Physical Change

Expando

10 minutes

What You Will Do

Demonstrate how pressure affects the volume of a marshmallow.

Get it Together

- Fresh marshmallow
- Small, clear, glass bottle with a mouth slightly larger than the marshmallow
- Black marker
- Modeling clay
- Drinking straw

Procedure

1. Use the marker to draw a face on the marshmallow.
2. Place the marshmallow inside the glass bottle.
3. Wrap the clay around the straw about 1" from its end.
4. Completely seal the short end of the straw in the bottle.
5. Suck (inhale) the air out of the bottle and observe the marshmallow.
6. Release the straw from your mouth and observe.

A Closer Look

A marshmallow is a spongy solid that contains sugar and air. Drawing the air out of the bottle decreases the pressure inside the bottle causing the air bubbles inside the marshmallow to expand. Removing the straw from your mouth allows the air pressure to return to normal, causing the marshmallow to return to its original size.

What Now?

You can stand in front of a mirror to see the results of your own marshmallow.