

Heat, Temperature and Graphing Lab

Name: _____

This lab will allow you to create your very own heating and cooling curve for water!

Part A. The LAB

1. Follow all lab safety procedures. (goggles on!)
2. Add 300mL of ice to a 400 mL beaker and suspend a thermometer through a piece of cardboard which will act as a lid for the beaker.
3. Place the beaker on a hot plate and turn it on to medium heat.
4. Record the temperature every minute for the rest of the class period. Make sure the mixture is stirred to get an accurate measurement.
5. Record your data in a chart with time and temperature.

Part B. Making a heating /cooling curve

You must turn in a graph of your data, either computer generated or on graph paper.

Part C- Questions:

1. Did adding heat change the temperature of the ice?
2. What do you suppose had been occurring just before the temperature started to increase inside the beaker of crushed ice?
3. Why did the temperature not increase as heat was added to the boiling water?
4. Identify the areas of your graph that represent phase changes. Why are these areas at a constant temperature? Where is the heat going?