

Do Different Liquids Affect How Fast An Ice Cube Melts?

By Lucas Koopmann

Question

Does the type of liquid affect how fast an ice cube melts?

Hypothesis

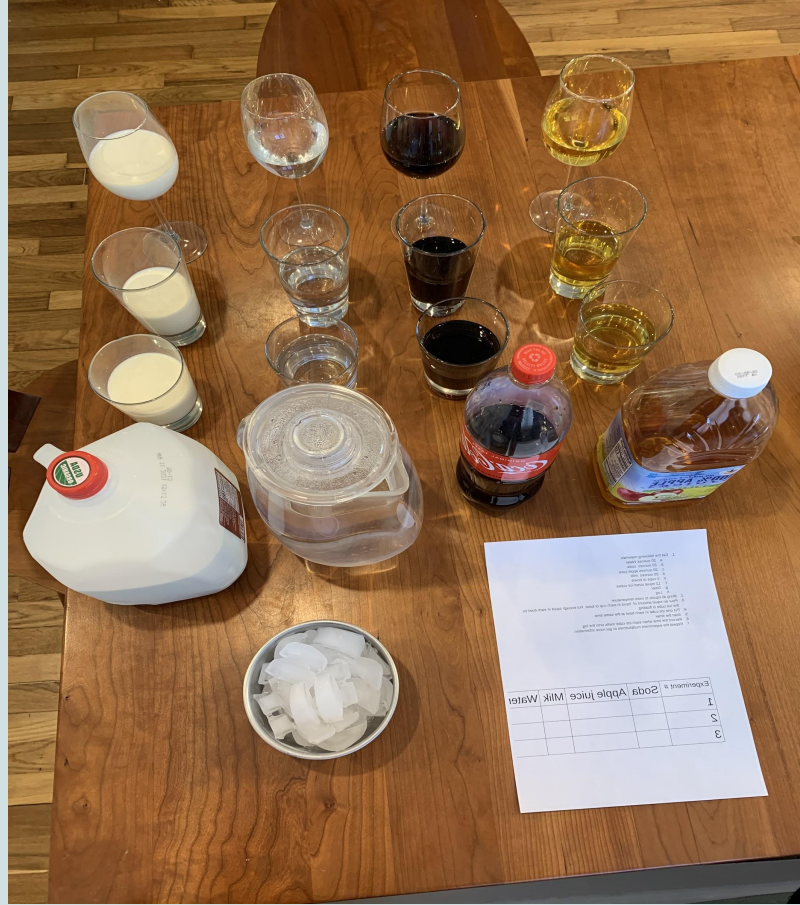
My Hypothesis is Soda will melt ice the fastest. Next apple juice. Then water then milk that is the order that I think they are going to melt.

Required materials:

- a. 3 cups of Water
- b. 3 cups of soda
- c. 3 cups of apple juice
- d. 3 cups of milk
- e. 12 cups or glasses
- f. 12 equal sized ice cubes
- g. Timer
- h. Log
- i. Flat work area



