Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: 12/ /18 Assessment Date: 12/ /18

Applied Study Guide: ***Parent Signature Required at the End***

**\*If questions or blanks appear on this document, you are expected to complete them**\*

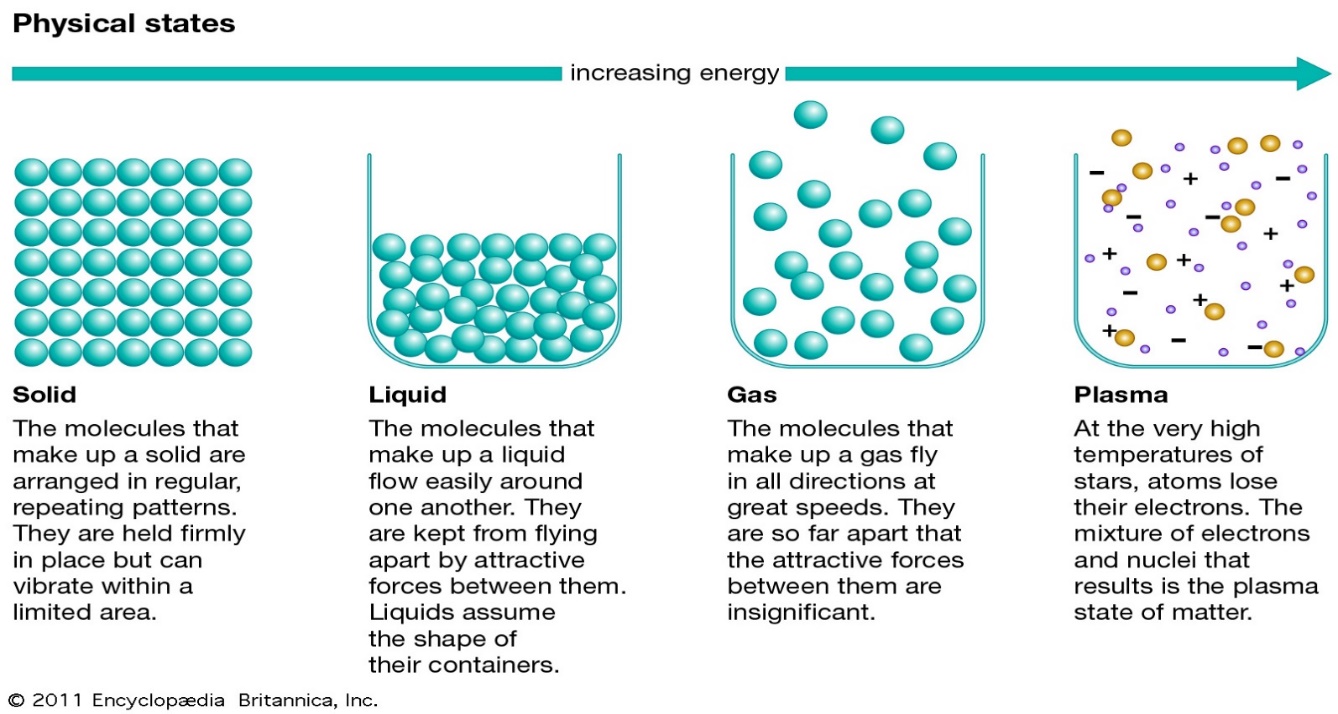
1. **Vocabulary:**
2. **State of Matter**: The physical form of a substance
3. **Solid**: The densest form of matter for any substance. Solids generally have a definite size and shape. The molecules that make up solids vibrate, but do not allow solids to change shape

Ice is the solid form of water. Give another example: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.**

1. **Liquid**: A state of matter that tends to flow freely. Typically liquids are capable of taking on the shape of their container. Particles are in constant motion. Give an example: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. **Gas**: The least dense form of matter for a given substance. Particles in gas are moving around rapidly and tend to be quite far apart. A state of matter that does not have a definite shape or volume. Give an example: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. **Plasma**: Matter that is heated to extreme temperatures where molecules come apart and produce light. Stars and fluorescent light bulbs are examples of plasma. Give another example: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. **Subatomic Particles:** are particle smaller than an atom; the protons, neutrons, and electrons.

7**. Ion:** an atom or molecule with an *electric charge* due to the loss (or gain) of one or more electrons. Try and draw an ion in the space below.

1. **States of Matter:**



8. How are penguins like ice molecules? And Why? (Reread *Matter Changes*) 

9. Also from *Matter Changes*, What does the broken toy car represent?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

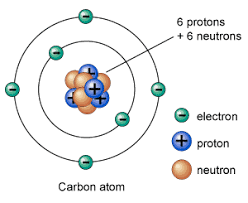
Explain.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10 . Sunlight is a source of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy

11. The increase and decrease of energy applied to a substance will *effect* the state of matter

What kind of relationship would this be? \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. **ATOMS**



12. Number the following particles in order from smallest to biggest; 1, 2, 3, 4, 5

Atoms, Electrons, Neutrons, Molecule, Nucleous

\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_

1. 2. 3. 4. 5.

*Smallest Biggest*

13. In an Atom, what are the **Sub**atomic particles (hint: the little ones in the picture above)?

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

14. When substances receive extreme amounts of energy what happen to their electrons?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

15. You can make equations that show what happens to substances when energy is added or taken away.

a. example: gas + energy= plasma

b. solid + energy = \_\_\_\_\_\_\_\_

c. \_\_\_\_\_\_+ energy=gas

d. Liquid - energy=\_\_\_\_\_\_

e. Plasma-energy=\_\_\_\_\_\_\_\_

16. The molecular structure of liquid particles alow it to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Because\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

17. The molecular structure of gas particles allow it to\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

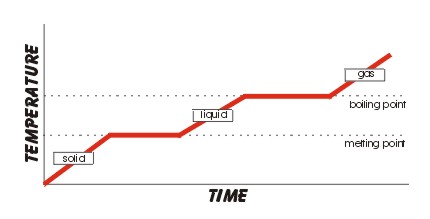
Because\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

18. The molecular structure of a solid allows it to\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Because\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

19. What super power does PLASMA have? (Think lights, stars, sun)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Graph**



19. What type of graph is shown? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

20. What is the title of the horizontal axis? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

21. Look carefully at the graph as a whole and think of a title and write it on the line.

22. Does the graph tell us what substance is changing states? \_\_\_\_. What type of substance could it be? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**To prepare for the quiz: 1. reread, 2. rewrite, 3. recreate illustrations, and 4. have an ongoing list of questions that you add to as they come up. Don’t wait until the last minute to review the material**.

**Parent’s Signature**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_