Science 9 Name: TA Section:

Title: _____

Safety (write three rules):
1. Wear gloves, goggles, apron (PPE)

2.

3.

Purpose/Questions: To learn about proper safety procedures in the lab. To learn about Thomas Haney Secondary School's Science Great Hall. To observe and attempt to identify chemical and physical changes.

Pre-Lab Theory: Research and **define** the following **BEFORE** the lab (look up and write down what they mean):

Physical Change:

Chemical Change:

Hypothesis: Use "IF... THEN..." statements to create a hypothesis. This lab's hypothesis has been written for you:

If three chemicals are combined that produce both physical and chemical changes, **then** we can decide which chemicals are causing the physical or chemical changes by mixing the chemicals in pairs.

Materials (make a list of the materials you'll be using – look at the procedure for this information)**:**

1. 5.

2. 6.

3. 7.

4.

Procedure: Refer to the Bag of Change procedure provided in the lab kit or found on the THSS website.

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Observations: Fill in the data table as you complete the lab. Make sure to give it a name. Your observations should be completed in your OWN words.

Data Table Name: _____

Chemical(s)	Observations	Diagram
A		
B		
C		
A & B		
A & B & C		
A & H_2O (A_{aq})		
B & H_2O (B_{aq})		
A_{aq} & B_{aq}		
A & C		
B & C		

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Questions:

1. Which combination of chemicals produced a chemical change? How do you know?

2. Which combination of chemicals produced a physical change? How do you know?

3. How did the safety equipment keep you safe?

4. a) Were your results quantitative (measurement/numbers based) or qualitative (word/description based)? How do you know?

   b) What are the advantages of quantitative data?

   c) What are the advantages of qualitative data?

Science 9 Name: TA Section:

*A **lab conclusion** summarizes what you tested in the experiment and what you observed. You make a conclusion about what happened and why it happened. The following six points should be included in your lab conclusion paragraph every time.*

1. Start by writing out what the hypothesis statement was that you were testing. (This lab's hypothesis was done for you and is on the first page.)

2. Based on your observations, describe your results. Tell the person reading your conclusion what happened in the lab – remember this is a summary and should be written as if the person reading hasn't seen the lab.

3. If there is a data table or graph, explain what it shows you.

4. Present a possible explanation for your results – why did they happen?

5. Identify any sources of error in one or two sentences. Describe what could have affected the experiment and your results (experimental or environmental error, user error).

6. State whether your hypothesis was correct or incorrect based on your observations (supported or not supported).

Conclusion:

In this experiment my hypothesis was "If three chemicals are combined that produce both physical and chemical changes, then we can decide which chemicals are causing the physical or chemical changes by mixing the chemicals in pairs." _____

_____

_____

_____

_____

_____

_____

_____. One source of error would be _____

_____

_____.

My hypothesis was _____ .

(Correct or incorrect)