

Bouncing Bubbles

**Materials:**

-Water

-Dish Soap

-Glycerin/Sugar

-Cotton Glove

-Bubble Wand/Modified Pipette/Straw

**Steps:**

-Mix 3 parts water with 1 part dish soap and 1 part glycerin

-Stir the solution to combine

-Let sit for multiple hours (24 hours for best results, but make it into a experiment to see when what amount of time works best)

-Test your solution with the cotton glove or similar materials

-See how many times you can get a bubble to bounce on different materials

**Sugar Version:**

-Mix ¼ cup Warm Water with 2 tablespoons Sugar and 1 tablespoon dish soap

**The Science:**

A bubble is formed from two layers of soap surrounding a thin layer of water with air in the center. Water bubbles pop easily because water is not very stretchy and the surface tension can easily be broken. When you add soap to the water the surface tension decreases allowing the water to stretch more.

The addition of sugar/glycerin to the soap and water mixture creates a stronger, thicker bubble by creating a molecular bond with the water. This bond helps slow the rate of water evaporation making the bubble stronger and last longer.