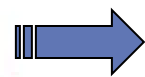
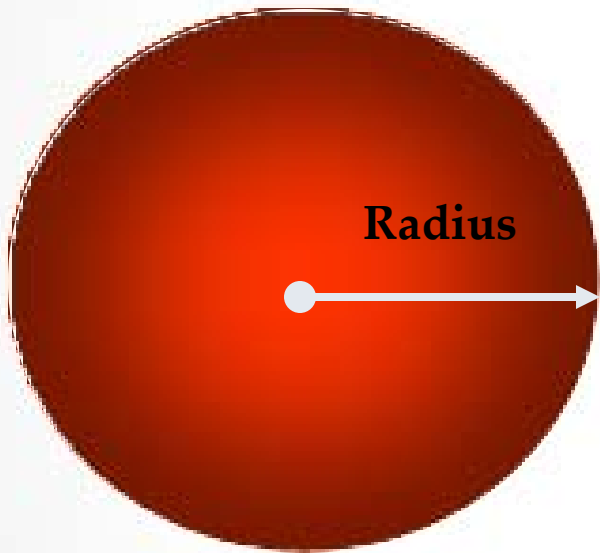


Chemistry Vocabulary

Atomic Radius



Atomic radius is the distance **from the center** of an atom's nucleus to its outermost electron.

