



VS

**Metal** **Non-metal**

**METALS** **NONMETALS**

The image shows two photographs at the top: gold nuggets on the left and dark charcoal on the right. Below them is a periodic table where the left side is colored teal and labeled 'METALS', and the right side is colored orange and labeled 'NONMETALS'. A red line separates the two regions.

## Properties of Metals

Shiny: Silver (Ag)

Malleable: can be hammered or rolled into flat sheets and other shapes

Ex. gold



Ductile: can be pulled out, or drawn, into a long wire. Ex. Copper (Cu) wiring



Conductivity: ability of an object to transfer heat or electricity to another object

Magnetic: Most metals are attracted to magnets; some metals are magnetic themselves such as Iron (Fe), Cobalt (Co) and Nickel (Ni)



Solid at Room Temperature: *except* Mercury (Hg), which is liquid at room temperature



## Properties of Nonmetals

Physical States:



Solid at Room Temperature:

Carbon (C) – charcoal

Iodine (I)

Sulfur (S)



Liquid at Room Temperature: Bromine (Br)

Gas at Room Temperature: 10 total

Oxygen (O) and Nitrogen (N) make up most of the air we breathe

## Properties of Nonmetals

Dull: Solid Nonmetals are dull, *not* shiny

Brittle: Solid Nonmetals are brittle, *not* malleable or ductile

Low Density: Will float if density is less than  $1 \text{ g/cm}^3$

Poor Conductors: Will not transfer heat or electricity easily

