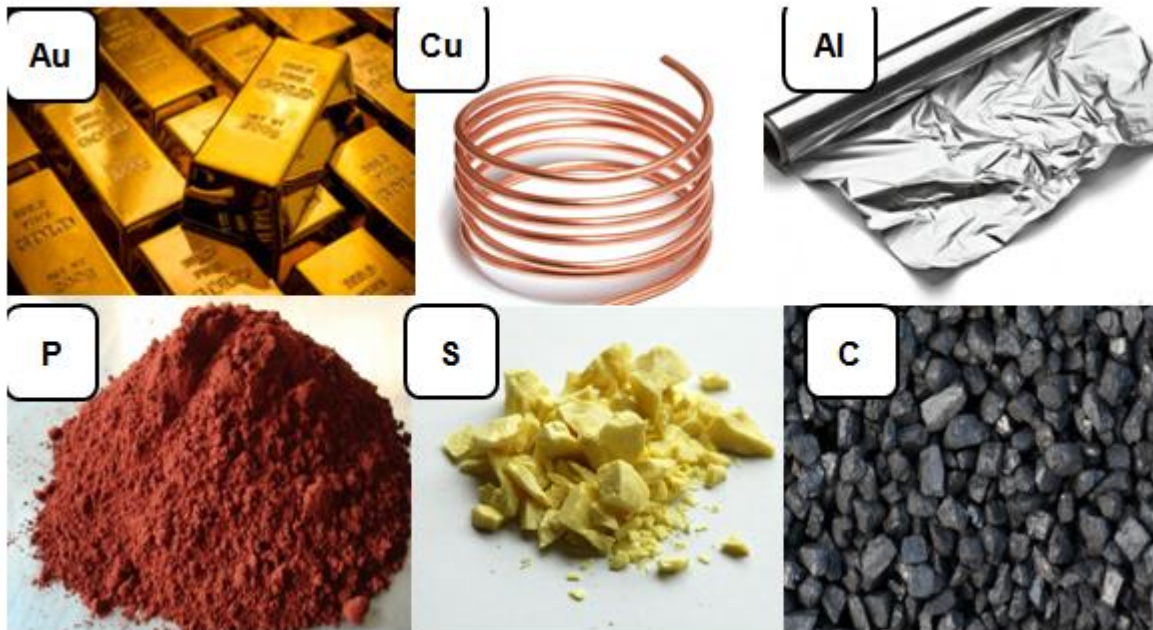


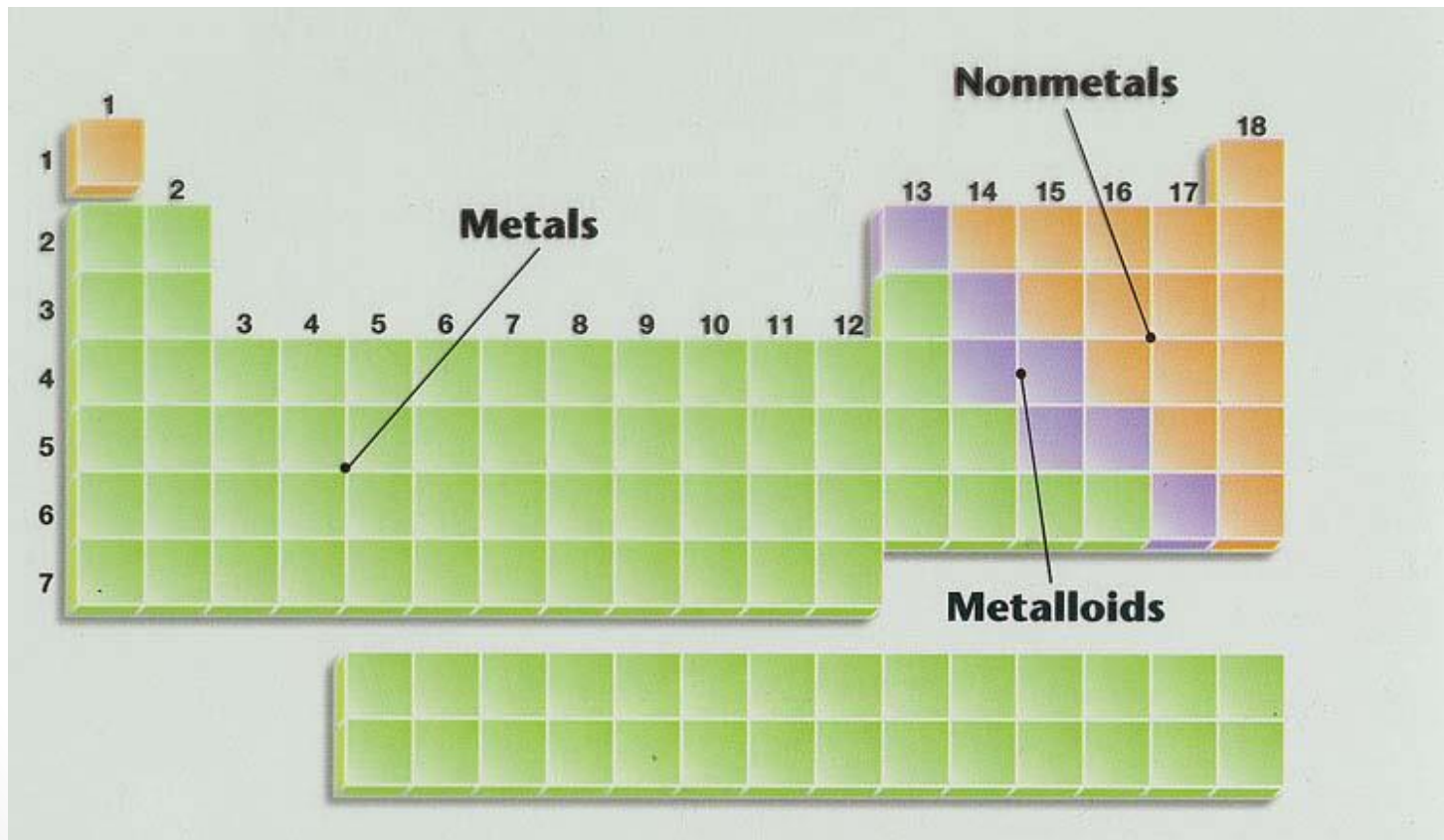
Metals, Non-Metals & Metalloids



S1-2-07 Investigate the characteristic properties of metals, non-metals, and metalloids and classify elements according to these properties.
Examples: ductility, conductivity of heat and electricity, lustre, reactivity

The Periodic Table Continued...

The families (groups) we have studied all fall into three major areas of the periodic table:



Vocabulary...

To better understand these larger groups of elements and their properties, we must learn some new vocabulary:

Ductility

The ability to be shaped or stretched into a wire without breaking.



Malleability

The ability to be hammered, pressed, or rolled into thin plates.



Vocabulary Continued...

Conductivity

How easily heat and electricity can pass through a substance.



Lustre

How shiny or dull a material is



Now we have some terms to describe some of the properties of these different kinds of elements.

Metals:

- Make up about **75%** of all the elements.
- They are located all over the periodic table, but are **CONCENTRATED** at the **LEFT SIDE**.
