Explore States of Matter with Dancing Raisins

Science demonstrations are like mini-magic shows for curious minds. When your child watches a scientific demonstration, he is inspired to ask questions, make hypotheses and predictions, and test his own ideas. These are all inquiry skills that encourage critical thinking and problem-solving.

In first grade, your child may be exposed, on an introductory level, to lots of abstract science vocabulary, such as properties, matter, liquids, solids, and gases. Here's a demonstration to help develop those inquiry skills, while exploring the power of gases to move objects.

What You Need:

- Clear drinking glass
- Club soda
- 2-3 raisins
- Dry pasta
- Other small, lightweight objects that will not dissolve, such as buttons and beads

What You Do:

1. Slowly, pour the club soda in the glass until it is ¾ full. Ask your child to describe what he sees. (There are bubbles coming from the bottom of the glass up to the top.) Now is a good time to talk about what bubbles are. Explain that bubbles are pockets of air in a liquid. Inside, a bubble is filled with a gas.
2. Have your child drop the raisins in the glass. What happened to them? (They should sink, at first, to the bottom). Ask your child to think about why they went to the bottom. (They are heavier, or denser, than the water).
3. Now watch the raisins for a few minutes. What's happening? (The bubbles attach to the raisins, then the raisins bob a bit, and slowly float back to the top. Once they get to the surface, the bubbles pop, and the raisins sink back to the bottom again.) Discuss with your child why this is happening. The bubbles are less dense than the soda, and so they "carry" the raisin to the surface. Once the bubbles pop, the raisin is denser than the soda once again, and so it sinks. (Note: After a while, the soda will begin to lose its carbonation and will go flat. When this happens, the raisins will just sink to the bottom).
4. Dump out the soda and discard the raisins. Add fresh soda to the glass, and ask your child to try to predict another item that can dance in the soda. Pasta? Buttons? Beads?

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