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Activity Idea

Inside Out Balloon

Recommended for Ages 6+

Learn about molecules and how to inflate a balloon inside out and backward.

Materials
2 teaspoons of water, glass bottle or vase, oven mitts, microwave, and a balloon

"IMG_3096 Glass Bottles" by ArturoYee, license CC BY 2.0

Instructions

1. Practice stretching the balloon over the mouth of glass bottle or vase before you start. This will be helpful in step number four.
2. Remove the balloon to begin the experiment.
3. Pour two teaspoons of water into the bottle.
4. Have an adult help you microwave the bottle for one minute. After one minute, have your adult use oven mitts to take the container out of the microwave and place on a flat counter or table.
5. Quickly stretch the balloon over the mouth of the bottle.
6. Observe! The balloon will start expanding inside the bottle in about 10 seconds and will continue to inflate inside the bottle as the container continues to cool off.

Experiment Explained:
The microwave heats up the water, and that causes the molecules to evaporate, spread, and push out of the bottle. As the bottle cools, the water vapor turns back into liquid and pulls the balloon in and inflates it inside the bottle.

Suggested glass bottle or vase: The neck and opening of the glass bottle needs to be smaller than the width of the bottle – enough for a balloon to stretch over the opening.