Name _____

ILS

Elements, Compounds & Mixtures Worksheet Key

Part 1: Read the following information on elements, compounds and mixtures. Fill in the blanks where necessary.

Elements:

- A pure substance containing only one kind of __**atom**____.
- An element is always uniform all the way through (homogeneous).
- An element __**cannot**___ be separated into simpler materials (except during nuclear reactions).
- Over 100 existing elements are listed and classified on the _**Periodic Table**_.

Compounds:

- A pure substance containing two or more kinds of __**atoms**__.
- The atoms are ___**chemically**___ combined in some way. Often times (but not always) they come together to form groups of atoms called molecules.
- A compound is always homogeneous (uniform).
- Compounds ___**cannot**___ be separated by physical means. Separating a compound requires a chemical reaction.
- The properties of a compound are usually different than the properties of the elements it contains.

Mixtures:

- Two or more __**elements**___ or ____**compounds**__ NOT chemically combined.
- No reaction between substances.
- Mixtures can be uniform (called __**homogeneous**___) and are known as solutions.
- Mixtures can also be non-uniform (called ____**heterogeneous**____).
- Mixtures can be separated into their components by chemical or physical means.
- The properties of a mixture are similar to the properties of its components.

Part 2: Classify each of the following as elements (E), compounds (C) or Mixtures (M). Write the letter X if it is none of these.

_**E**_Diamond (C)	_**C**_Sugar ($C_6H_{12}O_6$)	_**M**_Milk	_**E**_Iron (Fe)
_**M**_Air	_**C**_Sulfuric Acid (H_2SO_4)	_**M**_Gasoline	_**X**_Electricity
_**E**_Krypton (K)	_**E**_Bismuth (Bi)	_**E**_Uranium (U)	_**M**_Popcorn
_**C**_Water (H_2O)	_**C**_Alcohol (CH_3OH)	_**M**_Pail of Garbage	_**M**_A dog
_**C**_Ammonia (NH_3)	_**C**_Salt (NaCl)	_**X**_Energy	_**E**_Gold (Au)
_**M**_Wood	_**M**_Bronze	_**M**_Ink	_**M**_Pizza
_**C**_Dry Ice (CO_2)	_**C**_Baking Soda ($NaHCO_3$)	_**E**_Titanium (Ti)	_**M**_Concrete