Science Fair Project

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Assigned: Jan.12th ___/100
Due: Jan 27th

Science Fair topics template

TITLE A

Step-: 2 Project Ideas Proposal

Assigned: 10/27

Deadline: 11/05

1st Idea: Topic: How fast can different salts melt ice?

(Please circle one: engineering/science)

2nd Idea: Topic: Does caffeine make you run faster.

(Please circle one: engineering/science)

My Final idea:What salt melts ice the fastest.

Question:Which salt melts ice the fastest?

Resource(s): Ice, kosher salt, sea salt, table salt, himalayan salt

Science Fair Topics - Draft

Write down the topic you chose:

How fast can different salts melt ice?

What made you want to pick this topic?

I did a project when i was younger, testing how salt affects ice. Since I was younger, I did try this before. But I want to resume it and make my original test better.

Do you find these topics interesting? Why?

Salt melts ice by lowering its freezing point. So, what's the difference between different salts? It’s interesting to me.

Science Fair Topic and Question - Final

Which topic did you choose?

How fast can salt melt ice?

What question(s) are you testing?

Which salt will melt ice faster? If so how does it work?

What's the process?

We will have multiple ice cubes and apply different types of salt on them, timing which one melts the fastest. We will do this process multiple times.

How are you going to test your hypothesis?

We will be using different kinds of salts containing different chemicals or rather ingredients, the salts could be made differently, processed different and made differently so we will use this theory to test out if that process changes the results of the ice melting, defining it’s speed for disintegration

Background Summary

Find information and record the sources you use that help you make an educated guess to your testable question.

Write a 1 paragraph summary for each of your sources.

Tip: Make your hypothesis after this is done

In cold regions, people tend to use salt to melt not only snow, but ice too. Over 20 million tons of salt are used every year to melt ice and snow. Britannica talks about how the ice is affected and how the molecules are broken own by salt molecules. https://www.britannica.com/story/why-does-salt-melt-ice

Ice has a layer which is semi-liquid, and when you add salt to it the freezing point lowers. Increasing salt levels causes it to melt faster. https://www.popularmechanics.com/science/a41936364/why-does-salt-melt-ice/

People place salt on sidewalks to melt the ice and snow on the ground. They use the salt to dissolve the snow and clear the path.https://saltsmart.org/blog/how-does-salt-melt-snow-and-ice/

Background Research Source 2

If this source is a: _____ Magazine _____ Newspaper ___/____ Other
Title of the publication: Why does salt melt ice?

Title of Article:
Why Does Salt Melt?

Author's Name:

Cydney Grannan

Date Published:
Oct 17, 2025

Edition: Volume Number: Page Number(s):

(if applicable) (periodicals or encyclopedias)

This source is a: ___/___ Website _____ Other

The URL is http://
https://www.britannica.com/story/why-does-salt-melt-ice

Last Date of Access: Oct 17, 25

Title of Article: Why Does Salt Melt?

Author's Name: Cydney Grannan

Date of Article:
Oct 17, 2025

Background Research Source 2

If this source is a: _____ Magazine _____ Newspaper ___/___ Other
Title of the publication:

Title of Article: Why salt melts ice, according to science.

Author's Name:
Tim Newcomb

Date Published: Nov 22, 2022

Edition: Number(s):
(if applicable)

Volume Number:
(periodicals or encyclopedias)

Page

This source is a: ___/___ Website _____ Other

The URL is http://
https://www.popularmechanics.com/science/a41936364/why-does-salt-melt-ice/

Last Date of Access: Nov 22, 2022

Title of Article: Why Salt Melts Ice, According to Science

Author's Name:
Tom Newcomb

Date of Article:
November 22, 2022

Science Fair Hypothesis

Hypothesis: Use your background research to help you create a HYPOTHESIS that predicts the outcome of your experiment

What is your Hypothesis?

Sea salt will melt ice the fastest because it has the most calcium chloride.

Tip: Make your Hypothesis after the background research

Different salts placed on the ice will affect the freezing point of the ice due to the different metals found in the salt. Sodium, potassium, calcium, magnesium. Now all these different metals will affect the different factors the ice has. Sodium dissolves the ice when they make contact. I believe sea salt will melt the ice.

Materials

- ice
- Salt sample A
- Salt sample B
- Salt sample C
- Salt sample D
- a timer

Procedure

What are the steps you followed during this experiment?

