

Log Book

Nov. 15

My idea for the science fair:

Make a thing showing why ice floats on water and what would happen if I froze another liquid and put it on water and maybe show what earth would be like if ice didn't float on water

I got the idea when my science teacher taught me about how ice floats on water and I wondered what other frozen liquids might float on water.

I hope the ice tray doesn't get destroyed!

Jan. 2

I looked around the kitchen to find liquids I might want to freeze.

Liquids I want to freeze:

water, ranch, salad dressing, cooking oil, 2% milk, syrup, egg, soy sauce, dish soap

We didn't have any cooking oil so we replaced it with canola oil.

I picked Greek salad dressing because that was the only salad dressing I could find in the fridge.

Jan. 30

Time to do the experiment!

I measured the sections of the tray with tablespoons and each was around 25 mL.

We washed and dried the tray so it was completely empty before our experiment.

For egg I mixed the yolk in.

I put it in the freezer at 1 pm.

I will take it out the next day at 1 pm.

It was hard to ensure each section was filled to the same level, so I guessed approximately.

Jan. 31

I opened the freezer just before 1 pm. I was surprised that the soy sauce didn't freeze at all and the syrup barely froze. It was kind of like jell-o.

I followed my procedure, putting one cube in the cup at a time. I put the tray in the freezer in between to keep it cold.

After the first cube, I had an idea that I would get out a bowl and put all of the cubes in it waiting for them to melt and mix together so I could freeze it and see if that would float! It would be like a bonus experiment.

We took pictures of each one to print out later for the trifold and I recorded my observations in a chart I made.

Liquid	Did it float?	observations
Dish soap	Yes	it is good at cleaning
Canola oil	Yes	it sheds little bits off
Egg	Yes	harder than others
Milk	Yes	it freezes fast
Ranch	Yes	
Salad Dressing	No	
Water	Yes	
Syrup	No	like jello
Soy sauce	farmed sulation	still liquid



This was what it looked like before I froze the liquids.



This is how they looked after they were frozen. The canola oil went from clear to opaque. The soy sauce didn't freeze at all.



This is the dish soap. It floated and made bubbles. Maybe we could use it to wash the dishes?



This is the canola oil. Little bits came off the cube into the water, like it was shedding.



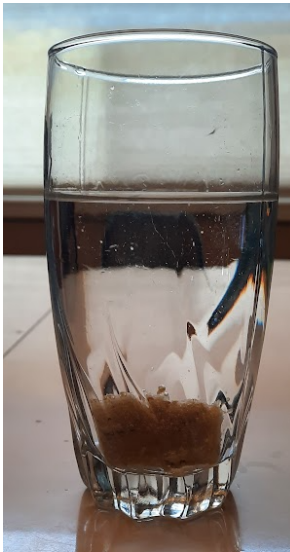
This is the egg. It was VERY frozen. We had to use a knife (carefully!) to get it out of the ice cube tray.



This is the milk. It started melting right away. It was soft and slippery.



This is the ranch. I thought it would sink, but it floated!



The Greek salad dressing sunk right to the bottom.



The ice cube floated. That wasn't a surprise!



The syrup was like liquidy jello. It was very sticky and sunk to the bottom.



The soy sauce did not freeze at all. I wonder if it needed a colder freezer or more time. When I put it in the water, it mixed together.

Feb. 11-28

We started gathering the materials to make the trifold. It was fun to place the letters and photos. At the bottom I made water out of blue paper and coloured the ice cube pictures to look like some of the liquids I froze.