

# Watch the Water Cycle in a Bag

## Equipment

- ◇ A clear plastic ziplock type bag
- ◇ A little water



## Method

- 1 Put a spoonful of water in the can, and place it on the hotplate. Let it get hot.
- 2 Quickly, pick up the can using the tongs or oven gloves, and plunge it opening down in the water in the pan.

As the temperature of the can rises, it fills with water vapour. At this stage, the air inside the can is warmer than the surrounding air, but the pressure inside the can is the same as the surrounding air. When you put the hot can upside down in the pan of cold water, after a few moments, the can should crumple with a 'pop' sound. This is because, as the temperature inside the can falls and the water vapour condenses, the pressure inside the can becomes lower than the pressure of the surrounding air. If you had used something sturdier than an aluminium can, you would find that water would have time to flood into the container to equalize the pressure.