

An Air Science Experiment

Wondering how we know that air is there? Here's a quick and easy experiment that proves that air may be thin, but it's not too wimpy to block your shot!

What You Need:

- Empty 2-liter soft drink bottle
- Tape
- Piece of paper
- Electric hand held hair dryer

What You Do:

1. Take an empty, 2-liter soft drink bottle and lay it on its side. Hold it down firmly.
2. Have your child make a ball out of a small piece of paper. Make sure it's small enough to fit through the mouth of the bottle.
3. Hold the hair dryer so it blows directly into the mouth of the bottle. Challenge your child to try and push the paper ball into the bottle using the air stream from the hair dryer. Much to your child's surprise, the paper will not enter the bottle even when the flow of air points directly to the bottle's opening!



What Happened?

Why couldn't your child get the paper ball to enter the bottle? This question offers a great opportunity for critically thinking on the part of your middle schooler.

While your child was trying to push the paper into the bottle, the air stream from the hair dryer was flowing directly at the mouth of the soda bottle. The hair dryer pushes air into the bottle, filling it with slightly compressed air. In fact, the bottle is so full of air that there is no room for anything else to enter - not even a little ball of paper! If they turn off the hair dryer or aim it away, the air can escape the bottle and there is room for the paper ball to enter. The activity not only illustrates the fact that air has volume, but it also gives your child a taste of how easy, and fun, science experimentation can be!

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