**Science Fair - Final Proposal**

**Group Members:** Hau Chenyu, Weng Feng, and Henry Huo

**Question**

Will ice melt more gradually when using a reflective container?

**Introduction**

Ever wondered if there's a cheap, and simple way to prevent ice from melting quickly? We know that using foam cooler boxes does the trick, but how about aluminum foil? This science fair project was conducted to determine if ice will melt more gradually in a reflective container due to the changes in heat absorption. The test was done using containers covered with aluminum foil, white paper and a transparent container. Color can affect heat absorption because of emissivity (Morton, 2018). The variables in this experiment are …

**Hypothesis**

When the ice is stored in a container covered with aluminum foil will melt at a slower rate.

**Materials**

The materials required for this science fair project:

* 3 x 250mL Erlenmeyer flasks
* 3 flask corks
* A roll of aluminum foil
* A roll of paper towels
* 1 bag of ice
* 3 white towels
* A digital weighing scale
* 1 Stopwatch

**Procedure**

1. 50 grams of ice are placed in each of the 250mL flasks:
	* The 1st flask is uncovered.
	* The 2nd flask is wrapped in 3 layers of kitchen towels and the
	* 3rd flask is wrapped with a layer of aluminum foil.
2. Flasks are placed on top of towels to prevent conduction of heat from the table to the conical flasks.
3. …
4. …
5. …
6. …

**Results**

A table of results similar to the following will be used:

|  |  |
| --- | --- |
| Thermal insulation | Time taken or the ice to melt |
|  | Start | 0.5 hour | 1.0 hour | 1.5 hours | 2.0 hours | 2.5 hours |
| None |  |  |  |  |  |  |
| Kitchen towels |  |  |  |  |  |  |
| Aluminum foil |  |  |  |  |  |  |

**References**

Morton J.L (2018). *Color and Heat Absorption: Heat absorption and emissivity*. Retrieved from: <https://www.colormatters.com/color-and-heat-absorption>

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