Types of Matter Worksheet

1) Define the following:

a. Element –

b. Molecule –

c. Compound –

d. Mixture –

e. Homogeneous mixture –

f. Heterogeneous mixture –

| **2)** What did the playdough balls represent in this activity? What did the toothpicks represent?	**3)** The element section did not have any toothpicks. Why?	**4)** What is the difference between a molecule and a compound?
5) If you were looking at the particles, a drawing, or model of a compound, what are some things you would notice?	**6)** If you were looking at the particles, a drawing, or a model of a molecule, what is one thing you could you see that you would not see in a compound?	**7)** In the mixture section, why didn't you connect the water and the salt with a toothpick?

8) Look at the particles of the following substances. Determine if it is an element, compound, or mixture.
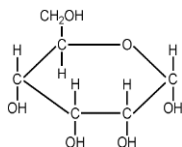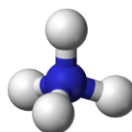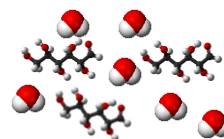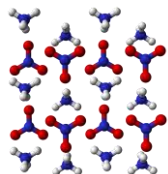
Pure Gold (Au)
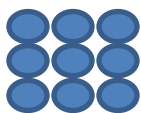
Carbonic Acid
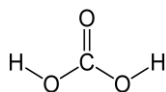
Sugar ($C_6H_{12}O_6$)

Ammonia (NH_3)

Kool Aid

_____   _____   _____   _____   _____

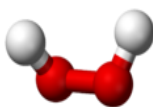Mystery Substance

Nitrogen
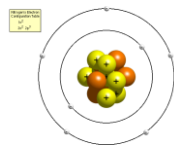
H_2O_2

Air

Silver (Ag)

_____   _____   _____   _____   _____

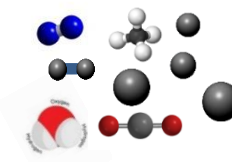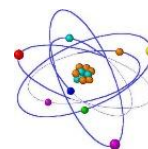**9)** Identify if each statement is referring to an atom, element, molecule, compound, or mixture.

a. The smallest unit of an element that has the same properties as the element.

b. A pure substance made of two or more atoms of the same element that are bonded together

c. More than one substance chemically bonded together, can be separated only by chemical means.

d. More than one substance that can be separated by physical means.

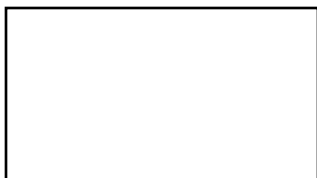e. A pure substance that is made of all the same type of atom.

10) Match the diagrams to the description that best matches.

a. Element
b. Compound
c. Mixture of Elements
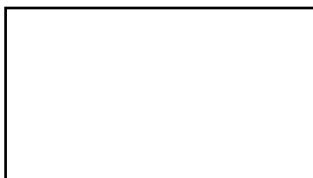d. Mixture of Compounds
e. Mixture of Elements and Compounds
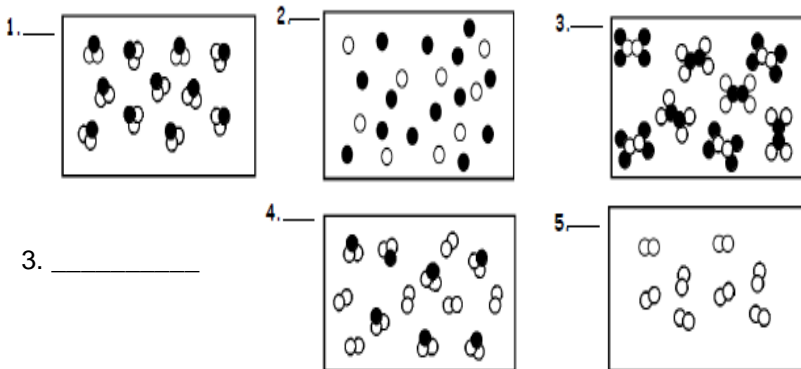
1. _____   2. _____   3. _____

4. _____   5. _____

11) Draw particle diagrams (like you see in Q10) for each of the things described.

Homogenous mixture made up of an gaseous element and a gaseous compound.	*Heterogeneous mixture made up of two different liquid compounds*	*Homogenous mixture made up of two different solid elements*

12) Complete the classification of matter flow chart:

MATTER

Separated by chemical means → **Pure substance**

Separated by physical means → _____

All one type of atom NOT bonded together → **Element**

One or more types of elements bonded together → _____

More than one type of element bonded together → _____

Uniform → _____

Not uniform → **Heterogeneous**