Elements are **pure** substances.

Pure Substances – substance in which there is only **one** type of particle

Particles are called **atoms** which are one of a kind and are alike no matter where they are found.

Examples - Al, O, C, Cu, Au
Pure substances are the same throughout.

Their composition does NOT change, no matter what part of the substance you look at.
IDENTIFYING ELEMENTS BY THEIR UNIQUE PROPERTIES

- **Physical Properties:**
  - Boiling Point
  - Melting Point
  - Density
  - Color
  - Texture

- **Chemical Properties:**
  - Reactivity with acid
  - Flammability
3 MAJOR CATEGORIES

- **Metals**
  - Shiny
  - Good Conductors of heat and electricity
  - Malleable
  - Ductile

- **Examples:**
  - Lead
  - Copper
  - Tin

- **Non-Metals**
  - Dull – Not Shiny
  - Poor Conductors
  - Solids tend to be brittle
  - Solids tend to be unmalleable

- **Examples:**
  - Iodine
  - Sulfur
  - Neon

- **Metalloids**
  - AKA – Semiconductors
  - Properties of both metals and nonmetals

- **Examples**
  - Boron
  - Silicon
  - Antimony