Study of Matter Quiz

1. Which of the following is NOT a takeaway from the article?

- Atoms comprise all matter.
- Mass and weight are different.
- All matter is visible.
- Plasmas occur in lightning bolts.

2. The study of matter describes which field of science?

- physics
- chemistry
- geology
- matrices

3. What do matter, space, and time have in common?

- their mass and volume
- their atomic structures
- their moment of origin
- their fluid nature

4. Which note card best summarizes the important points in the article?

a.
- All matter has mass and volume.
- Color and texture are physical properties.
- Chemical properties cannot be determined by sight.

b.
- Elasticity of a material is a physical property.
- Reactivity is a chemical property.
- Solubility is both a physical and chemical property.

c.
- The properties of matter are its characteristics.
- Properties of matter are either physical or chemical in nature.
- Knowledge of a material's properties makes it easier to identify.

Which is right?
- Note Card 1
- Note Card 2
- Note Card 3

5. In a lab report for an experiment on conservation of mass, what is the correct order of headings? Drag each term or phrase into its correct position at left to organize the items in the proper sequence.

Running the Reaction

Assembling the Reactants

Weighing the Reactants

6. Who among the following can claim experience existing in an extreme vacuum?

- workers in a food-preservation facility
- cleaning staff at a local hotel
- the crew in a light-bulb manufacturing plant
- astronauts who have completed spacewalks

7. The central core of an atom is called the (nucleus/electron/element/hydrogen). Within the core are protons and neutrons, which are comprised of (gauge/hydrogen/elementary/energy) particles. These particles, in turn, share three main properties: charge, mass, and (neutrality/flavor/charm/spin).

8. Which of the following statements can be inferred from this article?

- Atoms are very rarely found in isolation.
- There are several types of bonds.
- Hydrogen bonds are on the weak side.
- Ionic bonds involve the transfer of atoms.

9. Which note card best summarizes the important points in the article?

a. When elements bond together to form a compound, they lose their individual properties. Compounds are created or broken down only through chemical reactions. Scientists use chemical formulas to represent compounds. These formulas are used in chemical equations to represent the reaction process and its results.
b. When elements form a compound, the compound's properties may be very different from those of the individual elements. For example, sodium is a highly reactive metal, while chlorine is a poisonous gas. But the two elements come together to form sodium chloride, or harmless table salt.
c. Chemical formulas are used to show what elements are in a compound. The elements are represented by their periodic-table symbols, with numeric subscripts showing how many atoms of each element form the molecule. These same formulas are used to construct representations of chemical reactions.

Which is right?
- Note Card 1
- Note Card 2
- Note Card 3

10. Plasmas and Bose-Einstein condensates are formed under opposite conditions of _____.

- pressure
- crystallization
- fluidity
- temperature

11. (Vapor/Dark matter/Lightning/Mercury) is the only verifiable plasma illustrated in the slideshow. Quicksand and slurries are similar in that they can be considered (semi-liquid/semi-gaseous/Bose-Einstein condensates/organic matter). The only entirely solid matter shown in the slideshow is (lava/diamond/dark matter/mercury).

12. How do scientists obtain antimatter for study?

- They use particle accelerators.
- They capture it from high-altitude balloons.
- They visit so-called cosmic islands.
- They look through superstrong telescopes.