Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_

**Introduction to Chemical Reactions**

***Today, we will begin investigating chemical reactions. Your job is to make observations, ask questions, and eventually provide evidence-based explanations about what’s going in chemical reactions.***

**Procedure:**

1. Measure 25 mL of 0.1 M copper (II) sulfate, CuSO4, in a graduated cylinder and pour it into a beaker.
2. Add aluminum to the copper (II) sulfate solution (you can use aluminum foil, aluminum wire, or both!). Stir the aluminum around in the solution. Let me know if you’re having any problems.
3. Record any observations. Be detailed! This could be useful information later.
4. Dispose of everything in your reaction beaker in the “waste container” at the front of the room. **DO NOT DISPOSE OF THE COPPER (II) SULFATE SOLUTION!** Wash and dry any glassware you used. Keep your goggles/aprons on until everything is cleaned up.

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| --- |
| **Observations from the reaction:**  |
|  |

**Questions:**

1. Most students think that the “red/brown stuff” looks like rust (Fe2O3). What data could you collect in the lab to investigate the claim that the “red/brown stuff” is rust?

2. What are the reactants in this chemical reaction? Do you have any ideas about what the products could be?

3. Make a list of some scientific questions you have after observing this reaction. We are going to use YOUR questions about this reaction or chemical reactions in general to drive our investigations on chemical reactions. Here is an example of a possible question, “Would a reaction occur if we used a metal other than aluminum?” You can’t use this question :)

Question 1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Question 2:

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Question 3:

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Question 4: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_