

What's going on here?

Problem: What happens to matter when it undergoes a physical and chemical change?

Hypothesis: _____.

Materials: Clipboard, pencil, piece of paper, 2 smiles.

Background: This lab should be a fun one! Your teacher had a little extra time this weekend so he/she decided to clean out the attic. During the process he/she found a whole bunch of scientific recipes and other cool stuff. He/she used as many of these recipes as they could in today's lab.

Procedure:

1. The first thing you should do is divide your paper into 4 boxes like, we have done in previous labs. Letter the boxes (using the back as well) A-H. This sheet will serve as your data sheet.
2. When signaled one member from your group will move to the lab cart to get all the materials needed for the part of the lab you are doing.
3. On your piece of paper write a summary of what you observed make sure to write the name of the lab station down as well.
4. Make sure to identify whether what you witnessed was a physical or chemical change, in each appropriate box. Below you will find eight different lab activities, each has a different letter. Your Teacher will assign you a letter to start on. Take your time, when in doubt look back to the definitions of both processes.

Conclusion Questions:

1. What is Matter?
 2. What are the three classes of Matter?
 3. What three possible phases in which you may find matter?
 4. In which phase of matter are the particles farthest apart?
 5. Melting point signifies the phase change from solid to which phase?
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Stations:

- **There's nothing like burnt toast-** Go to the cart and get a piece of bread and a piece of burnt toast. Compare the two of them. I wonder is toasting a chemical or physical process. Remember things may not be what they first appear.
- **Making Orange Soda-** From the cart get a half of cupful of Orange Juice look at the Juice and make some observations. Then add a half of spoonful of baking soda, and a half

a spoonful of sugar and stir it in pretty well. Now fill the cup the rest of the way with water. Now compare what you have with all the ingredients you used. Which Process is it?

- **Bubbles-** Take two to three fresh straws from the cart and take a bubble pan. Designate which of you will take turns blowing bubbles in the pan. You each get three tries, blow the biggest bubble you can. While you were blowing bubbles, was the bubble solution undergoing a physical or chemical change?
- **I'm Melting!-** Grab a piece of ice in it's dish. Look at it, what's happening and why? Physical or Chemical change?
- **Time to break stuff-** Take a few popsicle sticks from the cart. Try to break them into as many pieces as you can. What's process did the sticks just undergo?
- **Be careful, very careful-** At this station you will be using Bleach. Bleach is a very toxic substance, it can easily kill living tissue. Take an eye dropper of bleach and two pieces of color construction paper. Now let the Rembrandt in you come out, use the bleach to make a painting on the construction paper. Now the science part, what process did the construction paper undergo?
- **Wow, now that's cool-** Take two spoonfuls of Sodium Bicarbonate put it in a beaker & add 25 mL's of acetic acid. Clean up when your done. What happened?
- **How ya like them Apples?-** Beware the answer to this is not as easy as it seems. Go to the cart and get an apple, cut a small slice off with the plastic knife and watch this slice for about six minutes. What is happening?

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