

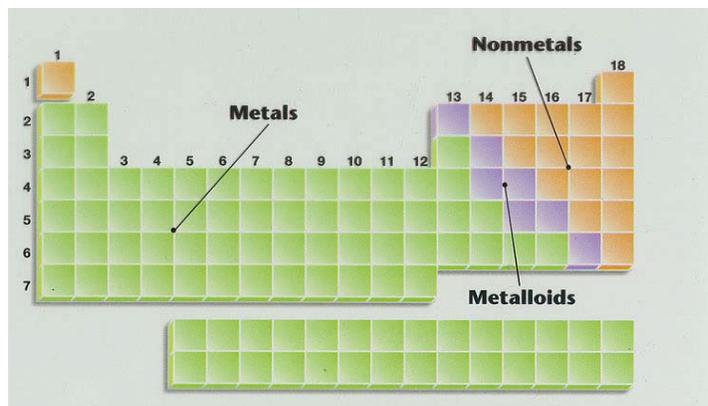
# NOTES for Metals, Nonmetals & Metalloids

## Metals, Nonmetals, & Metalloids

Most periodic tables contain a \_\_\_\_\_ line which allows you to identify which elements are metals, nonmetals, and metalloids. Following are descriptions of each of the three types of materials.

### Metals

Most elements are metals. 88 elements to the left of the stairstep line are \_\_\_\_\_ or metal like elements.



### ***Physical Properties of Metals:***

- Luster (\_\_\_\_\_)
- Good conductors of \_\_\_\_\_ and \_\_\_\_\_
- High \_\_\_\_\_ (heavy for their size)
- High melting \_\_\_\_\_
- \_\_\_\_\_ (most metals can be drawn out into thin wires)
- \_\_\_\_\_ (most metals can be hammered into thin sheets)

### ***Chemical Properties of Metals:***

- Easily lose \_\_\_\_\_
- Corrode easily. Corrosion is a gradual wearing away due to oxygen reacting with the metal. (Example: silver tarnishing and iron rusting)

### Nonmetals

Nonmetals are found to the right of the stairstep line. Their characteristics are opposite those of metals.

### ***Physical Properties of Nonmetals:***

- No \_\_\_\_\_ (dull appearance)
- Poor \_\_\_\_\_ of heat and electricity
- Brittle (\_\_\_\_\_ easily)
- Not \_\_\_\_\_
- Low \_\_\_\_\_ point
- Not \_\_\_\_\_
- Low \_\_\_\_\_

### ***Chemical Properties of Nonmetals:***

Tend to gain \_\_\_\_\_

Since metals tend to lose electrons and nonmetals tend to gain electrons, metals and nonmetals like to form compounds with each other. *These compounds are called ionic compounds.* When two or more nonmetals bond with each other, they form a covalent compound.

### Metalloids

Elements on both sides of the zigzag line have properties of both metals and nonmetals. These elements are called metalloids.

### ***Physical Properties of Metalloids:***

- \_\_\_\_\_ (not liquids or gases)
- Can be shiny or dull
- \_\_\_\_\_ Ductile
- \_\_\_\_\_ Malleable
- Conduct heat and electricity better than \_\_\_\_\_ but not as well as \_\_\_\_\_