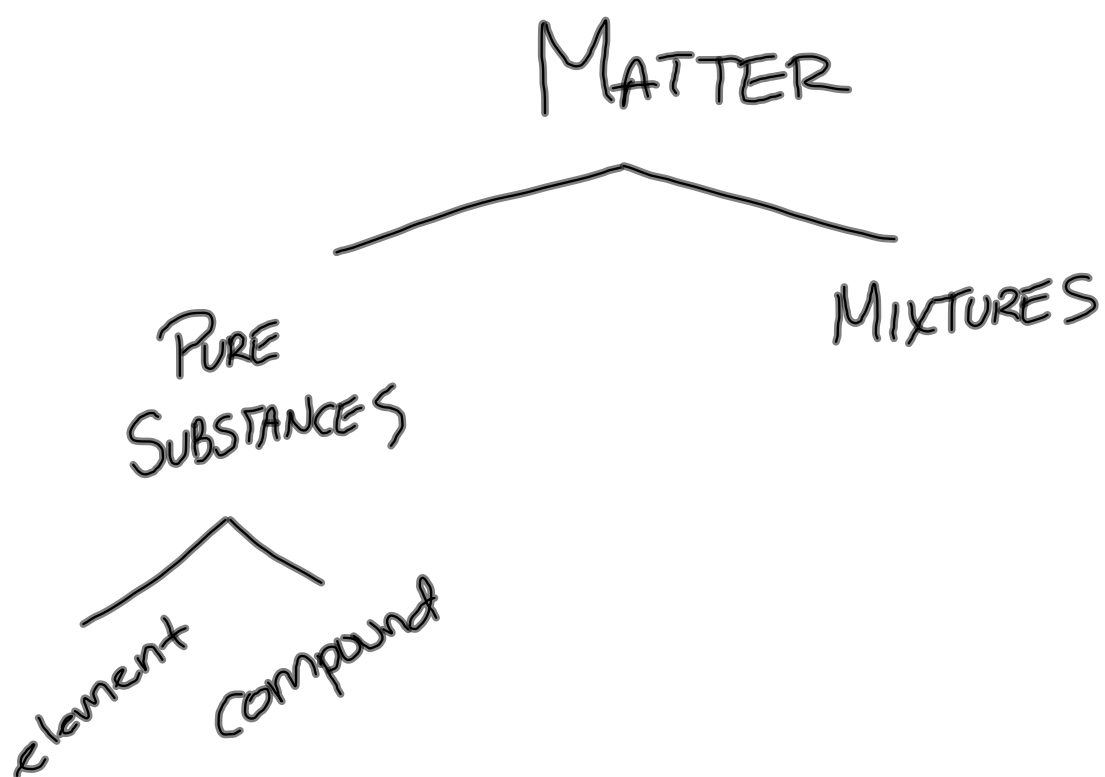


p. 175 #1, 2, 4, 5



Review of the Periodic Table

Periodic table - a structured arrangement of elements that help us explain and predict physical and chemical properties.

Metals are generally located on the left, while the non-metals are located on the right side of the table.

(staircase line)

**Periodic Table
of the Elements**

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----|----|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|---|----|
| 1 | 2 | | | | | | | | | | | | | | | | | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| H | He | | | | | | | | | | | | | | | | | B | C | N | O | F | Ne | | |
| 3 | 4 | | | | | | | | | | | | | | | | | 13 | 14 | 15 | 16 | 17 | 18 | | |
| Li | Be | | | | | | | | | | | | | | | | | Al | Si | P | S | Cl | Ar | | |
| 11 | 12 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | | | | | | |
| Na | Mg | Ca | Sc | Ti | V | Cr | Mn | Fe | Co | Ni | Cu | Zn | Ga | Ge | As | Se | Br | Kr | | | | | | | |
| 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | | | | | | | | |
| Rb | Sr | Y | Zr | Nb | Mo | Tc | Ru | Rh | Pd | Ag | Cd | In | Sn | Sb | Te | I | Xe | | | | | | | | |
| 55 | 56 | 57 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | | | | | | | | |
| Cs | Ba | *La | Hf | Ta | W | Re | Os | Ir | Pt | Au | Hg | Tl | Pb | Bi | Po | At | Rn | | | | | | | | |
| 87 | 88 | 89 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | | | | | | | | | | | | | |
| Fr | Ra | +Ac | Rf | Ha | Sg | Ns | Hs | Mt | 110 | 111 | 112 | 113 | | | | | | | | | | | | | |
| | | * Lanthanide Series | | | | | | | | | | | | | | | | | | | | | | | |
| | | Ce | Pr | Nd | Pm | Sm | Eu | Gd | Tb | Dy | Ho | Er | Tm | Yb | Lu | | | | | | | | | | |
| | | + Actinide Series | | | | | | | | | | | | | | | | | | | | | | | |
| | | Th | Pa | U | Np | Pu | Am | Cm | Bk | Cf | Es | Fm | Md | No | Lr | | | | | | | | | | |
| 1 | H | | | | | | | | | | | | | | | | | | | | | | | | |

Hydrogen, the lightest element, is the exception to almost every rule in chemistry. Although it is located on the left side of the staircase, it behaves mostly as a **nonmetal**.

