

Purpose: To describe the physical and chemical properties of matter based on the changes they undergo.

Problem: How do you determine whether a change is chemical or physical?

Hypothesis: (what do you think will happen when they are mixed with Water , Vinegar, Iodine)

Baking Soda: _____

Corn starch: _____

Salt: _____

Procedure:

- Using the chemistry wells container, place a small amount of baking soda in the top 4 wells
- Record your observations of the powder into Table 1 in the ‘Unmixed’ column.
- Use the popsicle stick to put some of the baking soda on the plate. Use a pipette to add water to the baking soda on the plate, mix with popsicle stick.
Record your observations in Table 1 in the column labeled ‘Mixed with Water’
- Place another scoop of baking soda on the plate. Use the pipette to add Vinegar, stir.
Record your observation in Table 1 in the column labeled ‘Mixed with Vinegar’
- Put a third scoop of baking soda on plate. Use the pipette to add iodine to the baking soda, stir.
Record your observations in Table 1 in the column labeled ‘Mixed with Iodine’.
- Clean plate, Repeat steps 2-5 for each of the other substances (Cornstarch, Salt)

Table 1: Observations

Substance	Unmixed	Mixed w/ water	Mixed w/ Vinegar	Mixed w/ Iodine
Baking Soda				
Cornstarch				
Salt				

Table 2: Summary of Changes (did it change?) and Property Determination:

Substance	Mixed w/ Water		Mixed w/ Vinegar		Mixed w/ Iodine	
	Change	Property	Change	Property	Change	Property
Baking Soda						
Cornstarch						
Salt						

2. Suppose that you have a mixture of two substances. The mixture turns black when mixed with iodine and bubbles when mixed with vinegar. What two substances are in the mixture?

3. How can you describe each of the three substances in terms of the chemical property of reactivity?

4. What is the difference between chemical and physical properties?

5. Pick one of the experiments and draw a picture below of the reaction you observed when you mixed the liquid with the powder.
Label your drawing.

Bolts Mini Lab

Container	Drawing Draw what you see in the container	Which is it? Element / Compound Or Mixture	Explanation: Choose one of these and write it in: 1. Element: ALL 1 type of atom 2. Compound: Specific Ratio/Attached or bonded / identical 3. Mixture: no bonds, random sorting, can easily separate
A			
B			
C			
D			
E			
F			
G			
H			
I			