Isotopes

Atoms of the same element (same atomic number) with **different** mass numbers

Isotopes of chlorine



17

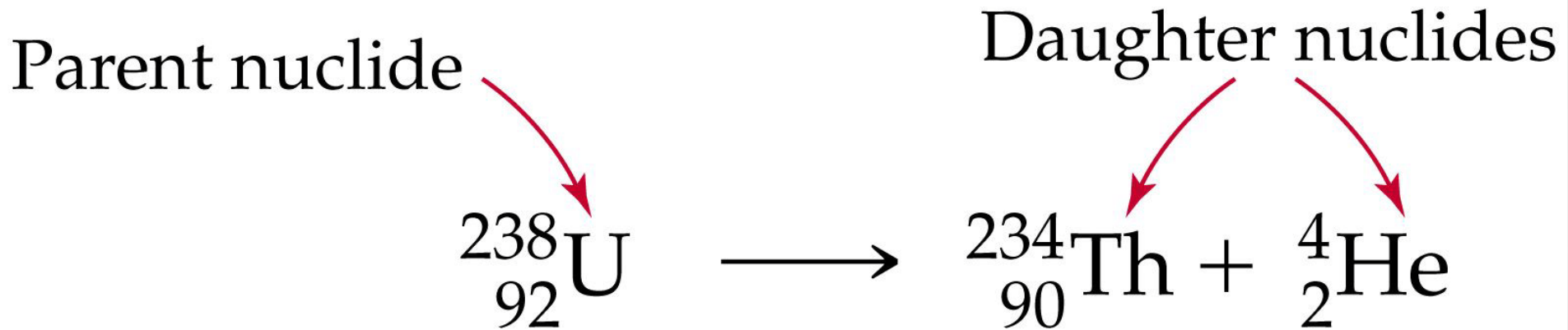
chlorine - 35



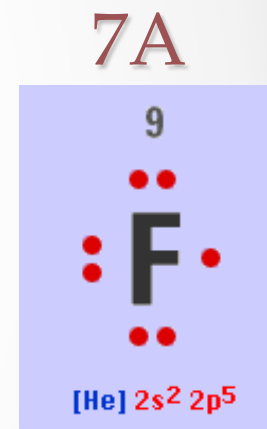
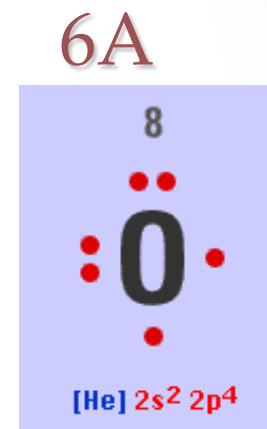
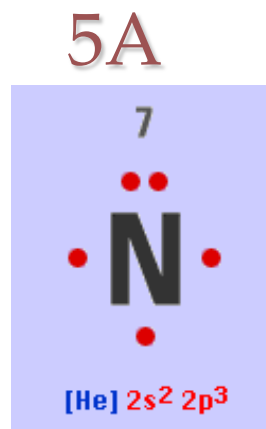
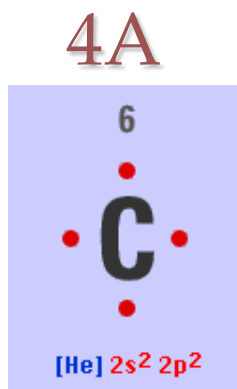
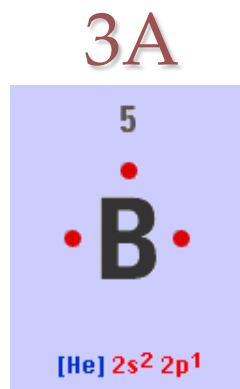
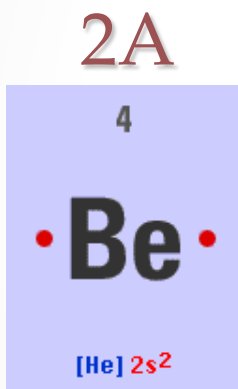
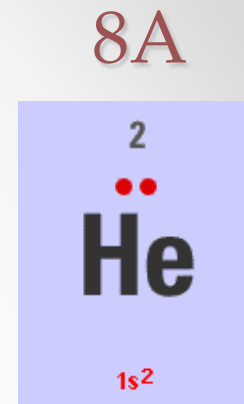
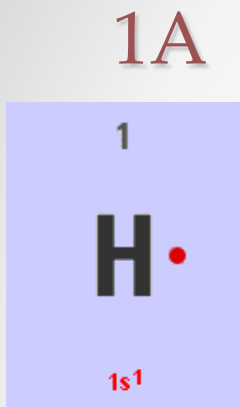
17

