Amazing Bouncing Bubbles: A Science Magic Trick!

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What child doesn't love bubbles? As you watch bubbles float away and disappear into the air, have you ever wished they could stay around a bit longer? Add a touch of sweet magic to your bubble mixture and let science help make your bubbles stronger and more fun!

- Age: 3-5
- Time: Less than 30 minutes
- Messiness level: A bit messy

Materials Needed:

1 Cup Water
2 Tablespoons Washing-Up Liquid
1 Tablespoon Sugar
Cup
Bubble-Blowing Tool (You Can Use a Straw or a Shop-Bought Bubble Wand)
A Pair of Soft Gloves (Or a Stuffed Toy)

Step-by-Step Instructions:

1. In a bowl, add 4 tablespoons of warm water, 2 tablespoons of washing-up liquid, and 1 tablespoon of sugar. Gently stir with a spoon until the sugar is completely dissolved.

2. Let the mixture sit for 5-10 minutes to allow the sugar and washing-up liquid to fully blend. Dip the bubble wand or straw into the mixture and gently blow a big bubble.

3. Gently touch or pat the bubble wearing gloves. Does the bubble pop? Try a few times with different objects, but remember not to use too much force.

The Science Behind It:

First, let's understand how bubbles form! Have you ever wondered why we add washing-up liquid to the water for blowing bubbles? This is because water itself has strong surface tension, causing water molecules to stick closely together. Washing-up liquid reduces the surface tension of water, increasing the distance between water molecules, making bubbles more stable and easier to form.

Why add sugar?

Sugar molecules are large organic molecules. When dissolved in the bubble solution, they form a strengthening layer on the bubble film. These large molecules can enhance the structure of the bubble, making the bubble film thicker and more elastic. Sugar moleculescan lock in more moisture, preventing the bubble film from evaporating quickly, thus extending the bubble's lifespan.

Why use cotton gloves?

The surface of cotton gloves or soft plush toys has a smooth fibre structure that doesn't absorb moisture from the bubble film. When bubbles touch these soft, dry surfaces, their film isn't destroyed, allowing the bubbles to remain intact and bounce.