- Metals are **SHINY**. They **CONDUCT HEAT**, and can make **WIRES** or be stretched into **SHEETS**.



Copper



Lead



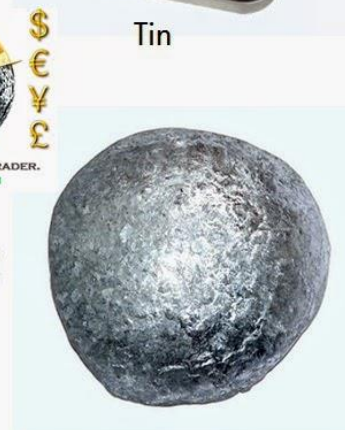
Tin



Nickel



Aluminium



Zinc



Non-Metals:

- Make up about **15%** of the elements. They are found at the **FAR-RIGHT** side of the periodic table.
- Are **POOR CONDUCTORS**, are **NOT SHINY**, and are **BRITTLE** and **NOT DUCTILE**.



Carbon



Iodine

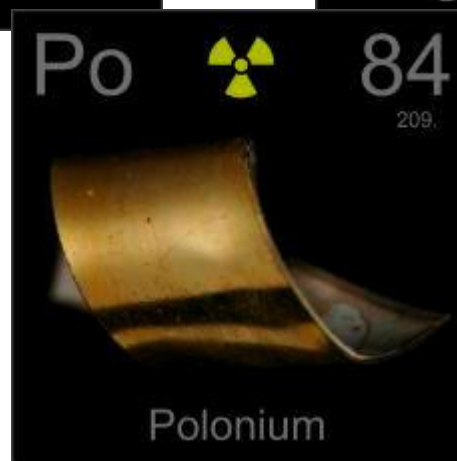
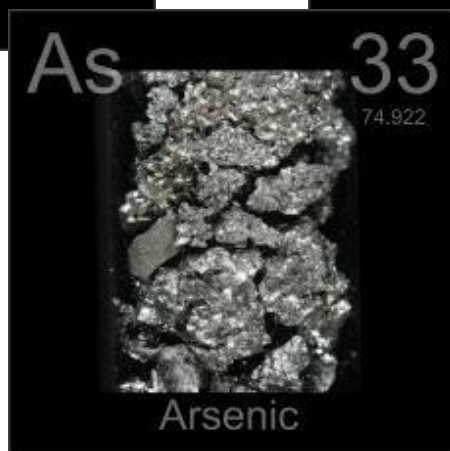


Sulphur

Metalloids:

Metalloids:

- Make up about **6%** of the elements. They are found on the “**STAIRCASE**” of the periodic table.
- They have properties of **BOTH METALS** and **NON METALS**.



Putting it all together...

Complete the following table in your notes:

	State	Lustre	Conductivity	Malleability	Ductility
Metals	Mostly solids at room temperature (except Hg)	Shiny lustre	Good conductors	Malleable	Ductile
Non-Metals	Some gasses, some solids At room temp. (Br is liquid)	Dull (Not shiny)	Poor conductors	Brittle	Not Ductile
Metalloids	Solids at room temperature	Can be shiny or dull	May conduct electricity (Poor conductors of heat)	Brittle	Not Ductile