In our workshop we had two experiments, one quiz, and one Android app.

The first experiment was named “Instant ice”. The purpose of this experiment was to create, just like its name, instant ice. As ingredients I used:

-one metallic bowl

-a bottle of unopened tap water

-table salt

-lots of crushed ice

-a glass of salty water

In order to create the instant ice, we had to put some crushed ice in the bowl, then place the bottle of water inside that bowl, after that we’ve added 5 tablespoons of salt, then we filled the bowl with ice, and finally, we’ve poured the salty water over the ice and leave the bottle to cool down for 30 minutes.

How did it happen? It’s not witchcraft, it’s science!

Everyone knows that water freezes at 0 °C - or does it? When water freezes, it needs a nucleus in order for the solid crystals to form and become ice. Water is typically full of particles and impurities which have no problem kicking off the crystallisation process. However, purified water by definition doesn’t have those impurities. With nothing for the water molecules to latch onto, purified water can be supercooled as far as -40°C. Usually it takes more than 3 hours to do that, but because of the salt, I’ve cooled it in only 30 minutes. I will leave the link to the experiment down here.

<https://www.youtube.com/watch?v=sBFK5-JvBAc>

The other experiment consisted in creating a ferro-fluid. A ferrofluid ([portmanteau](https://en.wikipedia.org/wiki/Portmanteau) of [ferromagnetic](https://en.wikipedia.org/wiki/Ferromagnetic) and [fluid](https://en.wikipedia.org/wiki/Fluid)) is a liquid that becomes strongly magnetised in the presence of a [magnetic field](https://en.wikipedia.org/wiki/Magnetic_field). A grinding process for ferrofluid was invented in 1963 by NASA's Steve Papell as a liquid rocket fuel that could be drawn toward a pump inlet in a weightless environment by applying a magnetic field.

The ingredients needed were:

-30ml of vegetable oil

-50g of ferrum (iron) powder

-an Erlenmeyer flask

-a strong earth magnet

Pour those 30ml of vegetable oil in the Erlenmeyer flask, then add the iron powder in the same glass. After that, stir the composition until you get a nice and homogenous liquid. And only in 5 minutes, you’ll get the magic! Now, funny time, you can play with that liquid with an earth magnet, just like in the following video!

<https://www.youtube.com/watch?v=5APHa7vscoI>

The quiz was made out of 15 questions created in “[onlinequizcreator.com](http://onlinequizcreator.com)". The questions were mostly general knowledge questions, and some questions about chemistry, of course! We also had 2 prizes for 2 lucky winners, one tablecloth made by my grandma and a jar of squash jam, made by my grandma as well.