## **Changing States of Matter Experiment NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Aim**

* Today, you will be working with H2O, also known as water.
* You will observe the change of state of water as it goes from a solid, to a liquid, and finally to a gas.
* You will also be recording how the H2O changes temperature as it is changing state.
* You will then draw a graph which shows the temperature change over time

**Independent Variable (What will (you) be changing)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Dependent Variable (What will you be measuring)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Equipment**

* Heat Proof Mat
* Bunsen Burner
* Tripod
* Gauze Mat
* 500m Beaker
* Retort Stand with Boss Head/Clamp
* Thermometer
* Timer
* Ice Blocks & Water

**Procedure**

* Set up equipment as shown in the diagram below
* Place a small amount of water in the beaker so that the bulb of the thermometer is covered
* Add a handful of ice to the beaker
* Take your first measurement and start the timer
* Observe and collect data!
* 2-3 minutes after the water boils, turn the Bunsen burner off and clean up your station.

**Diagram** (Look at Dr Pusey’s setup and draw your diagram)

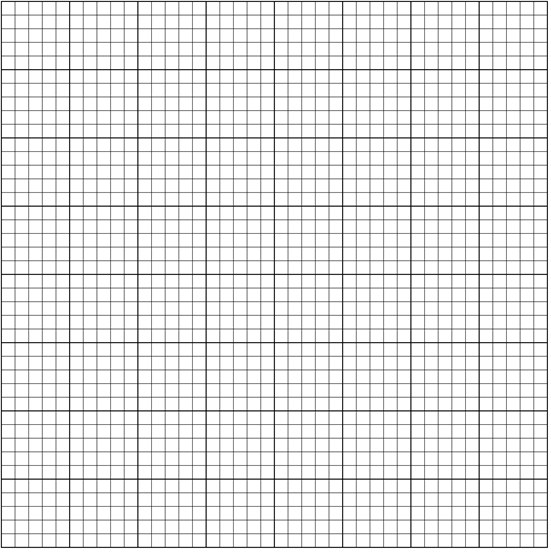
**Safety –** What are the hazards in this experiment and how will you reduce the chance of injuries?

|  |  |
| --- | --- |
| Hazard | Management Strategy |
|  |  |
|  |  |

**Data Table**

|  |  |  |  |
| --- | --- | --- | --- |
| Time (minutes) | Temperature | Time (minutes) | Temperature |
| 1 |  | 11 |  |
| 2 |  | 12 |  |
| 3 |  | 13 |  |
| 4 |  | 14 |  |
| 5 |  | 15 |  |
| 6 |  | 16 |  |
| 7 |  | 17 |  |
| 8 |  | 18 |  |
| 9 |  | 19 |  |
| 10 |  | 20 |  |

**Graph**

****