

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.

<u>E</u> Diamond (C)	<u>C</u> Sugar (C <sub>6</sub> H <sub>12</sub> O <sub>6</sub> )	<u>M</u> Milk	<u>E</u> Iron (Fe)
<u>M</u> Air	<u>C</u> Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> )	<u>M</u> Gasoline	<u>X</u> Electricity
<u>E</u> Krypton (K)	<u>E</u> Bismuth (Bi)	<u>E</u> Uranium (U)	<u>M</u> Popcorn
<u>C</u> Water (H <sub>2</sub> O)	<u>C</u> Alcohol (CH <sub>3</sub> OH)	<u>M</u> Pail of Garbage	<u>M</u> A dog
<u>C</u> Ammonia (NH <sub>3</sub> )	<u>C</u> Salt (NaCl)	<u>X</u> Energy	<u>E</u> Gold (Au)
<u>M</u> Wood	<u>M</u> Bronze	<u>M</u> Ink	<u>M</u> Pizza
<u>C</u> Dry Ice (CO <sub>2</sub> )	<u>C</u> Baking Soda (NaHCO <sub>3</sub> )	<u>E</u> Titanium (Ti)	<u>M</u> Concrete