Experiment Design - Setup



Procedure

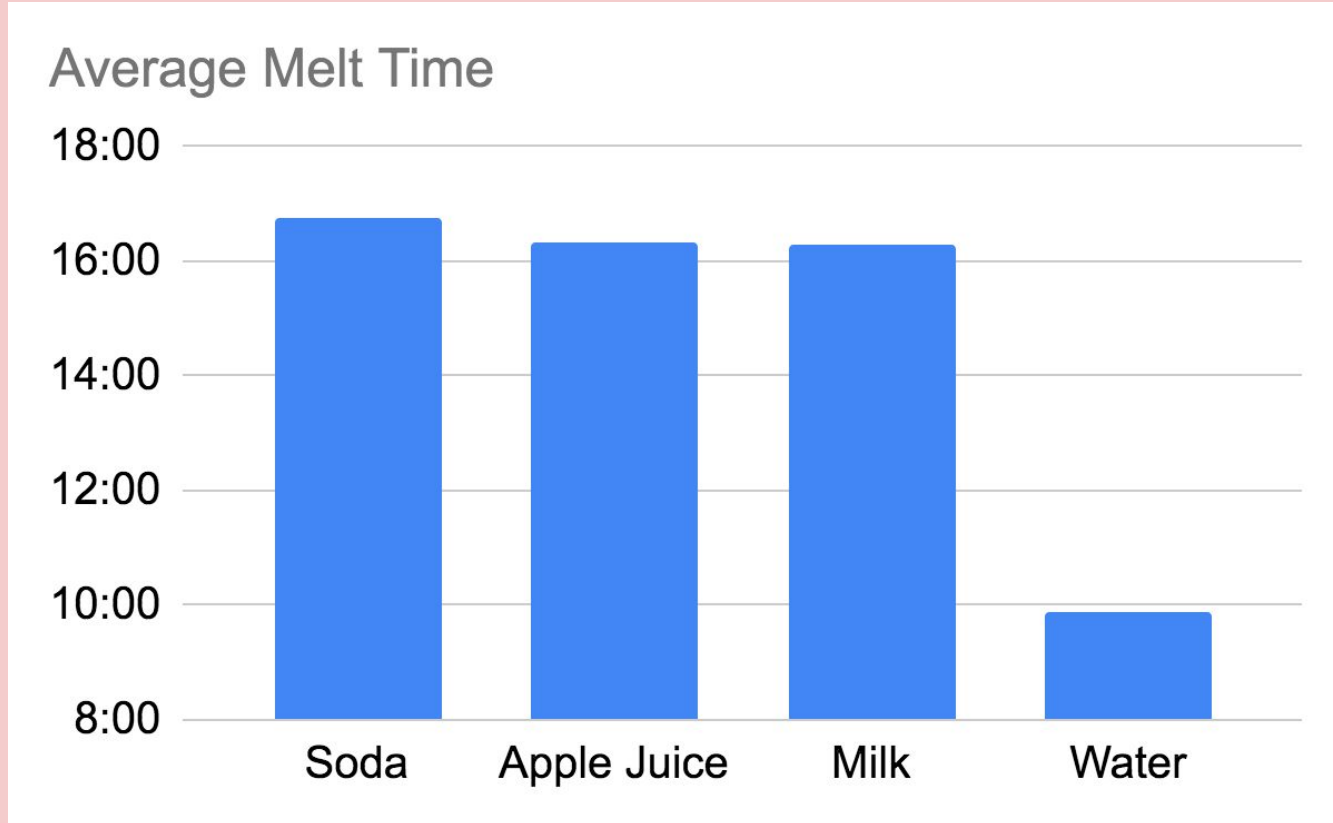
1. Bring all liquids to room temperature.
2. Pour an equal amount of liquid in each cup or glass. Put enough liquid in each cup so the ice cube is floating. I used $\frac{3}{4}$ of a cup.
3. Put one ice cube in each cup at the same time.
4. Start the stopwatch.
5. Record the time when each ice cube melts onto the log.
6. Repeat the experiment multiple times to get more information.

