

Experiment Details for Session 6: **SCIENCEZOOMZ** Summer 2021

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!

Blowing a Balloon with CO₂

Materials:

1. A plastic bottle
2. Vinegar
3. Balloon
4. Baking Soda
5. Funnel (optional to pour the baking soda in)

Note: If you don't have a funnel you can use the help of a sibling/parent to pour place the baking into the balloon

Procedure:

1. Pour a generous amount of vinegar into the plastic bottle
2. Pour about a tablespoon or more baking soda into the balloon
3. Try to place the balloon on top of the plastic bottle (Wrap the mouth of the balloon to the cap of the bottle)
4. Watch the baking soda fall into the bottle
5. Now observe the balloon getting filled with carbon dioxide!

Liquid Layering

Materials:

1. Glass
2. Maple syrup
3. Water
4. Oil
5. Food Coloring (Optional)

Optional Materials:

6. Coin
7. Small plastic piece
8. Grape (really any small fruit/vegetable/nut - I used raisins and sunflower seeds!)
9. Ping Pong Ball

Note: The optional materials can be any small household items you want to test in the layered liquids! Try to guess what layer the objects will float in or how far down they will sink :)

You can always test out other liquids as well to see if they will layer!

Procedure:

1. Pour some water into a glass and make sure to leave room for the other liquids!
2. Add a drop of food coloring (optional)
3. Slowly pour in some maple syrup into the glass (try to keep the proportions of each liquid the same)
4. Slowly pour in some oil into the glass as well
5. Observe and let the liquids sit for approximately 15 minutes so they can separate out!
6. Slowly start to drop in each small household item at a time to see what layer they sit in. By doing this, you can get a relative idea of each object's density.

Hot and Cold Water w/ Food Coloring

Materials:

1. Two cups
2. Food coloring
3. Water(different temperatures)

Procedure:

1. Fill your first glass with cold water
2. Then, fill your other glass with hot water
3. Slowly add food coloring drop(s) to the cup
4. Observe the food coloring spreading faster in the warmer water than the colder water

Note: Make sure you place the same number of drops in both the cups for fair results

Have Fun!