

# Science 9 Lab: Bag of Change

/15

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Block: \_\_\_\_\_

Signature:  
(2 marks)

## Introduction:

When performing labs, it's very important to make detailed and careful observations both before, during and after a chemical reaction. During this lab, you will describe the properties of reactants before and after a reaction and record your observations. You will also make a prediction and identify the change as either a chemical or physical change.

## Pre-lab Questions:

1. What is a *physical* change? Give an example of a physical change. (1 marks)
  
  
  
  
  
  
  
  
  
  
2. What are some clues that tell you that a chemical reaction is taking place? Name 2 (1 marks).

## Materials:

Ziploc bag                      sodium bicarbonate ( $\text{NaHCO}_3$ ) in a small beaker  
bromthymol blue           calcium chloride ( $\text{CaCl}_2$ ) in a small beaker

## Safety/Disposal:

While the risks in this lab are minimal, you should still take all the proper precautions when working with chemicals. Always wear your safety glasses and take care not to spill any part of the lab. All liquids may be disposed of down the sink drain and all remaining items can be placed in the trash.

## Procedure:

1. Write down your observations of the properties of sodium bicarbonate, calcium chloride, and bromthymol blue.
2. Add the two substances together into the Ziplock bag. Observe any changes in your data table.
3. **Before you add the bromthymol blue**, make a prediction of what you think will happen. Record in your data table.
4. *Act fast!* Add the bromthymol blue to the Ziploc bag and seal the baggie. Mix all the chemicals together. Record your observations in your data table.
5. Dispose of all substances down the drain or in the trash.

**Data (6 marks):**

	<b>Observations</b>
<b>sodium bicarbonate</b>	
<b>calcium chloride</b>	
<b>bromthymol blue</b>	
<b>sodium bicarbonate + calcium chloride</b>	
<b>sodium bicarbonate + calcium chloride + bromthymol blue</b>	<b>Prediction:</b>  <b>Observations:</b>

**Discussion Questions:**

1a. Did mixing the chemicals result in a chemical or physical change? (1 mark)

b. How do you know? (list 2 pieces of evidence from your observations) (2 marks).

2. Consider the following diagram – a lit candle. Is this an example of a chemical or physical change? Explain your choice. (2 marks).