chlorine - 37

Alpha Decay



Valence Electrons

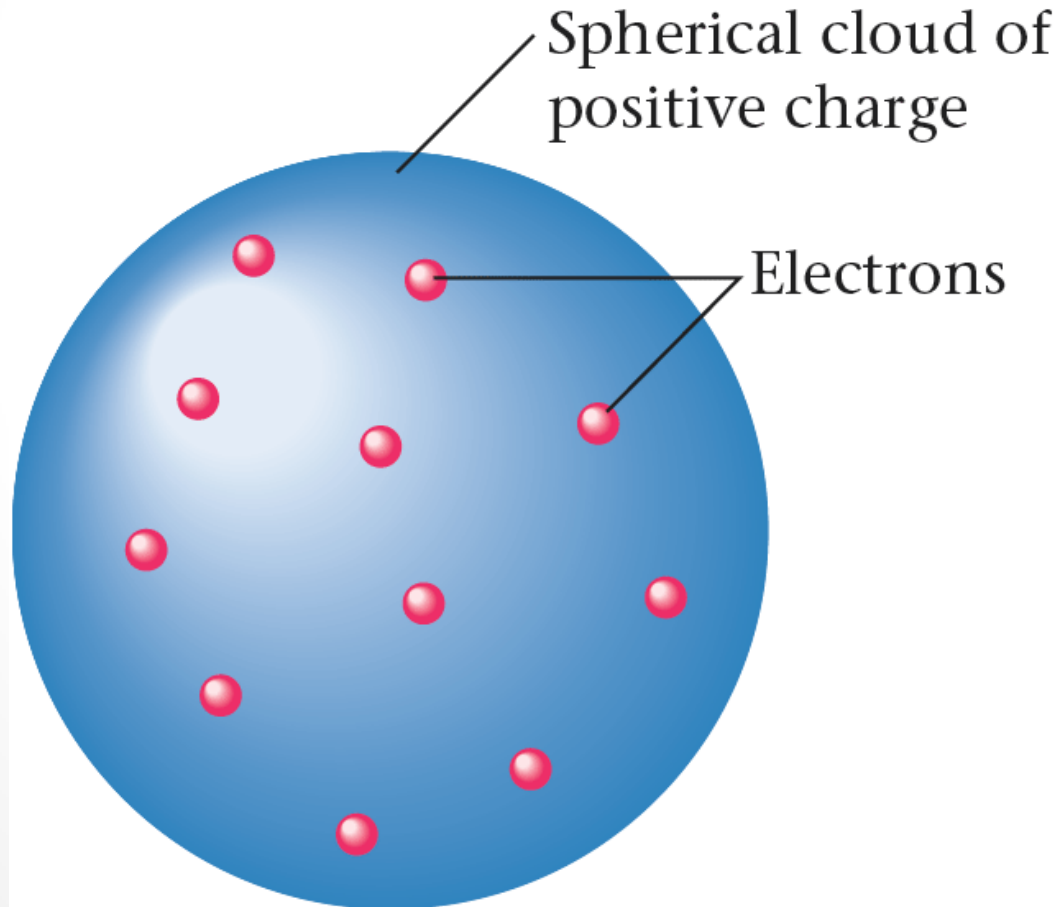


Number of valence electrons is equal to the Group number.

Plum Pudding Model

By

Thomson



Chemical Change

A change in which one or more substances are converted **into different** substances.



Physical Change

- A change that occurs that **does not** change the identity of the substance.
 - Melting ice(change in state or phase)
 - Tearing paper



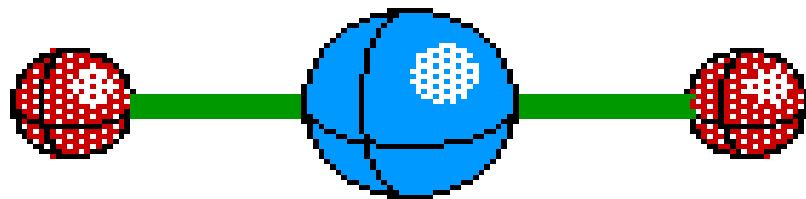
Linear

2 atoms attached to center atom

0 unshared pairs (lone pairs)

