Procedure:

- **Fill a bowl with cold water and ice.**
- **Put about 1oz or 30mL in a can.**
- **Place the can on the hot plate and allow the water to heat.**
- **Once steam is visible from the top of the can, using tongs, quickly flip the can upside down into the bowl of water.**

What is going on?

- **Heating the can causes the liquid water in the can to increase in temperature and turn into water vapor.**
- **The hot air and water vapor inside the can spread out and begin to escape from the top of the can.**
- **As the water vapor escapes, it encounters the cooler air and condenses back into liquid water that we see as steam.**
- **When the can is placed in the ice water, the remaining water vapor and air molecules quickly cool and condense, creating an area of low pressure inside the can.**
- **The higher air pressure, outside the can, pushes on the can, crushing the can in the process.**

Name _____ Date _____

Can Crush Air Pressure Experiment

1. Write a hypothesis about what you predict will happen if a can is heated on a hot plate, without water, and then placed upside down in an ice bath:
   _____
   _____
   _____
   _____

2. Test your hypothesis, making sure to allow enough time for the air to become heated in the can before placing it in the ice bath.

3. Record your observations of what happened:
   _____
   _____
   _____

4. Analyze your results: (Explain what happened):
   _____
   _____
   _____
   _____
   _____