

BUBBLEOLOGY

Have you ever looked closely at the different colors of a bubble? Let's explore the science (and fun) of bubbles!

Big Idea

Kids will experiment with bubble solution by making their own bubble wands (to keep) and then observing how their bubbles look (shape, color, duration, etc.).

Standards

<p>IELDS.11.A.ECf Make meaning from experience and information by describing, talking, and thinking about what happened during an investigation.</p>	<p>Students will describe what is happening with the bubble solution and bubbles as they experiment.</p>
<p>NGSS.2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.</p>	<p>Students will experiment with the bubble solution as a liquid and when it becomes a gas. Students will describe and classify the solution and bubbles.</p>
<p>CCSS. MATH.CONTENT. K.MD.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</p>	<p>Students will describe attributes of the bubbles and using observations and measuring tools.</p>

Materials

- Bubble solution with ingredients on display
- Jumbo straws
- Normal straws
- String and tape for lanyard
- Regular bubble wands
- Stop watch (cell phone)
- Magnifying lens
- Binoculars
- Rulers
- *If Indoors – tray, plastic cup, normal straws*

Setup

For Outside: Have ingredients, bowls/cups for the solution, straws and bubble wands.

Inside: Have ingredients, bowls/cups for the solution, a plastic cup with a straw for each tray. Poke a hole somewhere on the bottom 3rd of the cup for a straw to fit through.

Bubble Solution: 6 cups H₂O, 1 cup light corn syrup, 2 cups regular strength dish soap (have ingredients ready, but it's recommended to make the mix with students)

Directions

Making the outside wands:

1. Each student selects 1 jumbo straw and two regular straws.
2. Push the regular straws together inside the jumbo straw (it works best if the regular straws are closer to the bottom of the jumbo straw than the top).
3. Tape on the lanyard/string for students to wear the wand around their neck.
4. Place the bottom of the wand in the bubble solution and swirl it around.
5. Remove the wand from the solution and blow into the top of the wand to create bubbles!
6. Observe: number, size, color, reflections, where the bubbles go, and how long the bubbles last.

Making the indoor cups:

1. Push the straw into the hole in the cup.
2. Place the rim of the cup into the bubble solution.
3. Remove the cup from the bubble solution and blow into the straw to make bubbles
4. Observe: number, size, color, reflections, and how long the bubbles last.

Making the solution:

1. Invite students to help you measure and mix the ingredients. Add 6 cups water.
2. Then add 1 cup light corn syrup
3. Then add 2 cups regular strength dish soap
4. Mix the ingredients together and pour into bowls/cups for students to use.

Investigation Questions: What do you think will happen when we mix these ingredients? Where else do we see bubbles? What happens when the bubble pops? How long can a bubble last? What colors and reflections do you see in your bubble? What is the biggest bubble you can make? How do you know it is the biggest? Is your bubble a liquid, solid, or gas? What about the bubble solution, is it a liquid, solid or gas? What is heavier the bubble or the solution?