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| Groups Protons electron shell nonmetals Alkali metals  Atomic number Neutrons neutral metalloids Solute  Electrons halogens nucleus periods Solvent  Atomic mass Negative noble gases Hydrogen Chemical formula  Positive one alkaline earth metals Heterogeneous Metals  Element Compound Homogeneous Molecule Alloy  Solution Magnesium Beryllium Valence Boron |

**Directions: use the word bank above to answer questions**

1. Atoms are composed of three types of particles. These include \_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_.
2. A \_\_\_\_\_\_\_\_ is a positively charged particle.
3. An electron is a \_\_\_\_\_\_\_\_\_\_\_ charged particle orbiting the outside of the nucleus in a shell called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. Protons and neutrons are located in the \_\_\_\_\_\_\_\_\_\_ of an atom.
5. The total number of protons and neutrons in the atom’s nucleus is known as the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
6. The identity of an atom is determined by the number of \_\_\_\_\_\_\_\_\_\_\_ in its nucleus, called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
7. Mendeleev organized the periodic table based on the \_\_\_\_\_\_\_\_\_\_\_\_.
8. The modern periodic table is organized by the \_\_\_\_\_\_\_\_\_\_\_\_.
9. Elements in a vertical column on the periodic table are in the same \_\_\_\_\_\_\_\_\_\_.
10. Each horizontal row on the periodic table is known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
11. As you move from left to right on the periodic table, the number of protons increases by \_\_\_\_\_.
12. The three main classes of elements on the periodic table are \_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_.
13. Elements located on the far right of the periodic table are known as \_\_\_\_\_\_\_\_\_\_.
14. Elements that have characteristics of both metals and nonmetals are known as \_\_\_\_\_\_\_\_\_\_.
15. Elements that conduct electricity, appear shiny, and can be shaped easily are known as \_\_\_\_\_\_\_\_\_\_.
16. Groups 17 are known as \_\_\_\_\_\_\_\_\_.
17. Group 18 are referred to as inert and are known as \_\_\_\_\_\_\_\_.
18. Group 2 is known as the \_\_\_\_\_\_\_\_\_\_\_.
19. 2 or more atoms bonded together are known as \_\_\_\_\_\_\_\_\_.
20. 2 or more different types of atoms bonded together are known as \_\_\_\_\_\_\_\_\_\_\_.
21. A single atom found on the periodic table is known as an \_\_\_\_\_\_\_\_.
22. A solution that is the same throughout, such as salt water is known as a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ solution.
23. A mixture that is not the same throughout, such as salad or oil and water is known as a \_\_\_\_\_\_\_\_\_\_\_ mixture.
24. The outer band of electrons is known as the \_\_\_\_\_\_\_\_\_\_ electron shell.
25. When a \_\_\_\_\_\_\_\_\_\_ dissolves in a \_\_\_\_\_\_\_\_\_\_ it forms a \_\_\_\_\_\_\_\_\_\_.
26. The element in Period 2 and Group 13 is \_\_\_\_\_\_\_\_\_\_\_\_.
27. The element is Period 3 and Group 2 is \_\_\_\_\_\_\_\_\_\_.