



Curiosity Guide #602

Bubble Science

Accompanies Curious Crew, Season 6, Episode 2 (#602)

Glowing Bubbles

Investigation #8

Description

Glow, little glow-bubble, glow! Make glow-in-the dark bubbles!

Materials

- Bubble solution
- A glass
- Black light
- Highlighter
- Needle-nose pliers
- Bubble wand
- Waxed paper
- Tape

Procedure

- 1) Pour the bubble solution into the glass.
- 2) Use the pliers to pull the felt out of the highlighter.
- 3) Drop the felt into the solution.
- 4) Use the pliers to soak and squeeze the felt to release as much ink as possible.
- 5) Use the bubble wand to be sure you can blow a bubble.
- 6) Turn on the black light and darken the room. What do you notice?
- 7) Pour some of the solution onto a piece of waxed paper taped onto the table.
- 8) Try blowing some bubbles onto the waxed paper.

My Results

Explanation

The fluorescent ink in the highlighter mixes with the bubble solution. Under visible light, the highlighter appears yellow. This is because the high-energy ultraviolet light is absorbed in the chemicals and then emits lower-energy, visible light that we can see. The black light has an ultraviolet lamp that reveals the ultraviolet light from the highlighter and makes the bubble solution appear to glow. Bubbles blown onto the waxed paper will temporarily last, stick to one another, and create interesting structures and designs.

Explore a bit more. Have you ever noticed the pretty colors reflecting on the surface of a bubble? As light enters the bubble, white light is separated into multiple colors. The different colors reflect off both the inner and outer walls of the bubble. When the water layer of the bubble starts to dry out, the thickness of the bubble changes and makes different combinations of colors. When the bubble suddenly has no color, that is a sign that the layers are so thin that the bubble is about to pop. Oops! There it goes!

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