

ELEMENT

vs.

COMPOUND

vs.

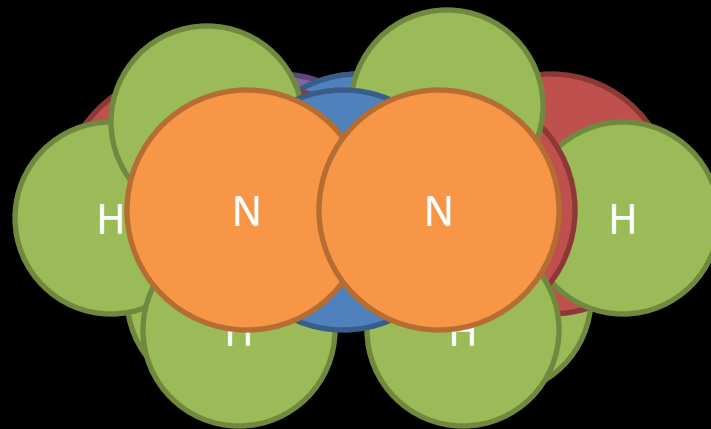
MIXTURE

ELEMENTS, MOLECULES & COMPOUNDS

- **Elements**: An **element** is a pure substance that cannot be broken down into a simpler substance (and keep its unique physical & chemical properties). (H, He, C, O, Au)
- Different elements have different properties because their atoms (# of protons) are different. (H= 1, C = 6, O =8)
- **Molecules**: are groups of two or more atoms. They are held together by chemical bonds.
- A **Compound** is a pure substance made of two or more elements. (ex: H₂O, CO₂, CH₄, C₆H₁₂O₆)

ELEMENTS

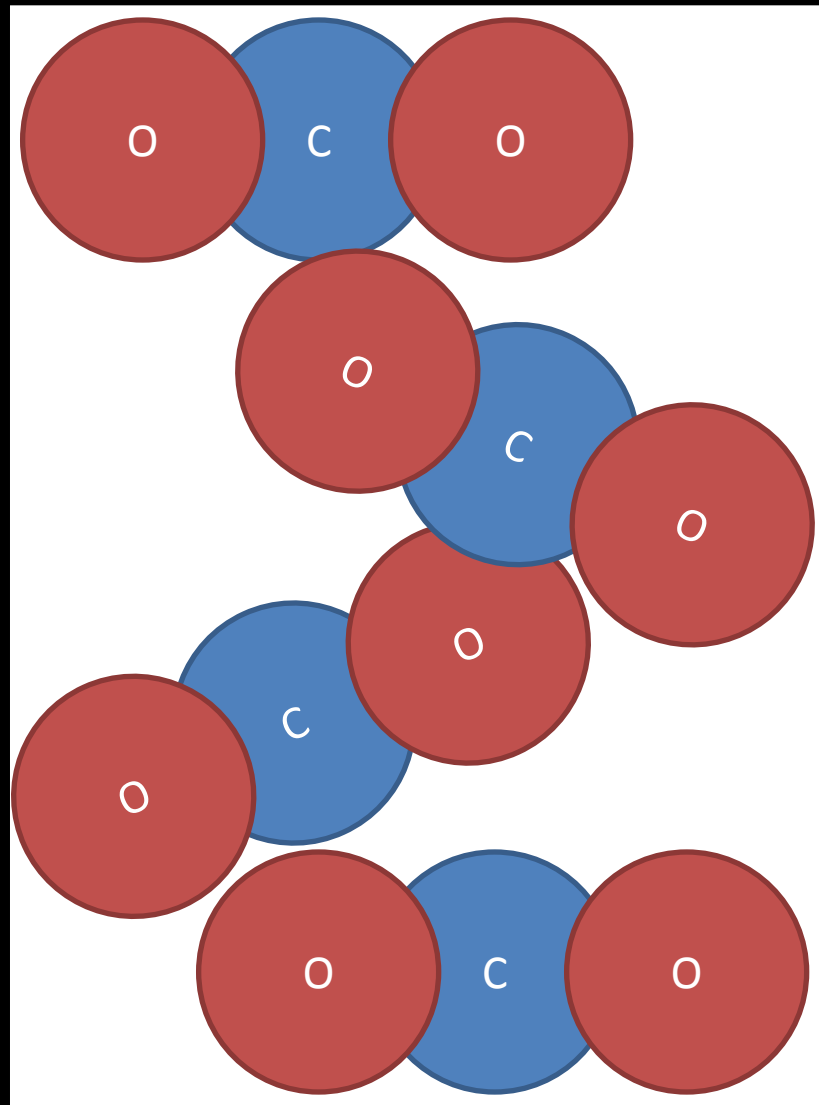
COMPOUNDS



PURE SUBSTANCES & MIXTURES

- **Pure substances** are composed of a single kind of matter and have a specific makeup and set of properties. They are the same everywhere (ex: Table Salt in USA vs. Australia).
- A **Mixture** is made up of two or more substances that are together in the same place, but **do not** chemically combine.
- Each substance in a mixture **keeps** its individual properties.
- Two types of mixtures.
 - A **Heterogeneous Mixture** is **not evenly mixed** and the different parts (substances) can be seen. (ex: Chocolate Chip Cookies)
 - A **Homogeneous Mixture** is **evenly mixed** that you cannot see the different parts (substances). (ex: Hot Tea or Coffee)

Substance or Mixture?



ELEMENT/COMPOUND/MIXTURE

Matter	Element	Compound	Mixture (Heterogeneous/Homogenous)
H (Hydrogen)			
O (Oxygen)			
SUGAR			
SUGAR WATER			
TABLE SALT			
SALT WATER			
SAND			
Fe (Iron)			
TRAIL MIX			
AIR			
EARTH (SOIL)			
WATER			
FIRE*			

THE END