Chemical Reactions

Objective: Test the reactivity of different liquids.

Supplies:

Experiment Grid

Reaction Chart

Pencil

Wax Paper

Baking Soda

Orange Juice

Lemon Juice

Water

Vinegar

Eye Dropper

Procedure:

- Take the Experiment Grid, and place it on the table with a piece of wax paper covering it.
- Place a ½ tsp of baking soda in each box on the Experiment Grid.
- In the box labeled Water, carefully drop two or three drops of water onto the baking soda. Observe and record what happens on the Reaction chart.
- In the box labeled Orange Juice, carefully drop two or three drops of orange juice onto the baking soda. Observe and record what happens on the Reaction chart.
- In the box labeled Lemon Juice, carefully drop two or three drops of lemon juice onto the baking soda. Observe and record what happens on the Reaction chart.
- In the box labeled Vinegar, carefully drop two or three drops of orange juice onto the baking soda. Observe and record what happens on the Reaction chart.

Discussion Questions for the Family:

1. Which liquid has the biggest reaction?

2. Which liquid had the least reaction?

3. Which liquid gave your favorite reaction?

4. Can you think of other liquids to try? What would their reactions be?

How it Works:

"In a chemical reaction, chemicals are mixed together to produce some new chemicals. Many times, we can observe a change that has occurred when the chemicals are mixed. Baking soda reacts with acids to produce carbon dioxide gas. That's the fizzing you see. Stronger acids produce more gas so you should see more fizzing or bubbles when you add the liquid to the baking soda. The gas produced from this chemical reaction, carbon dioxide - CO_2, is the same gas we exhale when we breathe. It is also the gas plants need to grow. "

- From: Sandia National Labratories (http://www.sandia.gov/about/community/education_programs/_assets/documents/2FSN%20English%20%20Spanish%20Activities2013.pdf)