

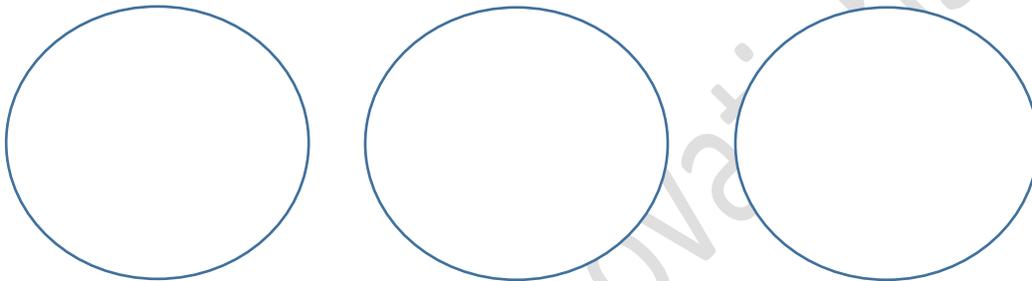
SPS5. Students will compare and contrast the phases of matter as they relate to atomic and molecular motion.

- a. Compare and contrast the atomic/molecular motion of solids, liquids, gases and plasmas.
- b. Relate temperature, pressure, and volume of gases to the behavior of gases.

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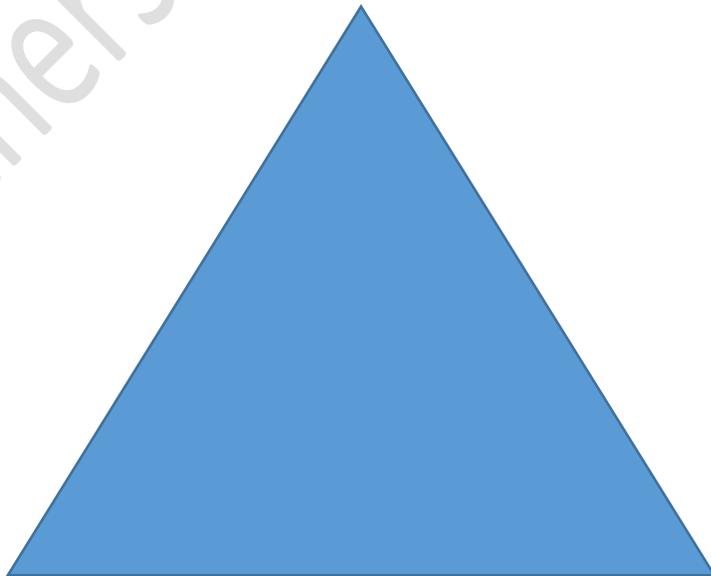
There are 4 states of matter and they are _____ . _____
have a definite _____ and a _____. _____ do not have a _____
but they do have a _____. Gases do not have a _____ or _____
_____. The fourth state of matter is _____. It is made up of _____. Like
gases they do not have a _____ or _____. Plasmas can be found in _____
_____.

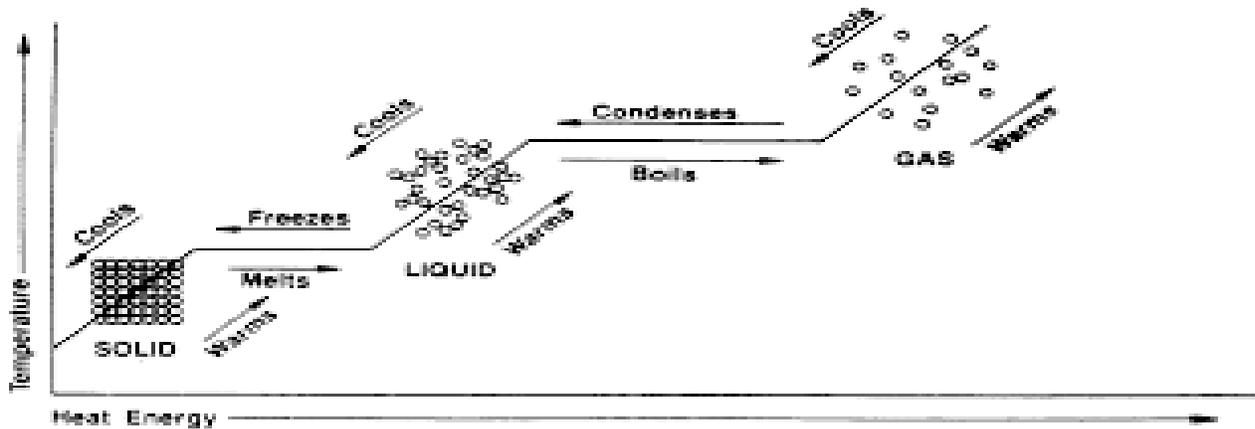
Draw the Molecular structure of solids, liquids, and gases in the circles below:



Fill in the triangle below and use the following words: States of matter, Solid, liquid, Gas.

Use arrows to show the direction of the follow words: Condensation, Evaporation, Melting, Freezing, Sublimation, Deposition





Answer the following questions by analyzing the following ice phase change diagram above:

1. What is the relationship between heat energy and temperature? _____

2. Is there a direct or indirect relationship between temperature and heat energy? Tell why. _____

3. What happens to the molecular energy/motion of the particles as heat energy is added? _____

4. What happens to the molecular energy/motion of the particles as heat is removed? _____

5. Look at your responses for questions 4 and 5. Can the same be said about Temperature? _____

6. What is the relationship of heat and temperature of the substance at points 2 and 3 as heat is added? _____

7. What is the relationship of heat and temperature of the substance at points 3 and 4 as heat is removed? _____

8. What is the relationship between potential and kinetic energy of the substance between points 4 and 5 as heat is added? _____

9. What is the relationship between potential and kinetic energy between points 5 & 6 as heat is removed? _____

10. Using the chart above, explain how the frost on the ground in the morning evaporates. _____

