**Vocabulary Defined: Periodic Table & Bonding**

1. **Periodic**: describes something that occurs or repeats at regular intervals
2. **Periodic law**: the law that states that the repeating chemical and physical properties of elements change periodically with the atomic numbers of the elements
3. **Metal:** an element that is shiny and conducts heat and electricity well
4. **Nonmetal**: an element that conducts heat and electricity poorly
5. **Metalloid**: elements that have properties of both metals and nonmetals
6. **Period**: in chemistry, a horizontal row of elements in the periodic table
7. **Group**: a vertical column of elements in the periodic table; elements in a group share chemical properties
8. **Alkali metals**: are elements in group 1 of the periodic table
9. **Alkaline-earth metals**: are elements in group 2 of the periodic table
10. **Noble gas**: unreactive nonmetals in group 18 of the periodic table
11. **Halogen**: are elements in group 17 of the periodic table
12. **Malleable**: can be flattened with a hammer and will not shatter
13. **Ductile**: can be drawn into thin wires
14. **Chemical bonding**: the combining of atoms to form molecules or ionic compounds
15. **Chemical bond**: an interaction that holds atoms or ions together
16. **Valence electron**: an electron that is found in the outermost shell of an atom that determines the atom’s chemical properties
17. **Ion**: a charged particle that forms when an atom or group of atoms gains or loses one or more electrons
18. **Ionic bond**: a bond that forms when electrons are transferred from one atom to another, which results in a positive ion and a negative ion
19. **Covalent bond**: a bond formed when atoms share one or more pairs of electrons
20. **Crystal lattice**: the regular pattern in which a crystal is arranged
21. **Molecule**: the smallest unit of a substance that keeps all of the physical and chemical properties of that substance
22. **Metallic bond**: a bond formed by the attraction between positively charged metal ions and the electrons around them