At Home Science: an exploration into kitchen chemistry

*Please note that these are OPTIONAL activities you can do with your family. I recommend doing them because I think they’re fun, but don’t take my word for it. Try them yourselves!*

**Experiment 1: Homemade Lava Lamp**

Materials:

* Glass
* Oil (I use vegetable or olive)
* Food coloring
* Water
* 1 Alka-Seltzer tablet

Place 1 part water and 1 part oil in the glass. Let the oil and water separate. Place 15-20 drops of food coloring into the glass as well. Finally, drop the Alka-Seltzer tablet into the glass and enjoy!

**Experiment 2: Surface Tension**

Materials:

* Plate
* Water
* Pepper (white pepper works best)
* Dish Soap

Place some water onto the plate. Coat the surface of the water with pepper. Dip finger into some soap. Touch the surface of the water with the soap covered finger and watch what happens!

**Experiment 3: Exploding Sandwich Bags**

Materials:

* Resealable sandwich bags
* Vinegar
* Sodium bicarbonate (baking soda)
* Tissue Paper
* Cup (plastic is suggested)
* Spoon and plate
* An outdoor area
* Measuring cylinder (optional)

Wrap a spoonful of baking soda in some tissue paper. Place the tissue paper into a sandwich bag. Add approximately 100mL of vinegar to the bag and seal it ***QUICKLY***. Note what happens to the bag. Repeat the experiment, but increase the amount of baking soda wrapped in the tissue paper and see what happens!

**Experiment 4: Microwave Soap (Parental Supervision Required)**

Materials:

* Microwave
* Microwave-safe bowl
* Bar soap (an old one from the shower works best)

Place the bar of soap on a microwave safe dish. Put the dish in the microwave and microwave the soap for 30-60 seconds (This might take longer for lower power microwaves). Watch what happens! ***Remember that things in the microwave get hot. DO NOT TOUCH the soap until it cools.***

**Experiment 5: Homemade Thermometer (Parent Supervision Required)**

Materials:

* 1 clear screw top container (plastic water bottle, soda bottle, etc.)
* 1 clear straw
* Something to make a hole with (nail, hand drill, etc.)
* Food coloring
* Hot water bath
* Ice bath
* Hair Dryer (Optional)
* Molding clay
* Permanent marker
* Balloon/water balloon
* Container (bowl, Tupperware, etc.)
* Scissors

Place a hole in the top of the lid of your bottle just big enough for the straw. Put the straw through the hole and seal the gaps with molding clay. Completely fill the bottle with water and add several drops of food coloring. Gently blow into the straw. If you blow too hard, the water will splash you in the face! If the water does not come up the straw when you stop blowing, you need to check the seal. Mark the final water level with the marker. This mark stands for room temperature. Hold the bottle between your hands or heat the bottle with the hot water bath or the hair dryer and see what happens to the water! Now place the water in the ice bath and see what happens to the water!