Bond angle = 180°

Ex. : BeF_2

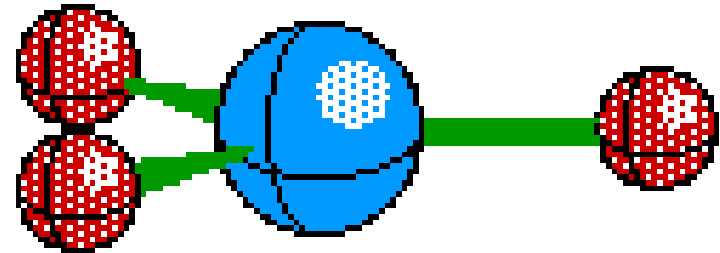


Trigonal Planar

- 3 atoms attached to center atom
- 0 lone pairs

- Bond angle = 120°

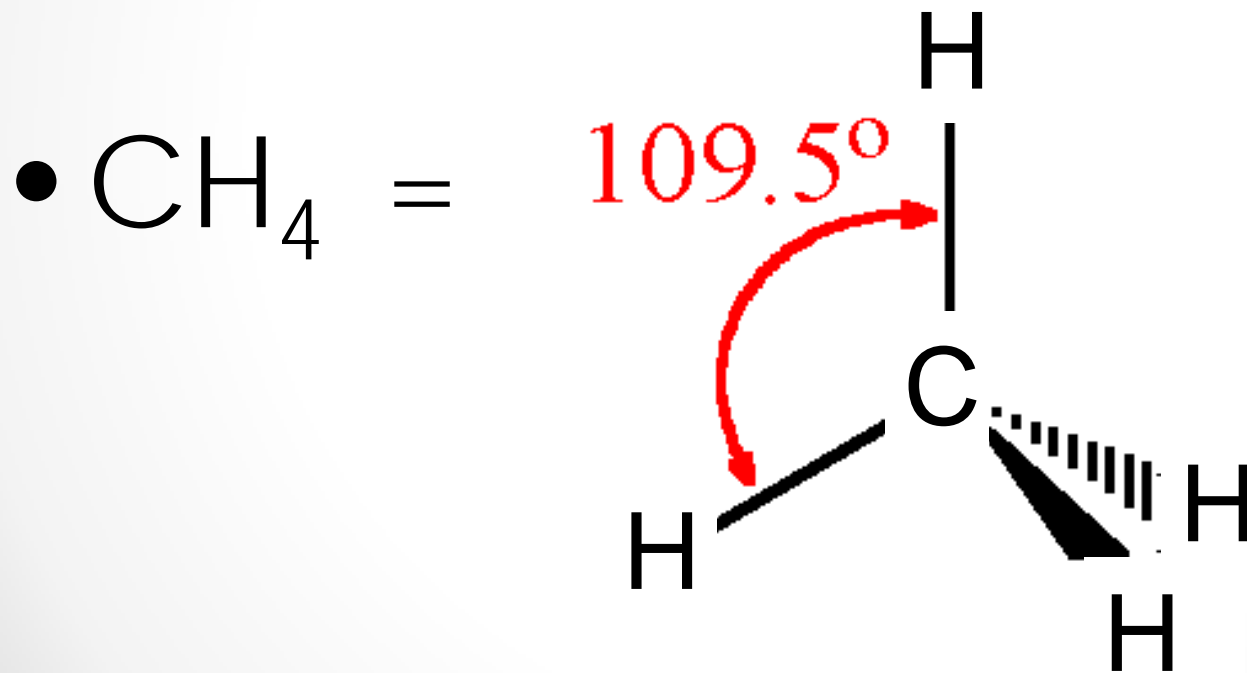
- Ex. : AlF_3



-

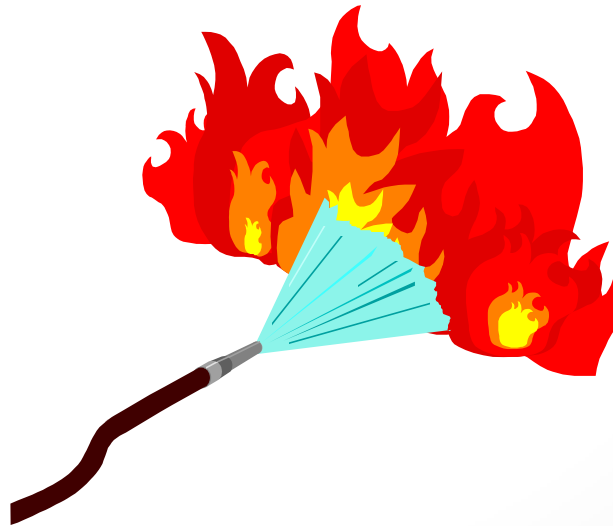
Tetrahedral

- 4 atoms bonded together.



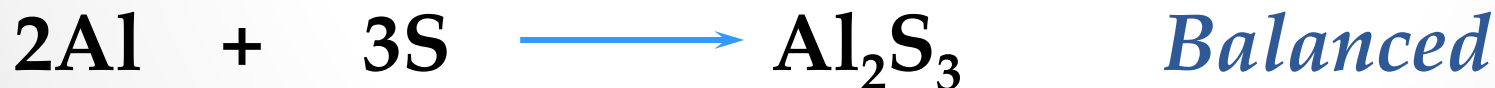
Law of Conservation of Mass

In any ordinary chemical reaction, matter is not created nor destroyed.



Balanced Chemical Equation

Same numbers of each type of atom on each side of the equation



EXOTHERMIC

A change (e.g. a chemical reaction) that releases heat.

