

Air Pressure Experiment

Young children are naturally curious and very creative. Put those qualities together with a little water and some household stuff, and you've got unlimited possibilities (as long as you can tolerate a teeny bit of a mess sometimes).

Here's a science activity that lets your first grader have fun with an empty dish soap bottle to create his own fountain as he explores air pressure. Get ready for an adventure that's both zany fun and good, solid science, too!

What You Need:

- Empty dish soap bottle
- Thumbtack or nail
- Water
- Bucket or sink
- Towel or paper towels for cleaning up



What You Do:

1. You may want to conduct this experiment outside. Use a thumbtack or nail to poke holes in the dish detergent bottle. Make 3 - 4 holes to get started, placing some holes near the top of the bottle and some holes near the bottom.
2. Tell your child that you are going to pour water into the bottle. Ask your child to predict what he thinks will happen.
3. Hold the bottle over a sink or bucket and fill the bottle with water.
4. As the water flows out of the holes, talk to your child about his observations about the design water fountain jets. (The water flow will resemble a fountain.) Is the jet stream of water at the top of the bottle smaller or larger than it is at the bottom of the bottle?
5. This time, fill the bottle again and close it with the cap. Have your child squeeze the bottle and ask your child to observe what happens. Why does he think the water came out that way? How is the pressure of the squeeze related to the design of the water as it comes out of the holes? Do the streams of water look different or act differently when the cap is on the bottle as opposed to when it is off?
6. Try adding more holes to create a different water fountain jet design, add more water, and watch the new fountain jet shapes.