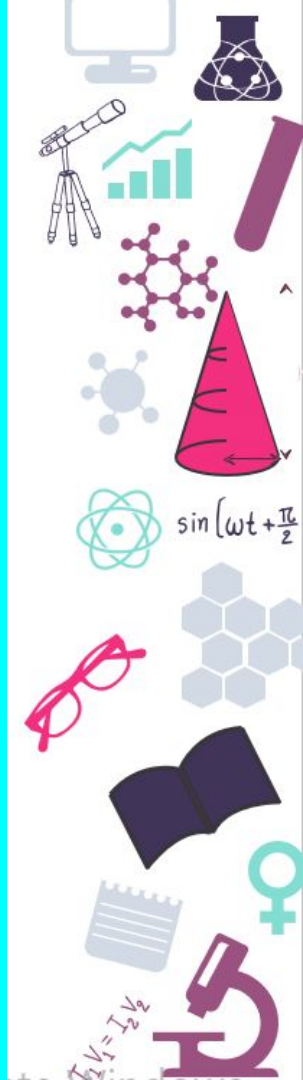


CHILL PROJECT

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1st grade
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Project#: F45



PURPOSE & HYPOTHESIS

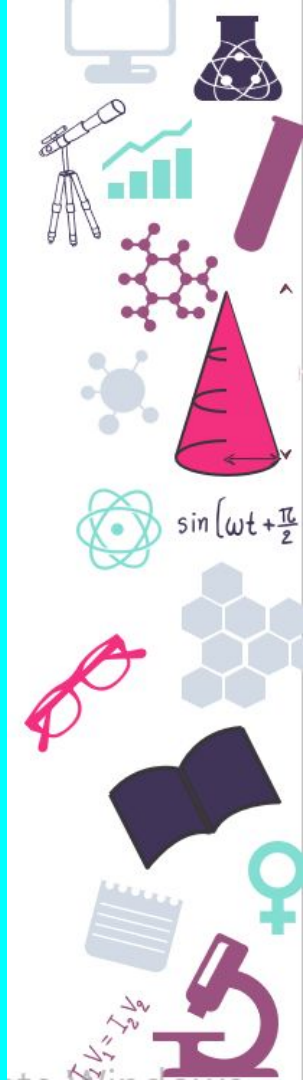
Do all liquids freeze in the same way when put in freezer for different time intervals?

My hypothesis is that different liquids freeze at different time intervals when put together in the freezer at same temperature.



RESEARCH

Once my dad said that when he was in Wisconsin, he used to put salt on the front porch to melt the snow, and that surprised me as what has salt to do with melting of snow. So I asked my parents so many questions about how liquids freeze and melt and though they answered my questions, I was still curious to experiment and see the results myself.



MATERIALS

- Water (60 ml)
- Mixture of Water (60 ml) + Salt (1 tablespoon)
- Mixture of Water (60 ml) + Sugar (1 tablespoon)
- Olive Oil (60 ml)
- Freezer



EXPERIMENT

1. Put the below materials in different containers and put them in the freezer at 0° F temperature
 - a. Water (60 ml)
 - b. Mixture of Water (60 ml) + Salt (1 tablespoon)
 - c. Mixture of Water (60 ml) + Sugar (1 tablespoon)
 - d. Olive Oil (60 ml)
2. Study how the above liquids freeze at different time intervals - after 1 hr, after 3 hrs, after 5 hrs and after 8 hrs
3. Observe how they melt when removed from the freezer
4. Also, observed the color change of the oil when frozen



