**Physical Science: Final Exam Study Guide**

Directions: For each set of terms/concepts, state the difference. Give examples if you can. This may include a drawing, symbol, formula or chemical equation

1. Series circuit vs. parallel circuit
2. Solid vs. liquid vs. gas vs. plasma
3. Physical changes vs. chemical changes
4. Element vs. compound vs. mixture
5. Metal vs. metalloid vs. nonmetal (location on the periodic table)
6. Ionic bond vs. covalent bond
7. Distance vs. displacement
8. Law of conservation of mass vs. law of conservation of energy
9. Solute vs. solvent
10. Atomic number vs. electrons
11. Acids vs. bases (definitions and pH ranges)
12. Sound waves vs. light (electromagnetic waves)
13. Radio waves vs. infrared waves vs. ultraviolet rays
14. Subscript vs. coefficient
15. Atomic number vs. atomic mass
16. Longitudinal waves vs. transverse waves
17. Compression vs. rarefaction in a compression wave
18. Period vs. group
19. Nuclear fission vs. nuclear fusion
20. Proton vs. electron vs. neutron
21. Reactants vs. product
22. Newton’s 1st law vs. Newton’s 2nd law vs. Newton’s 3rd law
23. Types of reactions: synthesis, decomposition, single & double
24. Catalyst vs. inhibitor
25. Endothermic vs. exothermic reaction
26. Current vs. static electricity
27. Zero acceleration vs. positive and negative acceleration
28. Physical vs. chemical properties
29. Stable elements vs. unstable elements
30. Velocity vs. speed
31. Unbalance equations vs. balance equations
32. Reflection vs. refraction
33. Frequency vs. wavelength
34. Generator vs. electric motor
35. Know the order of the electromagnetic spectrum from lowest to high freq.
36. Be able to count the number of atoms in a formula (**Ca(OH)2**)
37. Define the following: viscosity, catalyst, Doppler effect, isotope, gravitational forces
38. Know how to use all formulas that were listed on your reference sheet and be able to read a periodic table.