

The Big Freeze

Lab Activity

Name _____

1. Obtain the following materials from your teacher:
 - 3 small cups or beakers (one must be filled with tap water)
 - 3 ice cubes
 - 1 paper towel
2. Place the first ice cube in the cup or beaker. Place the second ice cube in a cup or beaker of tap water. Wrap the third ice cube in paper towel and place in a cup or beaker.
3. Use a clock or stopwatch to record the time it takes for the ice cube to melt completely. Record your data in the chart.

	Ice Cube Only	Ice Cube in Water	Ice Cube Wrapped in a Paper Towel
Melting Time (s)			

4. In which situation did the ice cube last the longest? _____ Why?
5. Based on the data from your experiment, build a device that will keep an ice cube in solid form for the longest time. Be sure to follow the rules outlined on the "Big Freeze" page.

Follow-up Questions:

Answer the following questions after all the devices have been tested.

- 1) Which project worked the best?
- 2) Why do you think it kept an ice cube in solid form the longest?
- 3) How could you change your project to make it more successful?

The Big Freeze

Your goal is to create a container that will keep an ice cube solid for as long as possible.

- 1) Containers must be smaller than 25 centimeters on any side.
- 2) Containers must be created specifically for this event. It cannot be a container made to keep objects cool or hot! Ice coolers, styrofoam cups, etc. are not allowed in their original form.
- 3) Containers must be able to hold any water from the melting ice cube. Leaky containers will be disqualified.
- 4) No electrical motors or similar devices allowed.
- 5) Containers must be easy to load and check.
- 6) No part of the container can be frozen prior to the event. This includes water, other ice cubes, dry ice, or other chemical substance.

Use the space below to draw a diagram of your device.

Why will your device work the best?