Dancing Raisins

Materials

- A can of colorless soda (e.g., 7-Up or Sprite)
- A tall, clear glass or plastic cup
- Several raisins (fresh raisins work best)

Instructions

- Pour the can of soda into the tall glass. Notice the bubbles coming up from the bottom of the glass. The bubbles are carbon dioxide gas released from the liquid.
- Drop 6 or 7 raisins into the glass. Watch the raisins for a few seconds. Describe what is happening to them. Do they sink or float? Keep watching, what happens in the next several minutes?
- You can try other objects to see if they exhibit this behavior. Any object whose density is just slightly greater than water's and has a rough surface to which the gas bubbles can attach should be able to dance in the carbonated water. Can you find other items that dance?

What's Going On?

Raisins are more dense than soda, so initially they sink to the bottom of the glass. The carbonated drink releases carbon dioxide bubbles. When these bubbles stick to the rough surface of a raisin, the raisin is lifted. When the raisin reaches the surface, the bubbles pop, and the carbon dioxide gas escapes into the air. This causes the raisin to lose buoyancy and sink. This rising and sinking of the raisins continues until most of the carbon dioxide has escaped, and the soda goes flat. The raisin will also get soggy with time and will be too heavy to rise to the surface.

the Works® museum
Engineering Fun