Write all of them down. Make sure they are exactly what you followed while doing the experiment

- Get the different salts
- Prepare the ice
- Place the salts on the ice
- Time how fast it takes the ice to melt
- Record the data

Variables

What are the Variables of your experiment?

Dependent Variable?

The amount of time it takes the salt to melt the ice.

Independent Variable?

Type of salts

Control Variable?

The ice/ subject we will use to put the salt on

Testing the Hypothesis - Experiment

EXPERIMENT Collect and record data. Take pictures. Write everything in your science fair notebook, even mistakes and problems! Conduct your experiment multiple times to see if anything changes.

We tested our hypothesis and was proven incorrect. Sample C took the least amount of time to melt. Sample C has the least amount of additives, which most likely affects the reason why it melted fasted. Factoring in its pure products.

TITLE D

Results

Sample A - 3:31

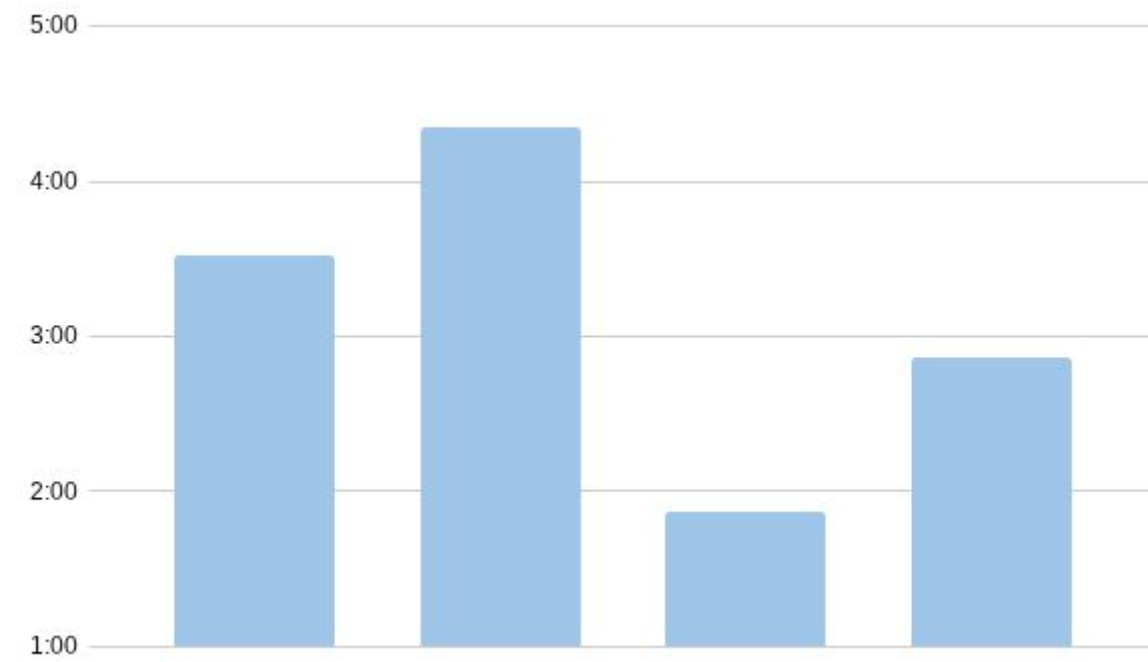
Sample B - 4:20

Sample C - 1:28

Sample D - 2:52

We expected the sea salt melt to fastest due to it having a lot of calcium chloride, usually found in a special salt thats made to melt ice. Instead, kosher salt took the shortest amount of time to melt.

Sample A - 3:31 Sample B - 4:20 Sample C - 1:28 Sample D - 2:52



Conclusion

Based on your results, what was the outcome?

Sample B took the least amount of to melt.

Does your data show that your hypothesis was correct?

No, it shows my hypothesis wrong.

What kinds of problems did you have?

It was hard to decide when the ice was melting, so we tested it more than twice and came to an estimate.

What would you do differently next time?

Take our time and not rush the experiment.

Rough Draft Report

You will use all the information from above to put together a rough draft report.

We tested our hypothesis and was proven incorrect. Sample C took the least amount of time to melt. Sample C has the least amount of additives, which most likely affects the reason why it melted fasted. Factoring in its pure products.

