Name(s)	Project Number
Aiden J. Aceves	
	22775

Project Title

From Ice Cubes to Icebergs: The Mathematics of Melting Ice

Abstract

Objectives/Goals

The objective is to determine how the rate at which a block of ice melts in it's water bath is related to the temperature of that water bath. Is the melt rate and water temperature relationship linear or exponential?

Methods/Materials

At regular intervals, I measured the weight of initially identical(in both shape and weight), frozen blocks of ice in a range of water temperatures between 32 and 85 degrees Fahrenheit. I measured the ambient air temperature and humidity in case they affected my results.

Results

At 32 degrees Fahrenheit the block of ice did not lose weight. The rate of ice weight loss increased rapidly as the temperature of the water bath was increased. The ambient air temperature and humidity did not appear to affect my results.

Conclusions/Discussion

The melting rate of an ice block follows an exponential (non-linear) curve in relationship to the water bath temperature.

Summary Statement

I determined the relationship between the melt rate of ice and it's water bath.

Help Received

Father helped refine the project goals, record data and choose appropriate mathmatical software to help exlpain results.