Metals are normally shiny, malleable, conductors, react with acid, and are mostly solids at room temperature.

Non-metals are generally dull, brittle, good insulators, do not react with acid, and can be solid, liquids or gas at room temperature.

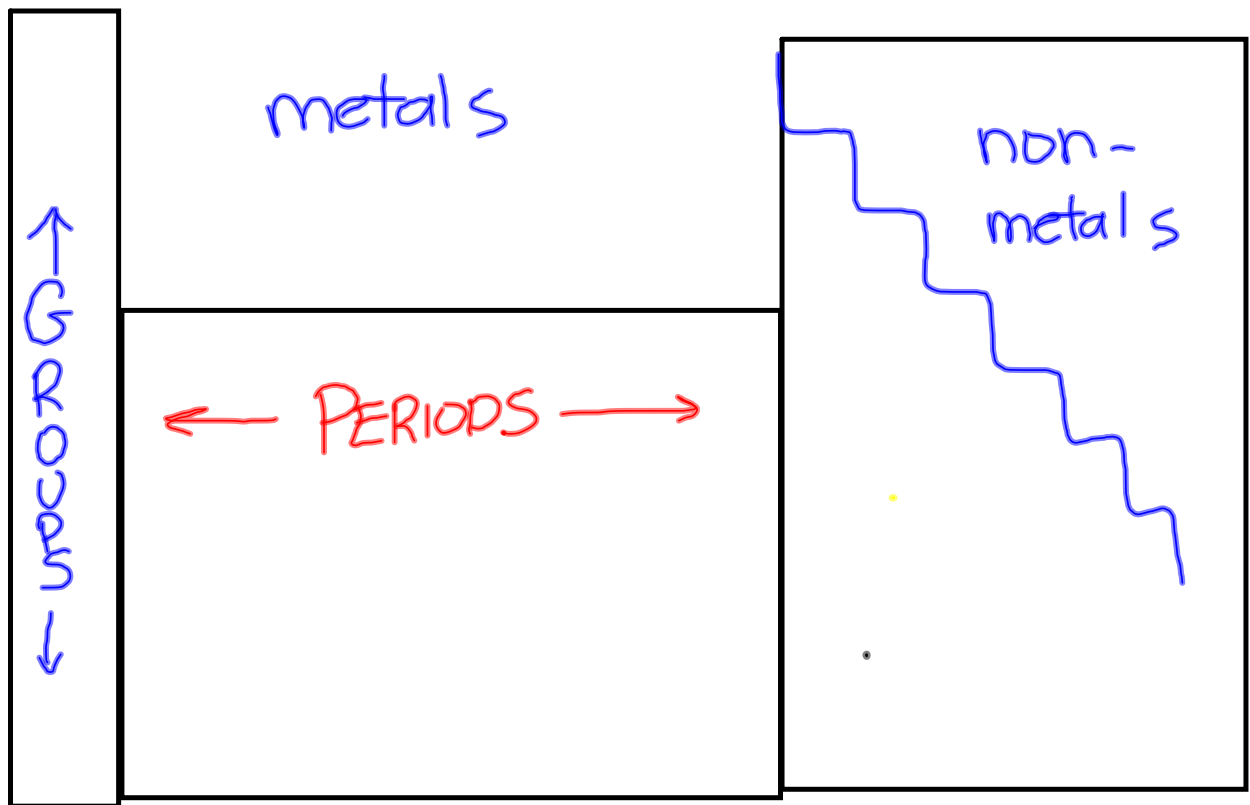
Chemical Families (groups) are vertical columns in the periodic table. They tend to have similar physical and chemical properties.

Alkali metals (group 1) are shiny, silvery metals and form compounds that are mostly white solids and soluble in water.

Alkaline earth metals (group 2) are shiny, silvery metals, but they form compounds that are not soluble in water.

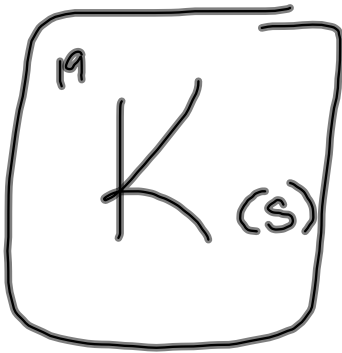
The *halogens* (group 17) generally react with alkali metals.

Noble gases (group 18) generally do not form compounds.



metalloids - properties of metals and non-metals

fluorine F 9 17 2 nm g
halogens



Ca
calcium

~~Ca~~

WHMIS Symbols

Workplace Hazardous Materials Information System



Class A: Compressed Gas



Class B: Flammable and Combustible Material



Class C: Oxidizing Material



**Class D, Division 1: Poisonous & Infectious Materials
- Immediate and Serious Toxic Effects**



**Class D, Division 2: Poisonous & Infectious Materials
Other Toxic Effects**



**Class D, Division 3: Poisonous & Infectious Materials
Biohazardous infectious material**



Class E: Corrosive Material



Class F: Dangerously Reactive Material

Hazardous Household Product Symbols



DANGER



WARNING



CAUTION



POISON



CORROSIVE



FLAMMABLE



EXPLOSIVE