

CALIFORNIA STATE SCIENCE FAIR 2007 PROJECT SUMMARY

Name(s)

Brian S. Maloy

Project Number

J1214

Project Title

The Effects of Different Insulators on the Melting Rate of Ice

Abstract

Objectives/Goals

The objective of this project is to find out which material used for insulation is the best. Also an alternative to fiberglass for insulating a house is another goal of this project.

Methods/Materials

This project used 13 different materials for testing how well they insulated. These materials were highest, middle, and the lowest grade of fleece, highest and lowest grade of fiberglass, newspaper, woodchips, cardboard, Styrofoam, foil, packaging peanuts, bubble wrap, and computer paper. Protective gear, wood, screws, and screen were used.

Results

The project found that the highest grade of fiberglass did the best with a time of 135 minutes, followed by the highest grade of fleece with a time of 118 minutes. The middle grade of fleece produced a better time than the lowest grade of fiberglas as well. The lowest grade of fiberglass (used to insulate the wall of a house) produced a time of 100 minutes. The worst material to be used as an insulator is computer paper.

Conclusions/Discussion

The conclusion to this project is that the insulation with the highest R-value did the best. For example the highest grade of fiberglass had the highest R-value so it did the best.

Summary Statement

This 2 year study is about testing 13 different insulators and their ability to insulate a 250 ml block of ice for the longest period of time.

Help Received

I received help from my mom, who drove me to get the materials I needed, my teacher, who kept me on and track.