

CALIFORNIA STATE SCIENCE FAIR 2005 PROJECT SUMMARY

Name(s)

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Project Number

J1539

Project Title

Don't Wanna Have Cold Feet? Spare the Heat!

Abstract

Objectives/Goals

The objective of my experiment was to determine which type of insulation maintains the temperature of warm and cool water the longest.

Methods/Materials

Six identical jars were obtained, five were wrapped with different types of insulation and one was left unwrapped as a control. Water was heated to ninety-two degrees fahrenheit and added to each of the jars, the change in temperature was recorded every five minutes for forty-five minutes. This test was repeated three times. The same procedure was used with water cooled to forty degrees fahrenheit. This test was also repeated three times.

Results

The jar wrapped with the foam material held the temperature closest to the original starting point. The control without any insulation showed the greatest change in temperature.

Conclusions/Discussion

My conclusion was that of all the materials tested the foam worked as the best insulator for maintaining temperature for both warm and cold water.

Summary Statement

This project studied different insulation materials and their effect on warm and cold water.

Help Received

California Pretzel donated thermometers and different examples of insulation.