A release of heat corresponds to a decrease in enthalpy

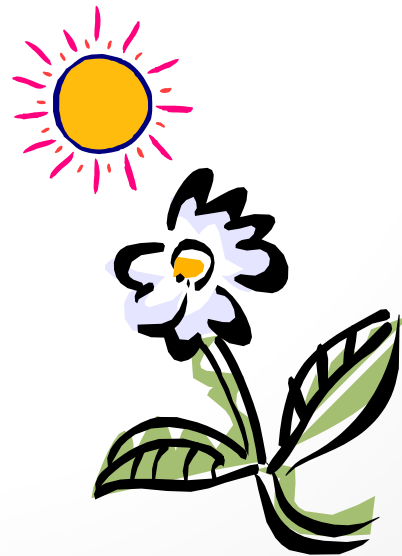
Burning fossil fuels is an exothermic reaction



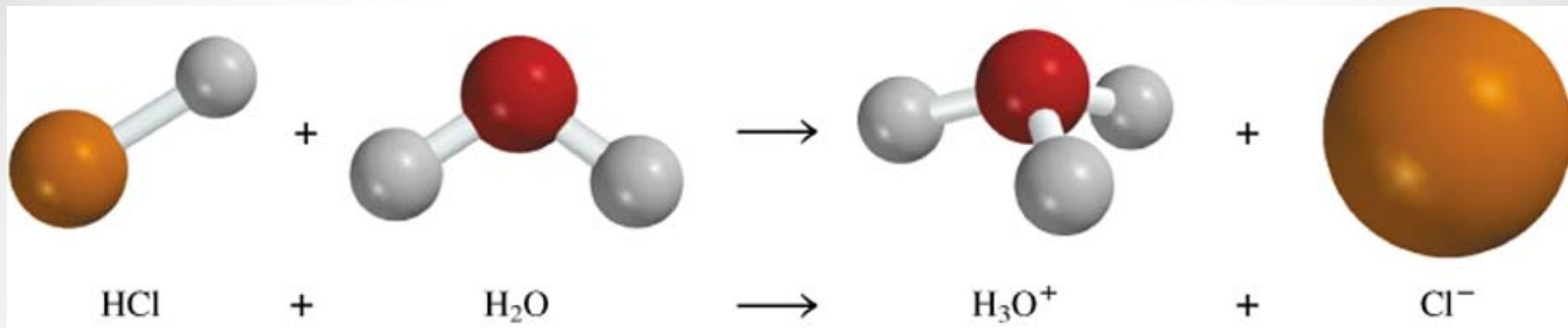
Endothermic

- A change (e.g. a chemical reaction) that requires (or absorbs) heat.
- An input of heat corresponds to an increase in enthalpy

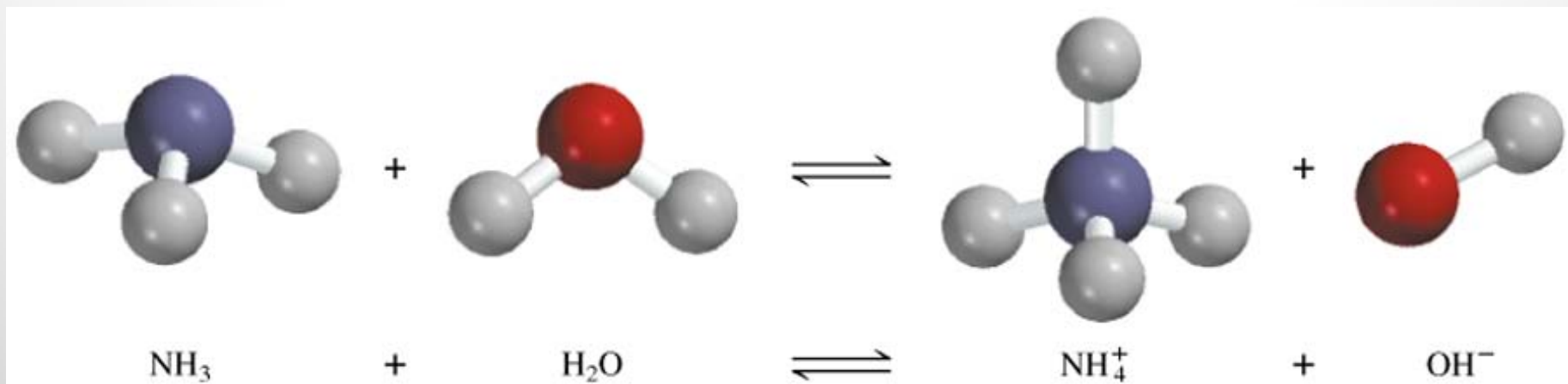
Photosynthesis is an endothermic reaction (requires energy input from sun)



