OBSERVE A CHEMICAL REACTION

MATERIALS

Large measuring cup

Vinegar (acetic acid)

Measuring spoons

Baking soda (sodium bicarbonate)

Pen or pencil (to make notes)

1. Place a large measuring cup on the kitchen counter.
2. Pour vinegar into the measuring cup until you have 100 ml.
3. Observe the vinegar and make notes below.

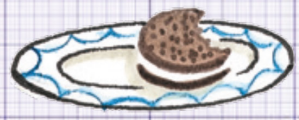
4. Put the measuring cup in the empty sink.
5. Measure out 1 tablespoon (approximately 15 ml) of baking soda.
6. Drop the baking soda into the vinegar.
7. Observe what happens. Make notes below.

8. Let it sit for 2 minutes, then observe again. Make notes.

Record what you see, hear, and smell here. Do not drink or taste the mixture.

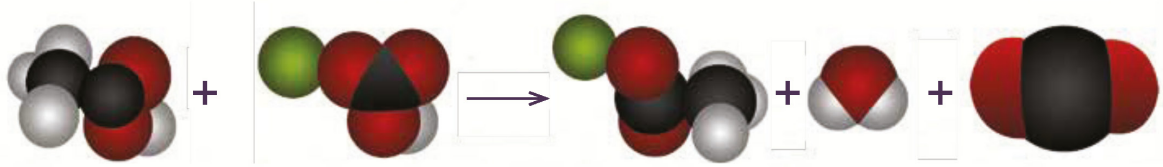
When you add the baking soda to the vinegar, the mixture will instantly bubble and rise rapidly in the measuring cup. Listen for the snap of bursting bubbles. How long does the fizzing last?

Is there the same amount of liquid in the measuring cup after the experiment as there was before? Does it look different?



Here's what's happening: The acetic acid ($C_2H_4O_2$) and sodium bicarbonate ($NaHCO_3$) recombine and form a new mixture of sodium acetate ($NaC_2H_3O_2$), water (H_2O), and carbon dioxide (CO_2). Carbon dioxide is a gas that rises out of the mixture and is released into the atmosphere as the bubbles burst.

An equation is a scientific description of what happens when molecules combine or separate. Here's a picture of the equation.



$C_2H_4O_2$	$NaHCO_3$	$NaC_2H_3O_2$	H_2O	CO_2
Acetic Acid	Sodium Bicarbonate	Sodium Acetate	Water	Carbon Dioxide

KEY: OXYGEN (O) HYDROGEN (H) CARBON (C) SODIUM (Na)