

# WHICH WILL FREEZE FASTEST?



BY: MACKENZIE PATACKAS



# Question and Hypothesis

Which will freeze the fastest: Pepsi Zero, coffee, water, milk?

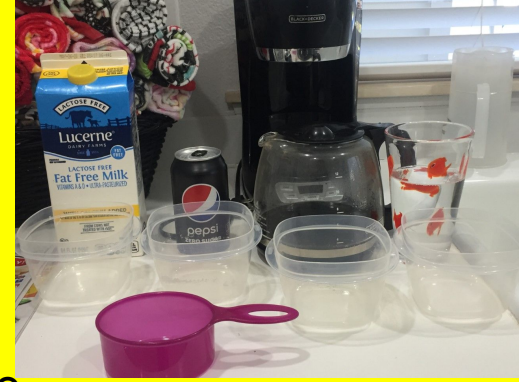
~My Hypothesis~

I think the water will freeze the fastest because it is very thin and water freezes fast because it is natural.

# Materials and Procedure

Pepsi Zero, coffee, milk, water, a 1 cup measuring cup, 3 tupperware containers (square deep), tupperware lids for the deep square containers, freezer, a timer.

I would take the measuring cup fill it with the liquid (do it 3 times one per liquid) and stick each liquid in its own tupperware container and put the lid on hard. I will stick the containers in the freezer in different spots. Then I would set a timer for 15 minutes 4 times then go at 1 hour at a time. Then I will check on according to the times I set. Once I see which one froze first I put it down on a data table then I keep checking on my other liquids.



# Variables

## Manipulated Variables

Liquid that has changed

## Controlled Variables

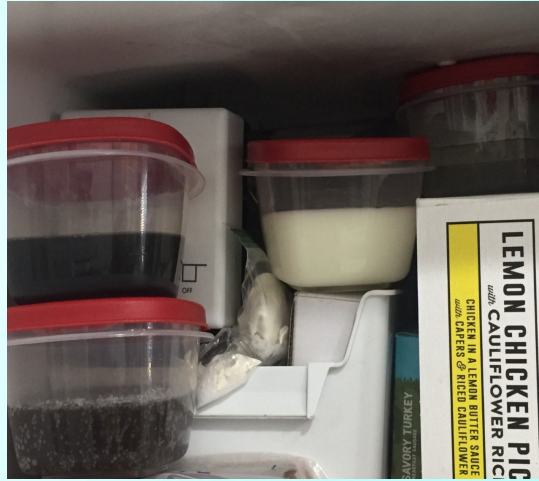
The container the liquid is in and how much liquid is in each one.

## Measured Variables

How much time they take to freeze.



# Data



coffee	water	pepsi	milk
15 cold	15 cold	15 cold	15 not cold
30 cold	30 cold	30 cold	30 cold
45 frosty	45 frosty	45 cold	45 cold
60 frosty	60 frosty	60 frosty	60 frosty
1 hour frosty	1 hour almost frozen	1 hour frosty	1 hour frosty
1 hour 30	1 hour 30	1 hour 30	1 hour 30
2 hour close to frozen	2 hour close to frozen	2 hour close to frozen'	2 hour not very frozen
3 hour	3 hour	3 hour	3 hour
4:30mins FROZEN SOLID!	4:30mins NOT ALL THE WAY FROZEN 5th hour frozen	4:30 mins NOT ALL THE WAY FROZEN 5th hour frozen	4:30 mins FROZEN SOLID!

# Conclusion

I was trying to see which liquid would freeze fastest. My hypothesis was that water would freeze fastest because it is natural. My hypothesis was wrong because the milk and the coffee froze first. In the beginning the milk was just cold and not freezing like the other liquids. But at the 1 hour mark it got frosty and started freezing. By the 4th hour and 30 minutes the milk was frozen all the way through. At first, the coffee was just cold until the 45 minute mark. Then it got frosty and froze solid at 4th hour and 30 minutes just like the milk! The rest were not frozen till about the 5th hour my water and soda froze. My conclusion is that the milk and the coffee frozen before anything else is because the milk is thick as is so it froze faster because it was thick so it didn't take as long. As for the coffee it was closer to the freezer vent. Over all, the milk and coffee froze fastest.