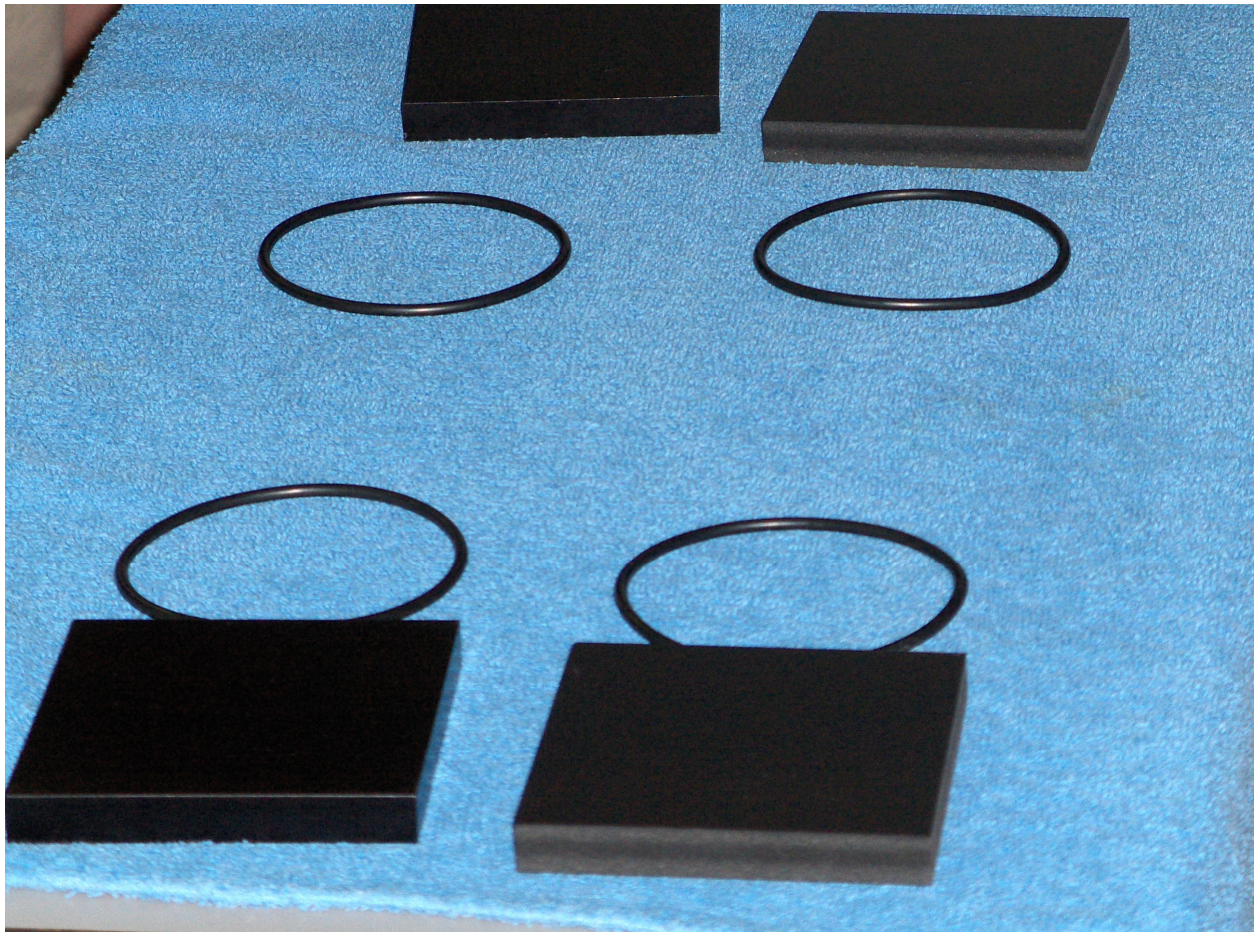


## Two black blocks

1. Without touching them, describe the difference in shape, size, and appearance between blocks A and B.
2. Now you can touch them. Add any new observations.
3. Predict which of the blocks will cause ice to melt more quickly.
4. Place the O-rings on top of the blocks.
5. Place equal sized pieces of ice on each block, centered within the O-rings.
6. Describe and explain what you observe.
7. When you're finished, pour off the ice and water and dry the blocks with the towel for the next person.



## Effect of Materials on the Conduction of Heat (Two black blocks)

Summary – This activity investigates the effect of differing materials on the rate at which heat is conducted. One of the blocks is made of aluminum while the other is a rigid plastic foam. Metals conduct heat very efficiently.

### Materials Needed

- Amazing Ice Melting Blocks from Educational Innovations, Inc. ([www.teachersource.com](http://www.teachersource.com))
- Ice cubes
- Paper or cloth toweling

### Scientific Questions

Does material affect heat conduction?

### Possible Hypothesis

- Materials have no effect on heat conduction, so the ice cubes will melt at the same rate
- Ice placed on the block that feels colder to the touch will melt more slowly
- Ice placed on the block that feels colder to the touch will melt more quickly

### Set up

- Place large “O” rings on the blocks to keep the ice cubes from sliding off

### Notes

- Almost everyone will predict that ice placed on the block that feels colder to the touch will melt more slowly. Just the opposite will be observed! The aluminum block feels colder to the touch because it conducts heat away from your hand more efficiently than the plastic foam block. So, the aluminum block will allow heat to flow from itself into the ice more efficiently, causing the ice to melt more quickly.