How Gases Behave

Experiment 6



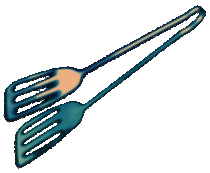
Squash a soda can without even touching it.

You will need

- An empty soda can.
- A stove.
- Tongs.
- A pan or dish containing about an inch of cold water.
- An adult to help you with the stove.









Process

1. Pour a spoonful of water into the soda can.
2. Place the can on the stove until steam begins to escape from the opening on top of the can.
3. Lift the hot can with the tongs and place it upside down into the dish of cold water.
4. Watch the can as it squashes.
5. Can you explain why it gets squashed?

What happens is that the hot air inside the can cools and the water vapor condenses forming droplets of water inside the can. So, as the water vapor leaves the air and the air inside the can gets cooler, the pressure inside the can decreases. When the air pressure outside the can becomes greater then the air pressure inside the can, the can gets crushed.