PHOTOS

Picture taken before starting the experiment



Picture taken after putting the liquids in freezer for 1 hr

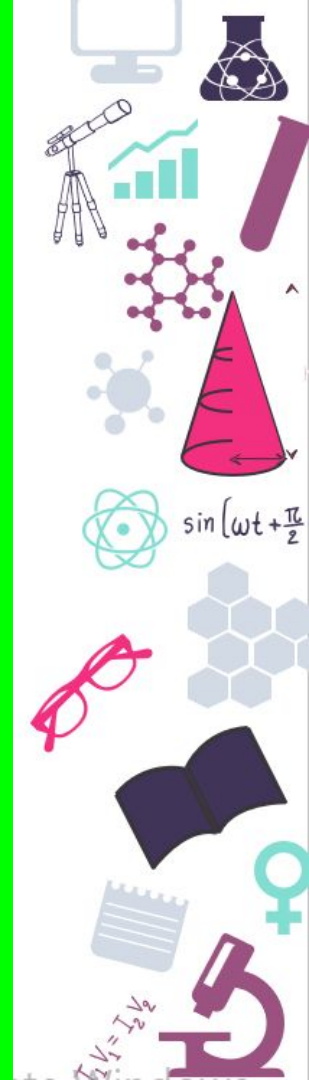


PHOTOS

Picture taken after putting the liquids in freezer for 3 hrs



Picture taken after putting the liquids in freezer for 5 hrs



PHOTOS

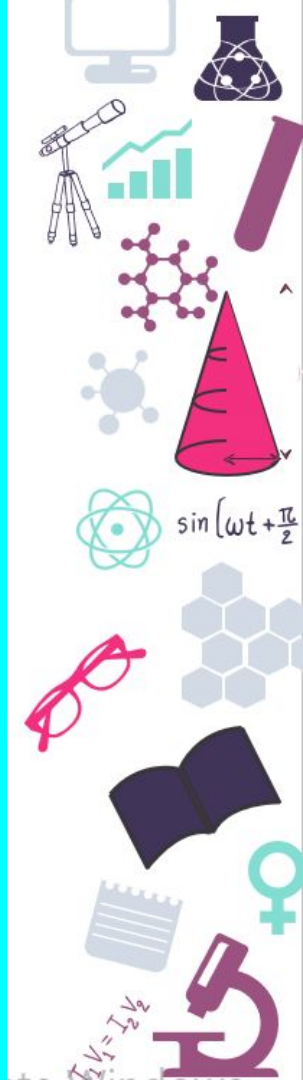
Picture taken after putting the liquids in freezer for 8 hrs



ANALYSIS

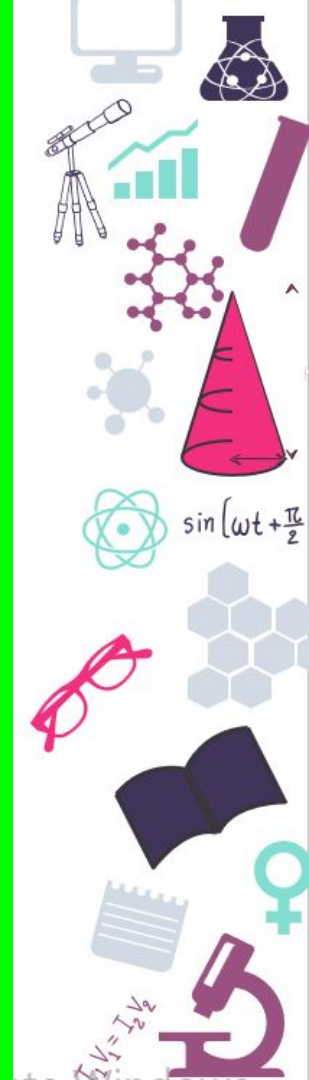
I wanted to test how different liquids behave when put in freezer for different time intervals. So, I chose to use water, mixture of water with salt and sugar, and oil.

I noticed that water mixed with salt and sugar were freezing slowly but melting quicker than just water, and oil is behaving completely different as it was not melting but was only becoming thick liquid.



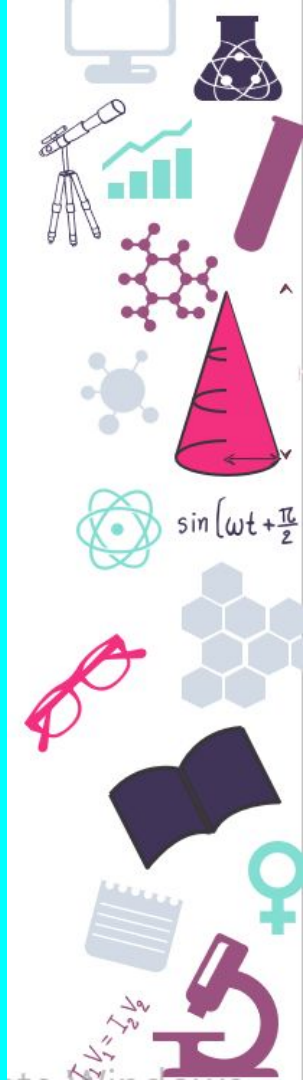
CONCLUSION

Different liquids freeze differently when put in freezer for same time interval. They also melt at different speeds when removed out of the freezer.



REAL WORLD CONNECTION

With more detailed study we can learn how to control freezing and melting of liquids by adding different ingredients to them - such as adding salt to water.



WORKS CITED

I discussed about this project with my parents and Ms. Pumilia.

