

## PHASE CHANGE GRAPH

**PURPOSE:**

To plot a line graph of the phase changes of water.

**DIRECTIONS:**

1. On a separate piece of grid paper label the x-axis time in minutes, and the y-axis temperature in degrees Celsius.
2. The temperature should be recorded in 20 degree increments, and the time should be recorded in one minute increments.
3. Plot the following information contained in the data table in a line graph.

Time in minutes	0	2	4	6	8	10	12	14	16	18	20	22	24
Temperature in Celsius	-20	-10	0	0	0	20	40	60	80	100	100	100	100

4. Label the resulting curve with the following terms. Some terms are used more than once.

- a) Temperature Increase
- b) Phase Change Melting Point
- c) Liquid
- d) Vapor
- e) Ice
- f) Phase Change Boiling Point

**QUESTIONS:**

- 1). State the two time periods in which the temperature stayed constant. What are these called?  
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- 2). What is the phase of water at 30 degrees Celsius?  
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- 3). What is the phase of water between -10 and -20 degrees Celsius?  
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- 4). During phase changes is heat still being added to the water? Is there an increase in temperature during the phase change? Explain.  
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