

Science:

STATES OF MATTER

WHAT IS THE EXPERIMENT?

I demonstrated how water changes its state between the three states of matter – liquid, solid & gas.

LIQUID STATE:

I poured water into a plastic bag. On its own, liquid water doesn't hold its shape. Water is in liquid state when its temperature is between 0°C - 100°C.



SOLID STATE:

I put the bag in the freezer overnight and the liquid water turned into a solid state: ice. Water changes into solid state when its temperature is below 0°C.

LIQUID STATE:

In the morning, I took the ice out of the bag (it then held its shape!) and I put it in a sauce pan. It started melting and changing back into liquid, as the temperature was above 0°C.



GAS STATE:

I then brought the water to boil when it reached 100°C and it started to evaporate. Now it is in the gas state! I could see the steam escaping from the sauce pan.

LIQUID STATE:

The steam settled on the splashback and as it cooled down, it made raindrop marks. That's because the temperature dropped below 100°C. The water has now changed back to being in the liquid state!

TOP TIP:

Never freeze liquid in a glass container as its volume expands when it changes to ice and it could crack the glass!!!