Volcano Science (recommended ages 5+)

Gather

- 1 Tbsp dish soap
- ½ cup cold water
- 1 ½ cup white vinegar
- Food coloring
- Baking soda slurry (fill a cup ½ way with baking soda, fill the rest with water)
- Empty 2 liter bottle
- Spoon

Let's Experiment!

Do this outside, it's messy!

1. Combine vinegar, water, dish soap, and several drops of food coloring into empty soda bottle.
2. Use a spoon to mix the baking soda slurry until it's dissolved.
3. Get ready for the eruption! Quickly pour the baking soda slurry into the soda bottle and step back!

How Does it Work?

A chemical reaction between vinegar and baking soda creates a gas called carbon dioxide. Carbon dioxide is the same type of gas used to make the carbonation in sodas. What happens if you shake up a soda? The gas gets very excited and tries to spread out. There is not enough room in the bottle for the gas to spread out so it leaves through the opening very quickly, causing an eruption!

Take it Further!

Experiment with the amount of ingredients that you use - if you double everything, what happens? What if you only change the amount of vinegar in the reaction, how is that different? What if you only change the water or the baking soda? Why do you think this is?

Check out the links below for more information:
http://www.sciencefun.org/kidszone/experiments/how-to-make-a-volcano/
https://www.wonderopolis.org/wonder/what-happens-when-you-mix-vinegar-and-baking-soda
https://www.middleschoolchemistry.com/multimedia/chapter6/lesson2