

# Lesson Plan: Under Pressure

Brighter Idea - Try This at Home

**Use some things from around the house to explore air pressure!**

In this activity you will need:

## Supplies

- \* Empty soda can
- \* Large bowl
- \* Kitchen tongs
- \* Water
- \* Heat source (stovetop or hotplate)

## Instructions

- 1 Fill the soda can with about 100 milliliters of water.
- 2 Fill your bowl about halfway with cold water.
- 3 Place the soda can on your heat source and set it to medium high heat.
- 4 When steam starts to rise from the can, carefully pick it up with the tongs.
- 5 Quickly dunk the can in the bowl of cold water, flipping it over as you put it in.
- 6 The change in temperature causes a change in air pressure, making your can implode!

## What's this all about?

Heating the water in the can creates an area of high pressure inside the can as the water turns to steam. When the can is turned over and dunked inside the cold water, that steam rapidly cools down and turns back into a liquid. This causes the pressure to drop, but it can't balance with the air pressure around the can because the opening of the can is underwater. The pressure outside the can is higher than inside the can, so it pushes on the can and causes it to implode.