

# 612-1340 (15-057) Ice Melting Kit

## Warranty and Parts:

We replace all missing or defective parts free of charge. For additional parts, use part numbers above. We accept Mastercard, Visa, checks, school P.O.'s. All products guaranteed free from defect for 90 days. This guarantee does not include accident, misuse, or normal wear and tear.



## Description:

A new twist on the "black box" - our black blocks look alike, but do they feel alike? More importantly, do they *act* alike?

Here's an interesting and irrefutable way to prove the difference in heat conductivity in different metals.

## How to use:

1. Place an ice cube on each of the two black blocks at room temperature.
2. Place the included ring around the cube to contain spills.
3. Do they melt at the same rate? Why or why not?

Check out our website at [www.sciencefirst.com](http://www.sciencefirst.com).

## Explanation:

The two similar-appearing blocks are at the same temperature (room temperature).

One feels "cooler" to the touch because it is made of aluminum, which is an excellent conductor of heat. The block feels cold because the heat from your hand is conducted from your hand into the aluminum block. Your hand is, of course, much warmer than room temperature and will be cooled more than you expect upon touching the block. The cooler block will melt the ice cube very quickly - even as you watch.

The "warmer" block is of plastic foam, which is a very poor conductor of heat. Heat is conducted slowly from your hand and the foam appears warm to your touch.

An ice cube melts at 0° C (32° F). Heat must be transferred from the block to the ice cube in order to melt it. Because the aluminum block conducts heat

quickly to the ice, the ice cube melts quickly - in a matter of minutes. Because the plastic foam conducts heat slowly to the ice, the ice cube melts slowly. During the same time interval, it may appear as if the cube on the plastic foam has not melted at all.

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