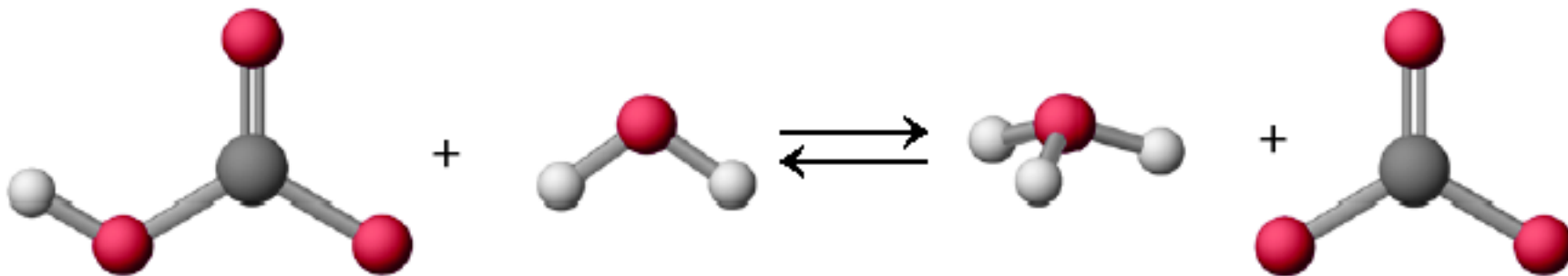
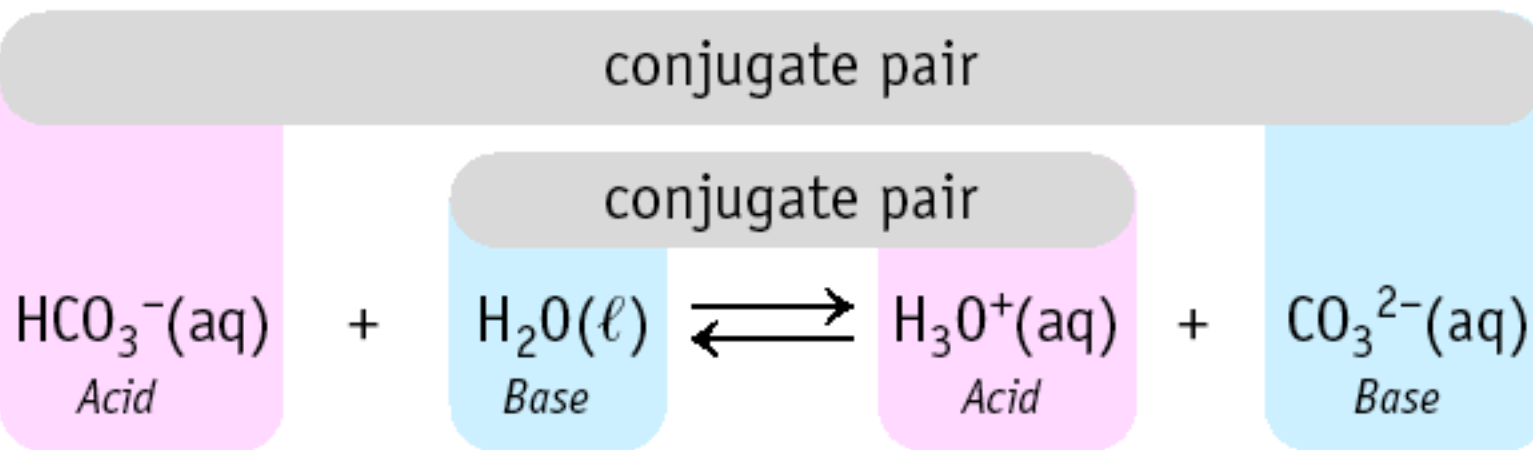
Arrhenius acid is a substance that produces H^+ (H_3O^+) in water



