



Properties of The States of Matter Video Notes

Solids

1. Why are solids usually hard? _____
2. Solids hold their _____ and don't flow like liquids. The atoms inside of a solid are not allowed to _____ around too much. Instead they just _____ in place. The molecules in a solid are _____ in a specific structure or _____ of atoms. The atoms will spin and the electrons fly around, but the entire atom will _____ position.
3. What do you call solids with more than one type of compound inside of them? _____ What are some examples of mixtures? _____

When a solid is made up of a pure substance and forms slowly, it can become a _____. The atoms in a crystal are arranged in a regular repeating pattern called a _____.

4. Even though they are both made from carbon. What makes the structure of a diamond different from the structure of graphite? _____



Cubic



Hexagonal

What do we call different structures of the same element? _____

5. What are at least three characteristics of solids? _____

Liquids

6. Fill out the following chart at 3:20 in the video by saying yes or no for the descriptions.

	<i>Solid</i>	<i>Liquid</i>	<i>Gas</i>
Definite shape			
Definite volume			
Definite mass			
Close particles			
Kinetic energy increases or decreases			

7. If you have a variety of materials dissolved in a liquid, it is called a _____. Liquids will fill up the _____ container from the bottom to the top.

8. What does it mean to compress something? _____
Why are liquids difficult to compress? _____

9. Liquids actually want to _____. How does evaporation make liquids not stick together? _____

Overall, liquids have _____ forces at work to hold the molecules together?

Gases

10. What is the atmosphere? _____
11. Gases are really _____ out and the atoms and molecules are full of _____. They are around constantly. Gases can _____ a container of any size or shape. It doesn't matter how _____ the container is. The molecules still spread out to fill the _____ space equally.
12. What is the difference between liquids and gases? _____
Vapor and gas mean the _____ thing. The word vapor is used to describe gases that are usually found as _____ at room temperature. _____ and _____ are two examples of 'Vapor'.
13. Gases hold huge amounts of _____, and their molecules are _____ out as much as possible. Why is it easy to compress gases? _____
What happens when you open a can of soda as it pertains to gases? _____

Plasma

14. Plasmas are made up of _____ and _____ of an element such as neon (Ne).
15. What are two types of naturally occurring plasmas? _____
16. How is plasma different from a gas? _____
In neon gas, the electrons are all _____ to the nucleus. In neon plasma, the electrons are to move around the system.
17. Two examples of man made plasmas are _____ and _____
How do fluorescent light bulbs work (7:38)? _____

18. How do neon signs work? _____

19. What causes the different colors in neon signs? _____

20. Both stars, neon signs, and compact fluorescent lights are all plasmas because they contain _____
