Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Mr. Taylor-Waldman

**States of Matter** (Sections 1) and **Changes of State** (Section 2) -- Homework Questions

**This assignment is worth 20 points**.

**State of Matter** -- CBB Chapter 2, Section One

1. How are the particles of a solid **arranged,** and are they stationary?

2. What are two ***differences*** between **amorphous solids** and **crystalline solids*.*** Alos, ***give two examples*** of each type of solid.

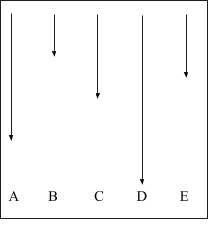
3. Complete the chart below based on what we learned in the Science World article *“Firestorm.”* Be sure to ***list two different examples*** for technology and each state of matter present in fires.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| technologies  *•*  *•* | solid  *•*  *•* | liquid  *•*  *•* | gas  *•*  *•* | plasma  *•*  *•* |

4. Why don’t liquids have a ***definite shape***?

5. Name and define the ***two different properties of liquids*** discussed in class. Which property explains how some insects able to walk on the surface of water?

6. Five different liquids were poured on a paper. After 30 seconds, this is what the paper looked like, with arrows indicating how far each fluid went. Rank these fluids in order of viscosity (from lowest viscosity to highest viscosity).



least viscous \_\_ \_\_ \_\_ \_\_ \_\_ most viscous

7. How is a ***gas similar to and different from*** a liquid?

8. Compare solids, liquids, gasses and plasmas in terms of the ***speed and energy of the particles in each.***

**Changes of State** -- Section Two

9. Describe what happens to particles in solid during the process of ***melting***.

10. How does the ***addition of energy*** affect the particles of a solid?

11. At what point do the particles of a solid break free from their fixed positions?

12. What happens when a substance reaches its freezing point?

13. What is the process called when a liquid changes into a gas?

14. What is the difference between ***evaporation*** and ***boiling***? Which process requires more energy?

15. What happens when the particles in a gas ***lose energy***?

16. What is the relationship between ***air pressure*** and ***boiling point***?

17. When does ***condensation*** occur? Give one real-life example of condensation.



18. What happens during ***sublimation***?