The Periodic Table... continued

Group → a column on the Periodic Table

- there are 18 Groups in the P.T.

Periods → rows on the periodic table

- there are 7 periods

What Element:

Period 4, Group 17: Br
Group 1, Period 1: Hydrogen
Period 5, Group 9: Rh
Period 3, Group 13: Al

Metals

- elements to the LEFT of the "stair step" (except Hydrogen)
- solid at R.Temp. (except Hg / Ga)

Common Properties: (generally)

1. Shiny (luster)
2. ductile
   → they can be made into thin sheets or really skinny wire.
3. malleable
   → bendable

Alkali Metals

- All metals in Group 1 (except H)
- HIGHLY REACTIVE
  - you cannot find these elements by themselves in Nature
- An Alkali Metal + Halogen (Group 17) = SALT ex. NaCl

Alkaline Earth Metals

→ Metals in Group 2

→ they are very reactive (but not as reactive as Group 1)

Mg, Ca

Transition Metals

- All metals in Group 3-12
- very commonly known elements because they can occur in nature uncombined: Ag, Au, Cu, Fe, Ni, Zn

Lanthanide Series } the bottom rows.

Actinide

→ Man-made

* U and Pu = used for creating nuclear energy

Transition Metals

↓

underneath the T. Metals

↓

Lantranide Series
Actinide Series
> are metals that belong with the Transition Metals, but they couldn't fit all of them.

Nonmetals
- they are elements to the RIGHT of the "stair step" (and Hydrogen)
- they are usually gas or solid at room temperature
- Brittle (they can crumble)
- Not good conductors of heat and electricity (Metals are).
- they make covalent and ionic bonds

The Noble Gases
→ Group 18 ↗ Nonreactive
→ they are INERT
→ Very Stable

Halogens
→ Group 17 ↓ Bonus
→ very reactive (Flourine is the most reactive nonmetal)
→ make SALTS with Alkali metals.

Metalloids
- they are elements that have properties of both nonmetals and metals: B, Si, Ge, Sb, Te, As, Po
  - They border the "stair step"