A Change of State: The Wonderful World of Water!

Geology Mr. Traeger

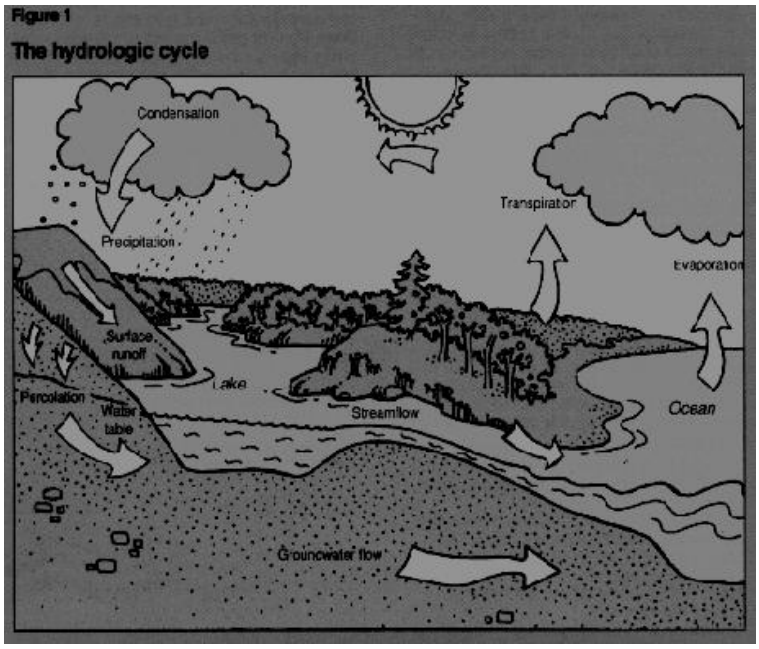
Name: _____ Period: _____ Date: _____

Water comes in many forms. Understanding these different forms will help us to understand our weather more thoroughly.

Part 1: Water Basics

1. Draw the molecular structure of water.

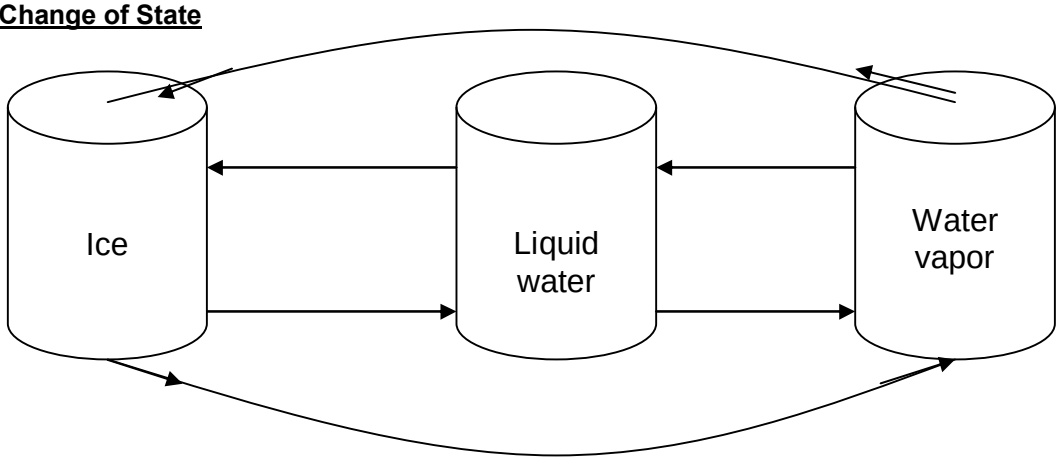
2. Name all of the forms that you have seen water exist in.



Part 2: The Water Cycle

1. Describe a possible year in the life of a water molecule as seen in the graphic to the right.

Part 3: Change of State



1. Fill in the diagram above as Mr. T does it on the board.

2. In which direction does energy go into the beakers? Left or Right? Draw an arrow and label.

3. In which direction does energy go out of the beakers? Left or Right? Draw an arrow and label.

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Part 4: Heating of Water

1. Fill in the data table below as Mr. T heats the water in the front of the room.

Time in Minutes	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Temperature in °Celsius	.9	.5	.5	.5	2	3	6	7	13	17	24	34	45	55	65	74	83	91	98	98

2. Graph this data below:

Graph Title: _____

y-axis label: _____

x-axis label: _____

3. What temperature does water melt/freeze at?

4. What temperature does water boil at?

5. Why doesn't the temperature rise at the beginning of the heating when the water is ice? Where is the energy going to?

6. Where does the energy go to when water is between 0° and 100° Celsius?

7. Why does the temperature stop rising after 100° Celsius? Where is the energy going to?

8. What will eventually happen to the level of water in the beaker if we leave the water boiling? What will this do to the *humidity* of this room?