

Make humidity visible by using condensation.

Material:



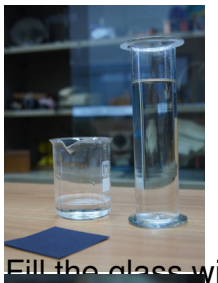
- one glass

- some water

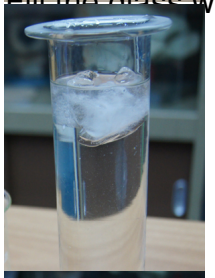
-piece of paper, which is big enough to cover the glass

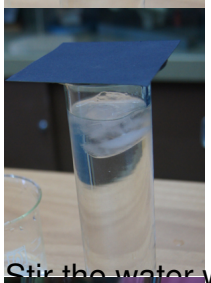
- some ice cubes

Instruction:



Fill the glass with water. Add the ice cubes.





Stir the water with the ice cube for some seconds. Now cover the glass and wait a few minutes.



Explanation:

As you can see, some drops appear at the outer surface of the glass. This effect is called condensation. There is always water in a gaseous state in the air around. This is called humidity.
Every material can change its state (gaseous, liquid, solid). We are dealing with water, therefore the possible states of water are ice (solid), water (liquid) and steam (gaseous). We are dealing with the change of states from steam to gaseous to liquid. The different phases depend on the temperature of the material, therefore to change the phase of a material, we have to change its temperature and this is exactly, what we are doing in this particular experiment. We are changing the temperature of the water-steam in our room. It cools down by being in contact with the cold surface of the glass, which is colder than our environment, be cause of the ice cubes. The gaseous water contacts the surface of the glass, cools down, changes its state from gaseous to liquid and is now visible as drops at the glass' surface.