Results

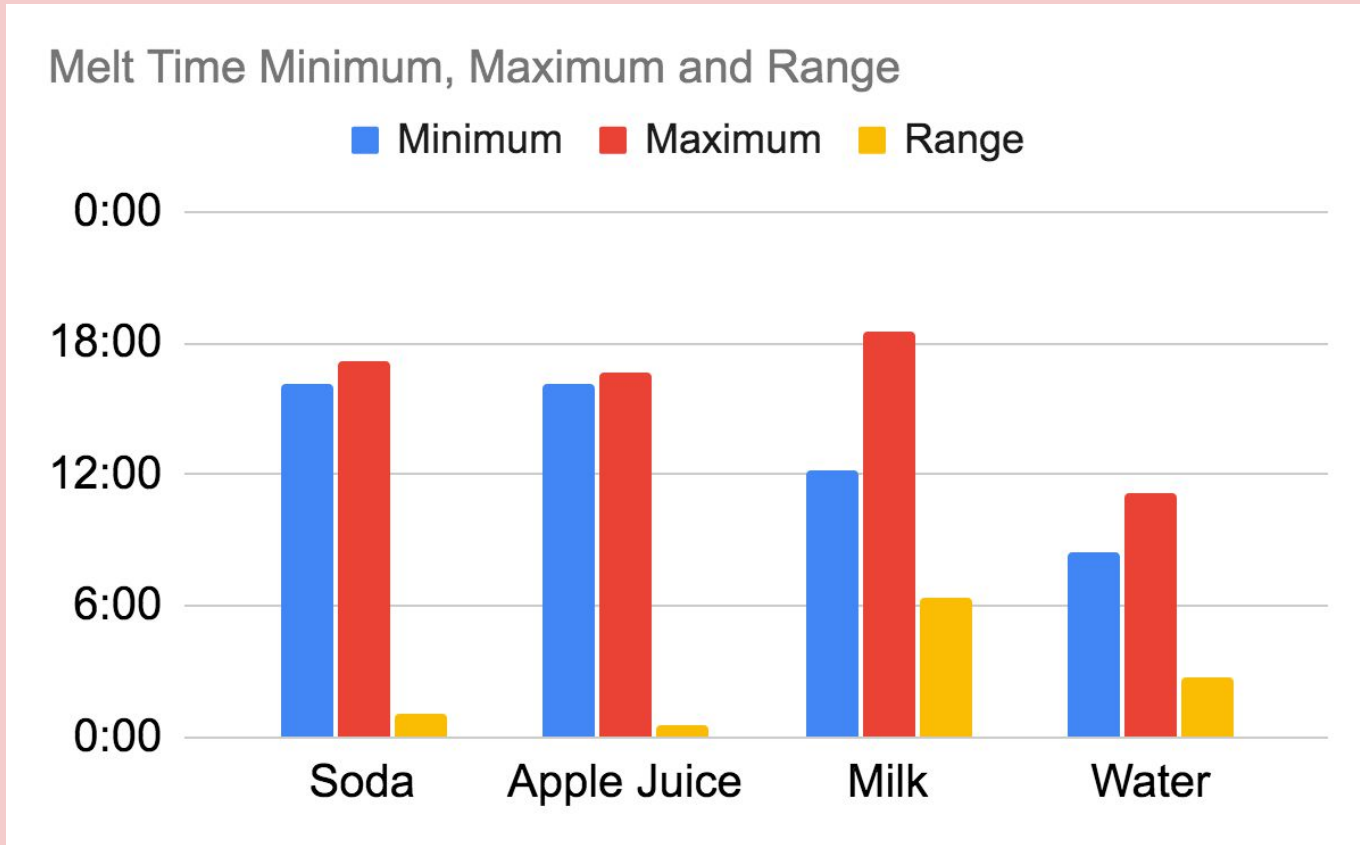
The following table lists how long each ice cube took to melt in the four different liquids with three different glass sizes.

Experiment #	Soda	Apple Juice	Milk	Water
1 wine glass	16:54	16:08	18:32	11:10
2 tall glass	17:12	16:39	12:10	10:00
3 short glass	16:08	16:09	18:08	8:27
Average	16:44	16:18	16:16	9:52

Results



Results



Conclusions

The results were not the same as my hypothesis. Water melted the ice cube the fastest in my experiment. I expected it to melt third slowest. I expected the soda and apple juice to melt fastest, but they actually melted the slowest. Overall my results were opposite what I expected.

The soda and apple juice melting times were very consistent. Milk and water melting times varied a lot more.

I learned that experiments do not always turn out how you expect them to. I also learned more about how to set up and do an experiment and analyze the results.