**Study Guide for Unit Test: Matter**

Please use this as a study tool for your test on Tuesday 10/08/2019. It will give you an idea of what to expect on the test. This study guide will not completely mirror the unit test, so be sure to use all of your resources from this unit. **Complete this study guide using your own paper. Staple this sheet to the front of your papers. ALL STUDY GUIDES ARE DUE AT THE BEGINNING OF CLASS ON Tuesday 10/08.**

**Periodic Table**

1. Define the following terms:

* Period
* Group/ Family
* Metals, Metalloids, Halogens, Nobel Gases
* Valence electron Shell
* Atomic Mass
* Atomic number
* Protons
* Neutrons
* Electrons

1. Identify the subatomic particles (Protons, neutrons, electrons) for the following elements.

* Gold
* silver
* Carbon
* Phosphorus
* Nitrogen
* Oxygen
* Silicon
* Neon
* Helium
* Hydrogen
* Calcium
* Lithium
* Argon

1. What happens to elements as you go from the right side of a period to the left?
2. Where can the most reactive elements be found? How do you know?
3. Where can the least reactive elements be found? How do you know?
4. Draw a Bohr Model for the following Elements.

* Nitrogen
* Carbon
* Phosphorus
* Hydrogen

**Law of Conservation of Mass**

1. Define the following:

* Law of conservation of Mass
* Chemical equation
* Product
* Reactant

1. Balance the following chemical equations:

* \_\_\_\_\_C2H6 + \_\_\_\_\_O2 → \_\_\_\_\_\_ CO2 + \_\_\_\_\_\_H2O
* \_\_\_\_\_Fe + \_\_\_\_\_\_\_O2 → \_\_\_\_\_\_\_Fe2O3
* \_\_\_\_\_\_\_Al + \_\_\_\_\_\_O2 → \_\_\_\_\_\_Al2O3

**Mixtures and Pure substances**

1. Define the following:

* Mixtures
* Heterogenous
* Homogeneous
* Colloid
* Suspension
* Compound
* Element

1. Compare and contrast an element, compound, and mixture.

**States of Matter**

1. Describe Kinetic Theory in your own words.
2. Draw how particles move in Solids, liquids, and gasses.
3. Why does matter expand when heated?
4. Describe plasma in your own words. Give an example.

**Physical and Chemical properties**

1. Define the following terms:

* Chemical Property
* Physical Property
* Combustibility
* Reactivity
* Melting Point
* Boiling Point

1. Why is it important to for scientist to use Chemical and Physical properties in the lab?
2. Give five examples of physical properties.
3. Give five examples of Chemical properties.

**Physical and Chemical Changes**

1. How do you know when a physical change has occurred? Give 3 examples of a physical change.
2. How do you know when a chemical change has occurred? Give 3 examples of a chemical change.