

Date: June 5, 2014

Question: Does air take up space?

Experiment: Sneaky bottles

- Materials:
- Tack
  - Razor knife
  - Two empty plastic bottles
  - Two balloons

- Describe what I'm doing:
- With bottle number one I did not use the tack or the razor knife to poke the bottom of empty water bottle. Then I stuck a balloon inside empty water bottle and pulled the balloon around the neck.
  - With bottle number two I poked the bottom out with tack/razor knife. Then I put balloon inside of empty water bottle and pulled the balloon around the neck.
  - Then I blew into the first one and it did nothing.
  - Then I blew into the second one and it started to puff up.

Answer to Question: Yes, air takes up space. The water bottle with the hole allowed me to blow up the balloon. The water bottle without the hole had no space for my air to puff balloon up.



Figure 1: This is the bottle without the hole. I can't blow up the balloon because there is no room for my air.



Figure 2: This is the bottle with the hole in the bottle. My air pushes so the balloon can blow up and the air in the bottle is forced out the hole.



Figure 3: This is the bottle with the bigger hole. I blew up this balloon and it stayed inflated because my thumb was over the hole which created high pressure. (Mom helped me write this last sentence.)