**Purpose**: We want to find out what happens to the temperature of ice as it melts.

**Hypothesis**: As ice melts we think the temperature will continue to rise at a constant rate until all the ice is melted.

**Materials:**

Data collection system

PASCO temperature sensor

Test tube

Ring stand (or something similar)

Test tube clamp (binder clamp)

Three fingered clamp (clay/something sticky)

Crushed ice

Water

Plastic cup

**Procedure:**

1. Connect the temperature sensor to the data collection system.
2. Fill the plastic cup with room temperature water. The water will serve as a heat source for the melting ice.
3. Mount the test tube and clamp to the ring stand with the very bottom of the test tube in the cup of water.
4. Put a small amount of crushed ice into the bottom of the test tube (1 – 2cm).
5. Mount the PASCO temperature sensor and clamp to the ring stand with the very end of the sensor in the ice.
6. Remotely collect data and then download to the computer.

**Results:** Our data showed that as ice melts the temperature continues to rise until all the ice is melted at which time the temperature plateaus. Our graph does show three dips – this happened because some of the ice was “stuck” above the probe and as it melted it fell to the bottom causing a temporary decrease in temperature.

**Conclusion**: The temperature of the melting ice gradually increased until the time span of 1,108 seconds through 1,385 seconds, at which time the temperature plateaued with all of the ice melted.

**Extensions**:

1. How does the data from this experiment relate to global warming and icecap melting?
2. How can these findings be used to improve the logistics of transportation and shipping of consumer goods in Arctic regions?
3. How can this data be used to protect and maintain the biodiversity of biomes such as the tundra and other Arctic areas?