Arrhenius base is a substance that produces OH^- in water



Conjugate Pairs

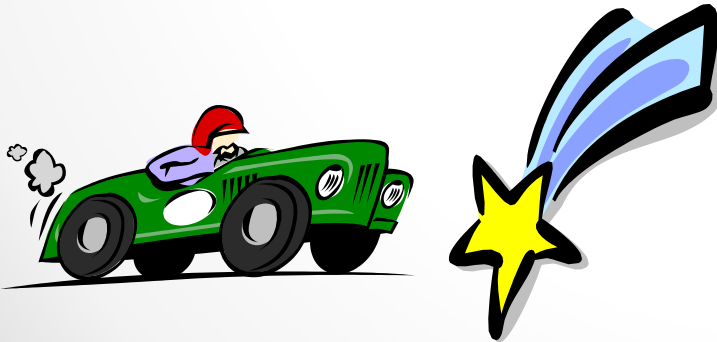
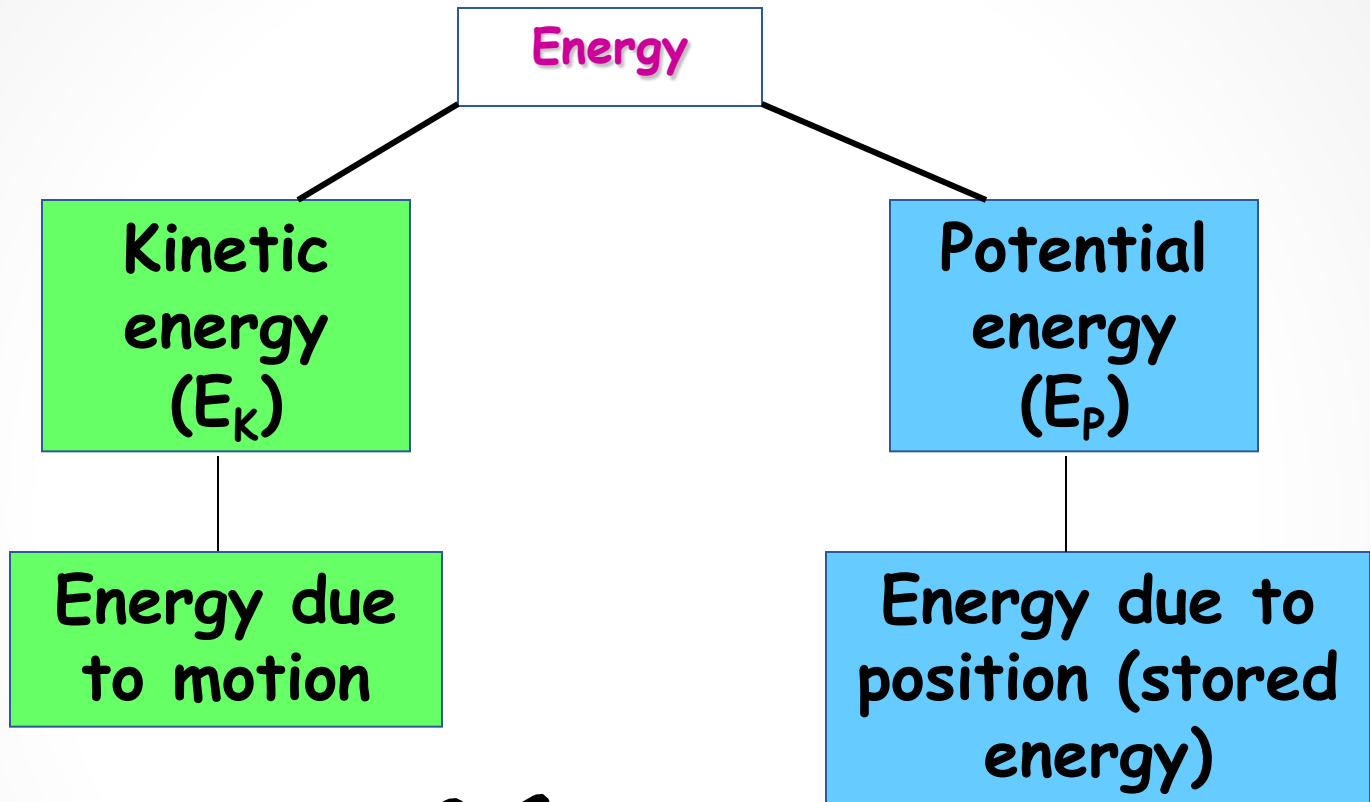


