Graphing Data

Name: _____

Date: _____

Lab #: _____

Period: _____

Mr. Hodder

Problem: Can you organize data into a graph?

Materials: 600mL beaker, Water, ice, Celsius thermometer, hot plate, graph paper, heat resistant gloves, clock.

Procedures

1. Pour 200mL of water into a 400mL beaker. Add ice to the beaker until the water line is at the 400mL mark.
2. Place the Celsius thermometer into the beaker. After the temperature stabilizes (about 1 minute) measure the temperature of the water.
3. Place the beaker and thermometer on a hotplate. Plug in the hot plate and measure the temperature of the water every 1 minute.
4. After you have reached the 10-minute mark unplug the hotplate and with your gloves **carefully** remove the beaker from the hotplate. Continue to record the temperature every minute for 10 more minutes.
5. On a piece of graph paper create a graph. Label the horizontal axis (the x-axis) "Time (min.)". Mark the axis in increments of 1 minute. Label the vertical axis (the y-axis) "Temperature (°C)". Mark the axis in increments of 10.
6. From your recorded data place a dot (•) at each corresponding point of your graph.

Data

Temperature of the water with ice _____.

Time(min)	Temp (°C)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Analysis

1. Examine the shape of your graph. Do you think the water heated faster than it cooled? Explain. _____
2. Estimate what the temperature of the water was 2.5 minutes after putting the beaker on the hot plate. Explain how you can make a good estimate of temperature between those you recorded. _____
3. Explain how a graph can often give more information than the same data in a list or chart. _____
4. Did the temperature of the water change (in relation to time) faster as it was cooled down or heated up? _____
5. Why did you remove the beaker from the hotplate after you turned off the hotplate's power? _____