

Name: _____

Date: _____ Class: _____

Matter, Properties and Change

1. In a laboratory, a sealed container with 100g of steam (gas) is cooled until all the steam (gas) becomes a liquid. The container is then cooled further until all the water becomes a solid. Which of the following remains constant during both of these changes?

(6.P.2.2/6.P.2.3)

- A. the mass of the water
- B. the pressure in the container
- C. the total energy of the water
- D. the position of the atoms in the container

2. Julie had four bottles. She wanted to know which bottle could hold the most water. Julie found the mass of each bottle when it was empty. Then she found the mass of each bottle when it was full of water. She recorded the following results. (Science Processes)

Bottle	Mass of Empty Bottle (grams)	Mass of Full Bottle (grams)
1	100	800
2	100	600
3	500	900
4	700	900

Which bottle held the most water?

- A. 1
 - B. 2
 - C. 3
 - D. 4
3. Which substance has a definite shape and a definite volume? (6.P.2.2)
- A. liquid
 - B. solid
 - C. gas
 - D. plasma
4. What is the smallest unit of an element that shares the element's properties? (6.P.2.1)
- A. molecule
 - B. cell
 - C. atom
 - D. compound
5. Density depends on _____. (6.P.2.3)
- A. weight
 - B. mass
 - C. mass and volume
 - D. volume

6. Mass is a(n) _____ property. (6.P.2.3)
- A. natural
 - B. chemical
 - C. electrical
 - D. physical
7. The temperature at which a liquid becomes a gas is the _____ point. (6.P.2.3)
- A. freezing
 - B. boiling
 - C. condensation
 - D. melting
8. All atoms of the same _____ have the same properties. (6.P.2.1)
- A. Elements
 - B. Compounds
 - C. Mixtures
 - D. Chemicals
9. Compared to gases, liquids are not easily compressed because particles of a liquid _____ . (6.P.2.2)
- A. are closer together
 - B. are moving faster
 - C. have more kinetic energy
 - D. have a crystal structure
10. In which phase of matter are the molecules of a substance farthest apart from each other? (6.P.2.2)
- A. solid
 - B. liquid
 - C. gas
 - D. crystal
11. Substances that have a definite volume but can take many different shapes are known as _____. (6.P.2.2)
- A. solids
 - B. liquids
 - C. gases
 - D. crystal
12. All living and nonliving things are made up of a combination of _____. (6.P.2.1)
- A. elements
 - B. liquids
 - C. crystals
 - D. oxygen

13. What are often called building blocks of matter? (6.P.2.1)
- A. cells
 - B. elements
 - C. compounds
 - D. atoms
14. Matter takes up _____. (6.P.2.1)
- A. space and temperature
 - B. space and mass
 - C. heat and temperature
 - D. space and heat
15. Which is not a physical state of matter? (6.P.2.1)
- A. vacuum
 - B. solid
 - C. liquid
 - D. gas
16. Solids have _____ shape and volume. (6.P.2.1/6.P.2.3)
- A. indeterminate
 - B. definite
 - C. changing
 - D. no
17. Which best describes particles in a liquid? (6.P.2.1)
- A. less freely moving than a solid
 - B. more freely moving than a gas
 - C. completely unmoving
 - D. more freely moving than a solid
18. Which of the following changes occurs during sublimation? (6.P.2.2)
- A. solid to gas
 - B. gas to liquid
 - C. gas to solid
 - D. liquid to gas
19. Which of these properties changes if the size of an object changes? (6.P.2.3)
- A. density
 - B. melting point
 - C. solubility
 - D. mass

20. An example of a property of matter that can be observed without changing the identity of the matter is: (6.P.2.3)
- A. flammability
 - B. reactivity
 - C. solubility
 - D. ability to rust
21. The melting point of a solid is 24.9°C . As heat is added to melt the solid, what happens to the particles? (6.P.2.2)
- A. The motion of the particles increases.
 - B. The motion of particles decreases.
 - C. The particles move farther apart.
 - D. The particles move closer together.
22. In what way are atoms of oxygen most different from atoms of nitrogen? (6.P.2.1)
- A. They have different temperatures.
 - B. They have different states of matter.
 - C. They have different masses.
 - D. They have different colors.