

Name:

Date:

## **Energy Transfer Lab Investigation: Operation Ice Cube**

Purpose: In order to learn more about heat transfer, we will investigate ice during a friendly competition.

### **Test One: Melt the Cube**

Safety Note: Do not put the bag in your mouth or under your clothes.

#### Procedure:

1. Get the plastic bag containing the ice cube. After you receive the bag, do not leave your seat. Do not remove the ice cube from the bag. Failure to follow these instructions will disqualify you from the race. Handle the bag carefully. Breaking the bag also disqualifies you.
2. Try to melt as much ice as you can in \_\_\_\_\_ minutes. The teacher will tell you when to start. Stay in your seat!
3. When the teacher tells you time is up, carefully remove the unmelted ice from the bag and discard it into the sink. Carefully pour the water in your plastic bag into the beaker and then into the graduated cylinders to determine how much ice melted.

#### Analysis:

1. How many ML of ice were you able to melt in \_\_\_\_\_ minutes?
2. What energy transformations took place during this activity?
3. What types of things did you and your classmates do to increase the rate of ice melting?
4. Did you use conduction, convection, or radiation? Explain which one(s) were used and how.
5. If you did the experiment again, what could you do to increase the rate of the ice melting?