

# Ice is Cool



# Introduction

The purpose of my experiment is to find which size of ice can stay frozen the longest. And how does the size of the ice cube affect how long it can stay frozen.

# Question

My question is which size of ice can stay frozen the longest?

I will answer this question by experimenting different sizes of ice and leaving it in room temperature in different sizes and how long it takes for it to melt.

# Research

- Global warming is changing the climate in Earth because of pollution.
- Icebergs, glaciers and snowpacks are ice is melting.
- Many animals including polar bears, penguins and other animals that live in that habitat are in danger.

# Hypothesis

I think that the ice which is the largest will stay frozen the longest.

# Materials

5 Paper cups, water, freezer, porcelain plates, and a timer.

# Procedure

Fill the cups with an amount of water, I used 150, 250, 350, 500, and 150ml.

Put them in the freezer at the same time and take them out at the same time when its frozen. Take them out of the freezer and put them in separate porcelain plates and note the time when it's thawed. Collect the Data and your done.

# Experiment

I'm experimenting with different sizes of cups of water and seeing which stays frozen the longest. I leave them outside the freezer at the same time so the data doesn't mess up by leaving them at different times. Each of the cups have a different volume of water so they each take their own time to thaw. I added a shallow dish.

Independent Variable – Each cup has a different volume of water.

Dependent Variable – Time taken to thaw.

Constants – Type of cup, The amount of time the cups stayed in the freezer, The room temperature, and each cup started thawing at the same time.

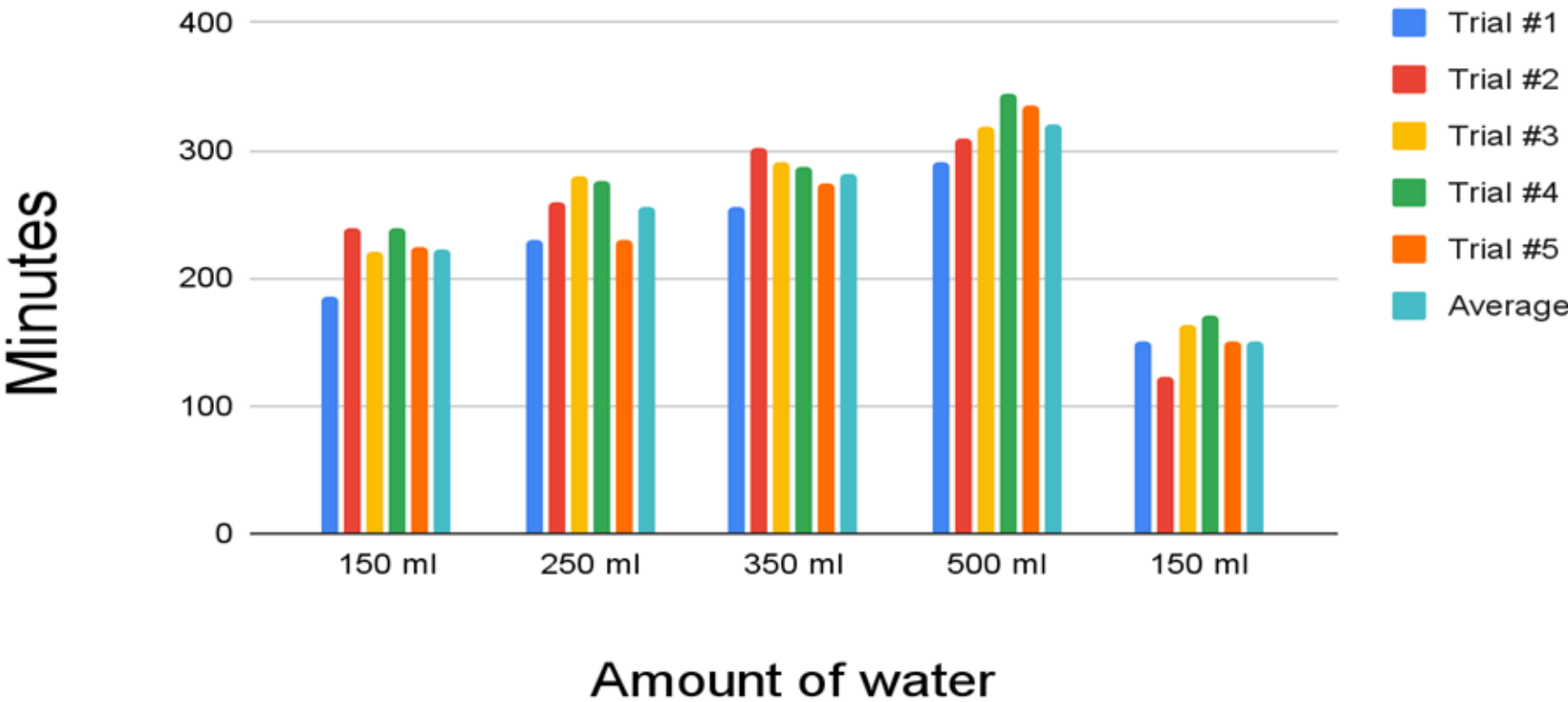
# Data

## TIME TAKEN TO THAW [min]

| Date     | Trials | 150 ml  | 250 ml  | 350 ml  | 500 ml  | 150 ml<br>(shallow<br>dish) |
|----------|--------|---------|---------|---------|---------|-----------------------------|
| 12-20-25 | 1      | 185 min | 230 min | 255 min | 290 min | 150 min                     |
| 12-23-25 | 2      | 240 min | 260 min | 302 min | 310 min | 122 min                     |
| 12-27-25 | 3      | 220 min | 280 min | 290 min | 319 min | 164 min                     |
| 12-30-25 | 4      | 240 min | 277 min | 288 min | 344 min | 170 min                     |
| 01-02-25 | 5      | 225 min | 230 min | 275 min | 335 min | 150 min                     |

# Data

Time Taken To Thaw



# Photos of Experiments



150 ml



250 ml



350 ml



500 ml



150 ml  
shallow dish

Pictures by the student.

# Conclusion

My hypothesis was right because the ice that was the largest size took the most time to thaw. It answered my question because the data clearly showed the ice which was the largest in size took the most time to thaw in trial #4, it took 344 minutes to thaw.

## Implications and Future Research

To make this project better you could test which thaws in less time, dirty water or clean water or clean water with the same volume that is thawing in different rooms. Stop the pollution, the icebergs won't melt and you just helped a lot of animals survive!

# Sources

Climate Change by Benoit, Peter.

Ducksters – [https://www.ducksters.com/science/environment/global\\_warming.php](https://www.ducksters.com/science/environment/global_warming.php)

Thank You