Matter Study Guide

1. Give examples (and know the basic definition) of the following:

a. heterogeneous mixtures : physical combination of substances in which you can tell the particles apart (pizza, salad dressing, mayonnaise, trail mix)

b. colloid : heterogeneous mixture with large particles that scatter light (whipped cream, mayo)

c. suspension: heterogeneous mixture where particles settle out over time (Italian salad dressing, ketchup…anything you need to shake)

d. homogeneous mixture: physical combination of substances in which you can not tell the particles apart (soda, salt water)

e. solution: homogeneous mixture when one thing dissolves into another (kool-aid, lemonade, sweet tea)

f. alloy: homogeneous mixture of metals (bronze, stainless steel)

g. physical property: characteristics that deal with appearance (color, size, texture, phase points)

h. chemical property: characteristics that deal with the ability to change (flammability, combustibility, reactivity)

i. physical change: change in physical property/state (boiling, dissolving, painting)

j. chemical change: change in composition (burning, rusting, rotting)

k. element: substance with 1 type of atom (calcium, oxygen, gold…all on PT)

l. compound: substance with 2 or more types of atoms (calcium oxide, sodium chloride, acids)

m. pure substance: particles are chemically combined (elements and compounds)

2. What is the difference between a property and change? A property is a characteristic (noun), a change is an action (verb)

3. Place the 4 states of matter in order of increasing energy. Solid, liquid, gas, plasma

4. Describe the shape and volume of solids, liquids, and gases. Solids-definite shape, definite volume; Liquids-indefinite shape, definite volume; Gas-indefinite shape, indefinite volume

5. Be able to label a phase diagram with the following: boiling point/condensation point, melting point/freezing point, solid, liquid, gas, temperature, time

A = Solid

B = Melting/Freezing Point

C=Liquid

D=Boiling/Condensation Point

E= Gas

