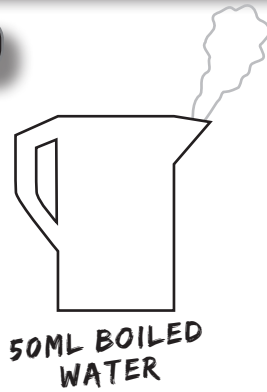


CLOUDS IN A JAR

You will need:



Method:

Pour about 2cm of boiled water into the jar. Swirl the hot water in the jar so that it heats up the sides of the jar.

Turn the lid of the jar upside down and use it as a small container to put a few cubes of ice into. Rest it on top of the jar for a few seconds.

Take it off and quickly squirt in some hairspray (or whatever aerosol you're using). Put the lid, with the ice resting in it, back on top of the jar.

WHY IS IT SO?

THE ATMOSPHERE NEEDS THREE INGREDIENTS TO MAKE A CLOUD

1. WARM MOIST AIR

2. COOLING WHICH CAUSES THE MOISTURE TO LIFT

3. CLOUD CONDENSATION NUCLEI OR CCN

Watch the cloud form inside the jar. When it is fully formed, take the lid off and watch the cloud escape.

(Cloud condensation nuclei = a very small particle that can float in the air to help water vapour condense into clouds. In Hawaii, for example, the most common CCN are sea salt aerosols, but CCN can also be dust, smoke, air pollution or volcanic fog.)

Here's what happened to make your cloud

- By pouring hot water into a jar and trapping it, you created warm, moist air. As the warm air inside the jar rose, it was then cooled by the ice on top of the jar.
- 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.
- The cloud swirled inside the jar due to the circulation of warm air rising and cold air sinking.

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