## Intermediate Science 7

Unit 2: Heat
Core Lab 1: "The Plateau Problem"

Name: $\qquad$
Date: $\qquad$

Partners:
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Problem: What happens to the temperature of water while it changes state?

## Materials:

2 laboratory thermometers
Kettle
Crushed ice

Stirring rod
2 beakers
Ice-cold water

Hot plate
Watch
Hot water

Hypothesis 1:
While water melts from solid ice to liquid water, the temperature will (drop/ stay the same/ increase) because
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## Hypothesis 2:

[1]
While water boils from a liquid to a gas, the temperature will (drop/ stay the same/ increase) because
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Procedure:
Refer to page 166 of text. Identify the following
In this Activity, you are measuring time and temperature. Indicate the:

Independent Variable:

[^0]Observations:

| Time (min) | Temperature of <br> Melting Ice ( $\left.{ }^{\circ} \mathrm{C}\right)$ | Temperature of <br> Boiling Water (?C) |
| :---: | :---: | :---: |
| 0 |  |  |
| 3 |  |  |
| 6 |  |  |
| 9 |  |  |
| 12 |  |  |
| 15 |  |  |

## Analysis:

1. Draw a line graph for melting ice and for boiling water to show the temperature time observations. Instead of joining the points dot- to- dot, draw a smooth line or curve that passes through or between the points (a line of best fit)

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4. List two sources of error that may have caused your observations to be different
from the "official" temperatures discussed in chapter 4.
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5. Predict and sketch a graph for the heating of a sample of ice to water vapour. Be sure to label both the melting and boiling points of water on your graph.


Conclusion: [3]
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[^0]:    Dependent Variable:

