

## Experiment Details for Day 3 (Dec 30th) Winter Session: **HOLIDAY THEMED!**

**Reminder:** All experiments recreated at home should be done under the supervision of a parent or guardian to ensure the safety of the child. No experiments listed should cause any harm!

### Holiday Catapults

Materials:

1. Popsicle/craft sticks (wider sticks work best!)
2. Rubber bands
3. Mini pom poms

Procedure:

1. Take a few popsicle sticks except one and stack them on top of each other
2. Place one stick horizontally right above the bottom stick
3. Wrap rubber bands around the sticks!
4. Place the last stick on top at an angle so one end is touching the horizontal stick at the bottom. Wrap one rubber band around the ends of the two sticks to connect them.
5. Take a pom pom and place it on one end of the angled stick at the top
6. Push down on the end of the angled stick and watch the pom pom catapult!

### Elephant Toothpaste

Materials:

1. Hydrogen Peroxide (3%) - first aid antiseptic
2. Warm water
3. Any cylindrical-shaped jar or bottle (empty plastic water bottle can work great)
4. Dish soap
5. A packet of dry yeast
6. Tray or large container (you can always work outdoors)
7. Food coloring (optional)
8. A funnel (optional but recommended)
9. A cup/small bowl
10. Something to mix with

Procedure:

1. Have an adult pour about  $\frac{1}{2}$  cup of hydrogen peroxide (first aid antiseptic) into the cylinder you are using
2. Add about a tablespoon of dish soap into the cylinder
3. If you would like, add several drops of one colored food coloring! I'm going to be using blue today!
4. Mix the packet of dry yeast ( $\frac{1}{4}$  oz) with about 3 tablespoons of warm water for about 30 seconds in a separate cup or small bowl
5. Pour the yeast into the cylinder and watch the elephant toothpaste be created! Please be sure to not touch the foam right away as it can be a little hot or warm!

## Lava Lamp

### Materials:

1. A clear glass
2. Water
3. Vegetable oil
4. Antacid (Alka seltzer)
5. Food coloring

### Procedure:

1. Fill your cup/glass with about  $\frac{3}{4}$  of oil
2. Fill the rest up with water and watch as the water sinks to the bottom!
3. Add a few drops of your favorite food coloring
4. Take your Alka Seltzer and break it into a few small pieces
5. Put the tablet pieces in a few at a time, and watch your lava lamp erupt with colorful bubbles!
6. If you want your lava lamp to erupt even more, just add another tablet!

## Squishy Circuits

### Materials:

1. 2 Jumper wires (positive and negative)
2. Battery (1.5 to 4 volts - lower voltage you can use two batteries)
3. LED
4. Playdoh (conductive dough - there are lots of homemade recipes to make this as well!)

### Procedure:

1. Roll 2 small balls of playdoh or conductive dough
2. Insert the LED into the 2 small balls of playdoh with one leg in each (pay attention to which ball the long leg goes into and which ball the small leg goes into)
3. Insert one positive jumper wire into the playdoh ball with the long LED leg and the other negative jumper wire into the playdoh ball with the short LED leg
4. Attach the other end of the two jumper wires to a battery (make sure the positive end of the wire corresponds to the positive end of the battery and the negative end of the wire corresponds to the negative end of the battery)
5. Your squishy circuit is now complete and the LED will light up! (keep in mind that the stronger the voltage of your battery and the closer the jumper wires are placed to the legs of the LED in the playdoh, the brighter your LED will be!)

**Have Fun!**