | | | |
| **Net Ionic Equation** |  | | | | | |

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**Absent?** Use this link to access videos of the reactions so you can finish this worksheet.

<https://tinyurl.com/53wr4cww>