Cohesion



Helps insects walk across
water

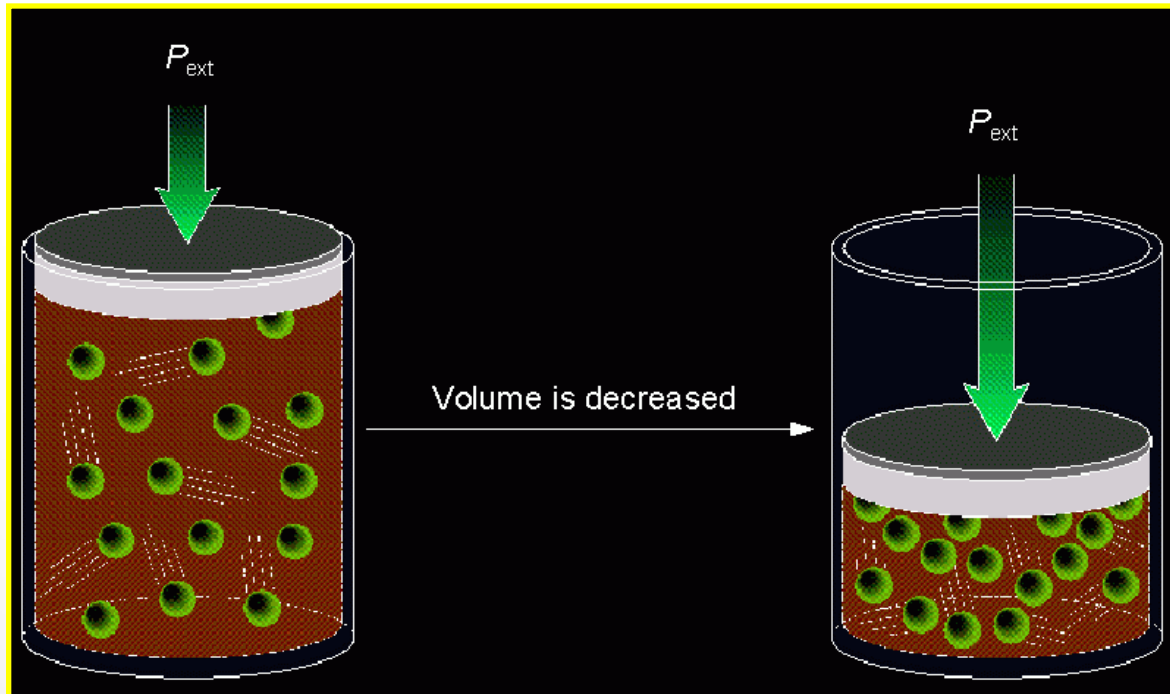
What is Energy?



Boyle's Law

Gas pressure is inversely proportional to the volume, when temperature is held constant.

● *Equation: $P_1V_1 = P_2V_2$ ($T = \text{constant}$)*



Solubility Curve

