

Phases Class work Assignment

name _____

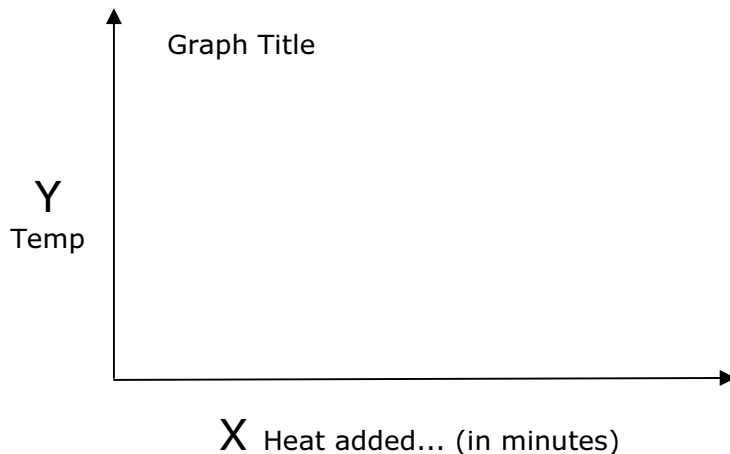
time	Temp Kelvin
0	240
1	250
2	260
3	270
4	273
5	273
6	273
7	273
8	280
9	290
10	300
11	310
12	320
12+1 ☺	330
14	340
15	350
16	360
17	370
18	373
19	373
20	373
21	373
22	373
23	373
24	373
25	373
26	373
27	373
28	373
29	373
30	373
31	380
32	390
33	400
34	410

Graph #1: The heating curve for H₂O

Draw a large graph using the given title.
Label Y-axis Kelvin Temp

Steps	Do this
1	Draw graph X and Y line, landscape this graph
2	Label Y axis Kelvin, X axis Heat being added at a constant rate, in minutes
3	Start at 0 Kelvin, put in a break, 2 lines up start with 220 K
4	Time in minutes 0 to 33 minutes
5	Title this graph
6	Draw data points, connect with ruler
7	Mark the end points of graph, and corners with ABCDE and F left to right
8	Copy the set of boxes below onto graph, fill in the blanks USE ↑ ↓ OR ↔ Phase or phases, could be one or more than one phase. Name could be cooling, or something like condensing.

Segment	Temp	KE	PE	Phase or Phases present	Name if applicable (ex: condensing, freezing)
AB					
BC					
CD					
DE					
EF					



2. Draw a much smaller graph onto white paper (4 inches X 4 inches is plenty big enough). Title this one the heating curve for mercury. Put in the proper temperatures, the proper curve, and label the both axis correctly.
3. Draw another smaller graph, title this one cooling curve for copper. Put in the proper temperatures, the proper curve, and label the both axis correctly.
4. Draw yet another smaller graph, you can make it a cooling curve for water, but this time USE CENTIGRADE. Put in the proper temperatures, the proper curve, and label the both axis correctly.
5. On a heating curve, does the mass change during a phase change?
6. On a cooling curve, does the mass change when the liquid is cooling, or when the solid is cooling?
7. State the complete Law of Conservation of Matter.
8. What is the common name for moving from point B to C on the cooling curve?
9. What is the common name for the phase change that occurs from point D - E on the cooling curve?
10. What's the common name for the phase change that occurs from point B - C on the heating curve?
11. What is the common name for the phase change that occurs from point D - E on the heating curve for water?
12. Explain how the freezing point and the melting point for water is the SAME temperature.

Grading: Big graph and boxes, etc. = 9 points
Questions above 1 each = 11 points
Total = 20 points