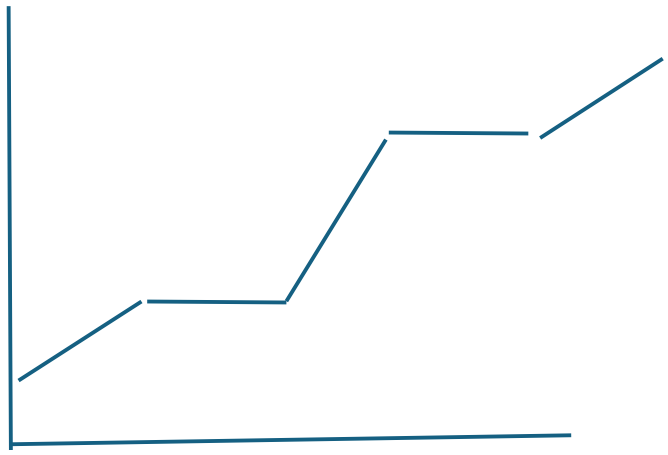
Determining the Heat of Fusion for Ice

For nearly as long as humans have been conscious, we have been wondering about what is and how and why it seems to change forms (think of solid ice melting and turning into liquid water.

In the modern age, we have a better sense of Heat as a form of energy which drives these changes, both forwards and backwards.

Based on our discussion in class, label the axis and annotate the graph, describing with proper terms both the phases and transitions.



Procedure:

1. Obtain a thermally insulated cup, place it on the scale and 'zero' the scale
2. Clark will add an amount of HOT WATER! ***Record the mass of hot water*** _____
3. ***Record initial temperature*** of the Hot water _____
4. Clark will then add a mass of solid ICE into your cup.
5. ***RECORD THE NEW TOTAL MASS*** _____
   a. And ***determine the Mass of Ice*** that was added _____
6. Stir the ice around until it melts and then ***record the Final Temperature***. _____

Calculations.

1. Determine the Heat lost by the Hot water cooling. (Q_1)

2. Determine the Heat gained by the ice water *warming* (Q_2)

3. Using the ***First Law of Thermodynamics***; Determine the Heat required to melt the ice (Q_3)

4. Calculate Percent Error (Clark will put the accepted value on the board)>