Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_

**Chapter 5 Test Study Guide (8th grade) – Matter: Properties and Its Changes**

1. What are physical properties? List three physical properties of matter.

2. The four states of matter are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

3. The ability to react with oxygen, rust, or be flammable/combustible are all examples of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ properties.

4. What is a chemical property? List four of them.

5. Melting, freezing, and boiling points are some of the physical properties of matter.

6. When something freezes, it changes from a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ to a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; when it melts, it goes from a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and when it boils, it transitions from a \_\_\_\_\_\_\_\_\_\_\_\_\_ to a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

7. Density is calculated by dividing mass by volume (m/V), thus, density depends on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

8. What is solubility?

9. The mass of the products of a chemical reaction is the same as the mass of the reactants. The amount that you started with (reactants) equals the amount that s produced (products)).

10. The physical property that determines how easily heat and electricity pass through a material is called \_\_\_\_\_\_\_\_\_\_\_\_.

|  |  |  |  |
| --- | --- | --- | --- |
| a. | conductivity | c. | hardness |
| b. | density | d. | weight |

11. The state of matter of a material depends on its temperature because changes in energy produced changes in state.

12. To calculate volume, multiply length x width x height. Calculate the volume of an object with a height of 2.9cm, a width of 2.1cm, a mass of 12.5g, and a length of 10cm. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cm3

13. How are particles arranged in a solid, liquid, and gas?

Solid =

Liquid =

Gas =

14. Volume displacement is the technique used to find the volume of an irregular-shaped solid.

15. The law of conservation of mass states that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

16. If two objects have the same volume but different masses, their densities will be different.

17. What number should be in place of the question mark to keep the law of conservation of mass true? \_\_\_\_\_\_\_\_\_

2Na + 2H2O  ?NaOH + H2

Reactants: 2 Na, 4 H, and 2 O.

Products: \_\_\_\_\_Na, + \_\_\_\_\_O + \_\_\_\_\_\_ H + 2 H

18. If a piece of silver has a density of 17.2 grams per cubic centimeter (g/cm3) and a volume of 1.5 cm3, what is its mass in grams? Remember that D = M/V. Please show your work.

19. An object’s mass does not change on the moon. Its weight will decrease.

20. Which of the following is the most likely physical property shared by the metals Copper (Cu), Aluminum (Al), and Zinc (Zn)? A. low boiling point, B. low melting point, C. high magnetism, D. high conductivity