**Melting**

Purpose: To observe heat transfer during a change of state.

Materials: 2 foam cups, water, ice water, ice cube, 2 thermometers

Procedure:

Label two foam cups A and B.

Measure 75mL of room-temperature water into each of the two cups.

Add an ice cube to cup A.

Add ice water to cup B until the water levels are equal. Measure the temperature of each cup at one-minute intervals until the ice has melted.

PREDICTION:

Do the samples reach the same final temperature?

Check one: \_\_\_\_\_ Yes

\_\_\_\_\_No

Reason:   
No, the samples do not reach the same final temperature, because the Cup B with Ice water is already melted as they mix with the room-temperature water. So, the Cup A, with the ice cube is colder due to the fact that the ice cube is just starting the melting phase in order to mix and affect the temperature of the 75 ml room-temperature water. Also, as water cannot be taken below the freezing point, but ice cube is capable to do it. Therefore, the water ice cube is colder.

- - - - - - - - - - - - - - - - - - - - - - - - - - -- - -- - - - - - - - - - - - - - - - - - - - - - - - - - -- - - - - - - - - - - - - - - - -

Explanation:

How different were the answer from your prediction? Why is this so?

The answer was that the ice cube will cool the water better than the ice water. The only difference from that to my prediction, was the explanation of the answer, but we had the same idea. The answer was more on about who will make the water cooler and that the ice cube takes energy to change from solid to liquid. My prediction was more of the melting phase and that you cannot take water below the freezing point because that will then create ice. Therefore, the ice is colder and able to make the temperature of the water decrease more. But we both agreed upon that the ice cube has more time to mix with the temperature of the water in the cup.