Names of group members:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Cubes to Clouds**

**Goal:** To understand the 3 states of matter that water can exist in.

**Materials:** Ice/Snow Thermometer

                   Beaker Timer

                        Hot Plate Graph Paper

Water

**Procedure:**

1. Fill a beaker about half full of ice/snow. Add water to the level of the ice.

2. Insert the thermometer, swirl it around a couple of times and record the temperature under **time** 0 on the chart (back).

3. Turn on the hot plate, and put the temperature control on medium-high. Record the temperature every minute. Add more lines if you need more minutes.

4. Keep heating the water (and recording the temp) until it has boiled for at least 3 minutes. Turn off and unplug the hot plate. **Let glassware cool** and clean the lab area.

5. Make a graph to show your data. (Temperature vs. Time)

**Lab Questions: (Put on a left hand page of your notebook)**

1. Create a **line** graph from the data from the first part of the experiment. (Remember which variable goes on the X axis and which one is for the Y!) Label on the graph where you would see **solids, liquids, gases, melting point, and boiling point**.

2. At what temperature does water change from a solid to a liquid?

3. At what temperature does water change from a liquid to a gas?

4. Describe how the water particles are moving when they are in the **solid** form.

5. Describe how the water particles are moving when they are in the **liquid** form

6. Describe how the water particles are moving when they are in the **gas** form.

7. In a couple of sentences, describe what happened to the temperature. Why? (Use some of our vocab… ☺)

Names of group members:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Lab Questions:**

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7. In a couple of sentences, describe what happened to the temperature. Why? (Use some of our vocab… ☺)

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