

Periodic Table Notes

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* The periodic table is a tool that is designed to acquire all kinds of info. about the elements - very organized.

Types of elements

- Metals - found to left of "zig-zag" or "stair step" line
 - have luster, are ductile or malleable, good conductors (heat & elect.)



- Non-metals - found to right of "zig-zag" or "stair step" line
 - Non-lustrous, brittle or gaseous/liquid, poor conductors
good insulators

- Metalloids - found along "zig-zag" or "stair step" line

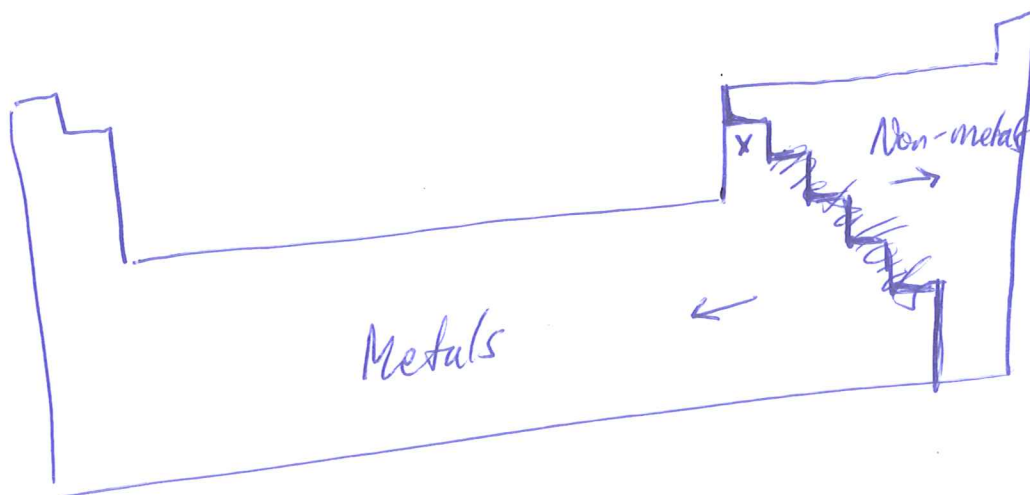
- share at least 1 side w/ line

ex) Boron, Germanium, silicon

* Only Aluminum

breaks this rule (both are metals)

- Metalloids share properties w/ metals & non-metals



Families of the PT.

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- known as the main body - or representative elements (skips the "hole")

1A = Alkali metal family

- very active metals that include Na, K, Rb & Cs

- Hydrogen is a family 1 element, but NOT a Alkali metal

2A = Alkaline Metal Family

- active metals - includes Ca, Mg, Sr & Ba

~~~~ skip over hole ~~~~~

### 3A (or family 13) = Boron Family / Aluminum Family

- includes B, Al, Ga, In

### 4A (or family 14) = Carbon Family

- includes C, Si, Ge, & Sn

### 5A (or family 15) = Nitrogen Family

- includes N, P, As & Sb

### 6A (or family 16) = Oxygen Family

- includes O, S, Se & Te

### 7A (or family 17) = Halogen Gases

- all are gases (except Bromine - liquid) at room temp (25°C)

- includes F, Cl, Br, & I

### 8A (or family 18) = Noble Gases

- All are gases - odorless & colorless - most are dangerous

- includes He, Ne, Xe & Ar

## Transition Metals

(3)

- The "hole" in the PT
- Includes metals whose behavior is less predictable
- Families 3-12B
- B designates they are NOT representative elements
- Includes Ti, Cr, Mn, Ag, Hg, & Au

## Inner Transition Metals

- Known as the "rare earth metals"
- Written @ the bottom of PT to make PT smaller
- elements fall between family 2A & family 3B on table

