**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Phase Change Lab**

Procedure: Watch the video of the ice being heated. Keep a close eye on the x axis of time and pause the video if needed. Record missing observations and measurements in the data table below.

| **Time (s)** | **Observations** | **Temperature (°C)** |
| --- | --- | --- |
| 0 | Solid phase | -1.0 |
| 300 | Solid and liquid phases |  |
| 500 |  |  |
| 700 |  |  |
| 800 |  |  |
| 1200 |  |  |
| 1300 |  |  |

Analysis Questions:

1. Graph the data from above on the chart below. The x axis should be labeled time and the y axis should be labeled temperature (°C). Title your graph. Re-watch the video to ensure you have a similar graph.



1. Divide your heating curve into three regions; label *each* region:
	1. a low temperature plateau
	2. a region of temperature change
	3. a high temperature plateau
2. For *each* region on your graph:
	1. Label each region with what phases were present
	2. Draw a model at the particle level that shows how the water particles were behaving at the regions a, b, and c from question 2.



1. Did the system absorb or release energy? Explain.
2. How would increasing the rate of heating by using a hot plate at a higher heat setting affect the shape of the curve?
3. If the water was continued to be heated, predict what may occur to the particles:
	1. Phase
	2. Space between particles
	3. Temperature