Physical and Chemical Properties Vocabulary **Name** _____

Concept Drawings Date_____ Period_____ Score____/4

Vocabulary Term	Drawing (with captions and colors) clearly identifies…	
Physical Property	……physical properties as any characteristic of a material that can be observed or attempted to be observed without changing the identity of the material. Examples of physical properties are density reflectivity boiling point malleability freezing point conductivity magnetism size color	
Physical Change	…a physical change as any change in size, shape, or state of matter in which the identity of the substances stays the same. Physical changes which occur because of changes in temperature – freezing, boiling, melting, condensation	
Volume	…volume as the amount of space an object occupies. Volume is a 3-dimensional measurement of length, width, and height, and can be calculated or measured through displacement, Volumes of solids and liquids change very little. Volumes of gasses have extreme variability	
Density	….density is the mass per unit volume of an object (mass ÷ volume) Detailed explanation/example of how density is calculated. Comparison of more dense and less dense materials	
States of Matter	…states of matter, whether a substance is a solid, liquid, or gas depends on the temperature of the substance. Kinetic theory explains the relationship between particle movement within a substance and thermal energy	

Solid	……a <u>solid</u> is a material which has tightly packed particles which move slow enough that the material maintains its shape The particles of solid often have a specific geometric arrangement which affects the physical and chemical properties of the material	
Liquid	…a <u>liquid</u> is a material which has particles which are less densely packed and faster than a solid and tend to move freely over each other The particles of liquids flow out of arrangement as a result of additional kinetic energy to the point that they take the shape of the container they are in	
Gas	…a <u>gas</u> is a material with very widely spaced particles that are moving very fast. A gas is a material has enough kinetic energy to break the attraction between particles and can spread out to fill its container	
Plasma	…<u>plasma</u> as a gas energized with charged particles. Examples of plasma in the universe (stars, lightening)	
Boiling Point	…<u>boiling point</u> as the temperature which pressure of the vapor in the liquid is the same as the pressure on the surface There is a difference between boiling and evaporation. ***Heat of vaporization*** helps explain the difference.	
Melting Point	…<u>melting point</u> as the temperature when enough thermal energy has been added to a material for the particles to slip out of arrangement ***Heat of fusion*** as the amount of energy required to change a material between a solid and a liquid	

Freezing point	…freezing point as the temperature when enough thermal energy has been removed from a material for the particles to slow down and rearrange as a solid. ***Heat of fusion*** is the amount of thermal energy required to change a material between a solid and a liquid. Freezing and melting point are identifies as the same temperature.	
Chemical Property	…a chemical property as a characteristic of a substance that indicates whether it can undergo a certain chemical change (react). Examples of materials that have specific chemical properties – acids, bases, flammable, corrosive, oxidizer, reducer.	
Chemical reaction (change)	…a chemical reaction as a process in which one or more substances (reactants) are changed into new substances (products)… Examples of how a chemical change may be detected – change in color, new materials formed, release of energy, flames	
Conservation of Mass	…conservation of mass as the mass of all substances that are present before a chemical change equals the mass of all the substances that remain after the change Where does the mass go if it seems to "disappear"?	