



# Cloud in a jar

Get ready to see a cloud form in front of your own eyes, in this weather science experiment, "Cloud in a Jar"! You'll see a real-life example of condensation, and maybe even a convection current!

## Materials

- 🚀 1 glass jar with lid
- 🚀 50 ml boiled water
- 🚀 Ice cubes
- 🚀 1 aerosol can



## Method

**Step 1:** Pour the boiled water into the jar. Swirl the water inside so that it heats up the sides of the container.

**Step 2:** Turn the lid upside down on top of the jar to place a few ice cubes onto. Rest it on top of the jar for 20 seconds.

**Step 3:** Take the lid off and quickly squirt some aerosol into the jar. Put the lid (with the ice resting on it) back on top of the jar.

**Step 4:** Watch the cloud from inside the jar. Wait until it is completely formed and remove the lid to watch the cloud escape into the air.

## What is happening? The Science explained.

You have created warm and moist air by pouring hot water into a jar. As the water vapour rises (because it is less dense) to the top of the jar, it is then cooled by the ice on the lid. When the water vapour cooled, it wanted to turn back into liquid, but it needed to condense onto a surface. The aerosol provided cloud condensation nuclei: a surface for the water vapour to condense into tiny cloud droplets. If you watch the cloud inside the jar, you will see it swirl. This is because a convection current has been created; that is the circulation of warm air rising and cold air sinking.