TITLE

Final Draft Report

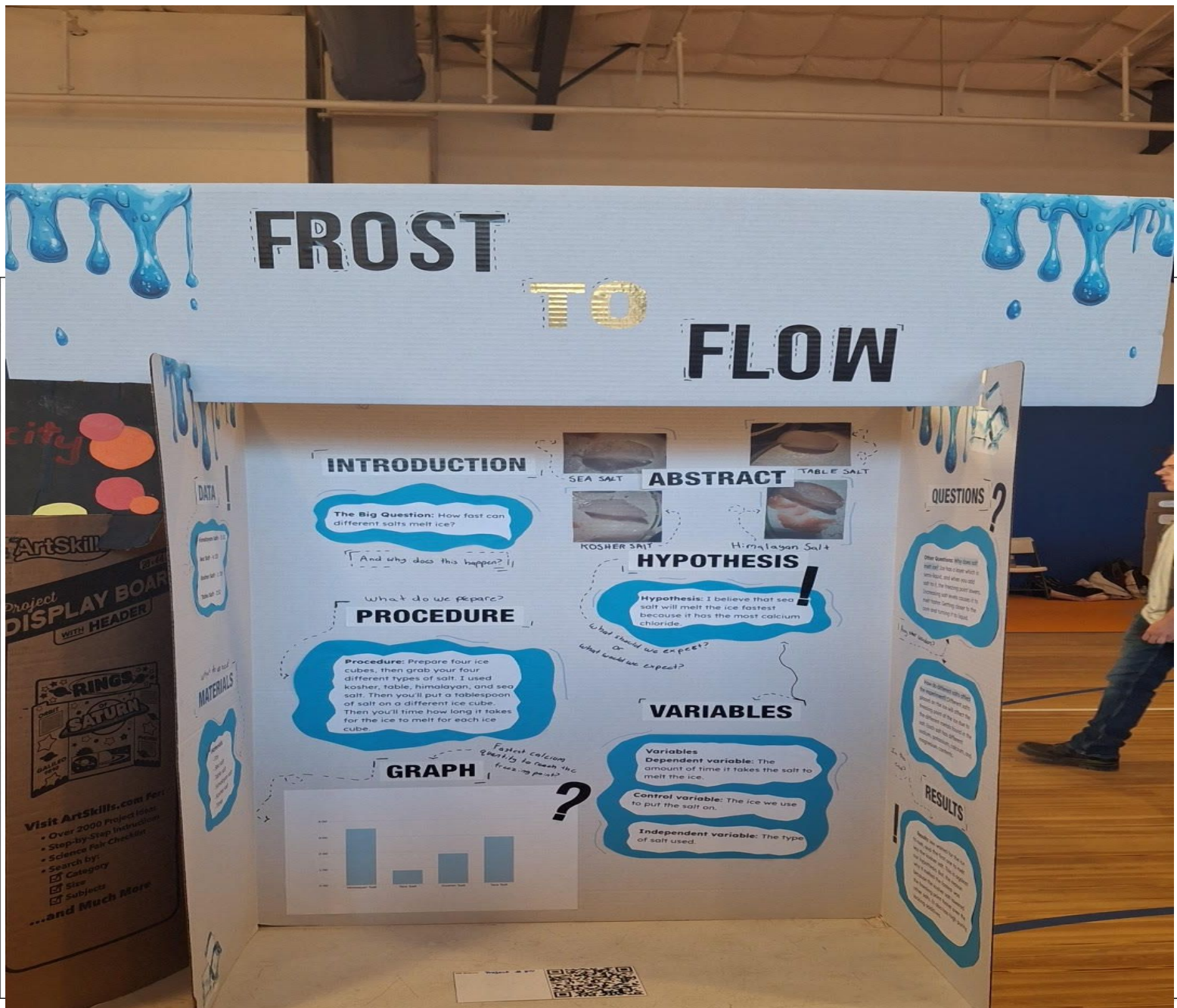
Go back to your Rough Draft Report and fix any mistakes.

Ask a teacher for their opinion.

Make final changes.

We tested our hypothesis and were proven incorrect. Sample C took the least amount of time to melt instead of Sample B. Sample C has the least amount of additives, which affects the reason why it melted fasted. Factoring in its pure products and also larger crystal size. The larger crystal size covers more of the ice.

Final Project - Display Board Report

Make a Trifold Poster Board

Have it include all the components you have included in this Binder so far.