

Rain in a Jar

On SCOPE's Floods episode, Will controlled the weather temporarily when he made rain in a jar. Here's how you can try it at home!



What you need:

A jar with a metal lid
 A handful of ice cubes
 A cup of boiling water
 Some food colouring
 A hammer and a nail



What to do:

1. Use your hammer and nail to make some little dents in the lid of your jar.
2. Put some warm water in your jar, swish it around, and tip it out (this will prevent the jar from cracking in the next step).
3. With help from an adult, add boiling water to your jar until it's about 5 cm deep.
4. Add a few drops of food colouring to the water, so your results will be easy to see.
5. Place the lid upside down on the mouth of the jar, making sure it's completely covering the hole. Then leave the jar to sit for a few minutes.
6. Put your ice cubes in the lid of the jar, and sit back and watch the rain you've made!



What's happening:

Some of the water in the bottom of the jar evaporated, or turned from liquid water into water vapour. This water vapour moved upwards in the jar, until it hit the lid. Now, since the lid was made cold by the ice, the water vapour touching it condensed into tiny water droplets. These collected at the dents in the lid, until they formed drops heavy enough to fall as rain.

In our experiment the water in the bottom of the jar is like the rivers, lakes and ocean on the surface of the earth. The water vapour that rose inside our jar is the same stuff that rises in the atmosphere after evaporation occurs at the surface of water bodies. And the cold lid acted like the cold, upper part of the atmosphere, where water vapour condenses into droplets, which combine and fall as rain.