

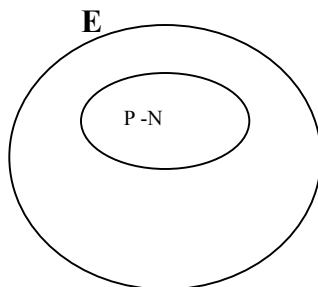
## PARTS OF AN ATOM

**CHARGE**

**P = PROTON**

**E = ELECTRON**

**N = NEUTRON**



**ELEMENT = ALL THE SAME ATOMS**

**Na = Sodium, O = Oxygen, C = Carbon, etc.**

**6O<sub>2</sub> → 6 = Total Molecules of Oxygen**  
**→ 2 = # of atoms per molecule**

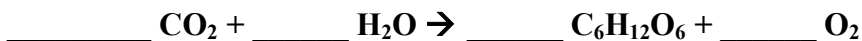
**H<sub>2</sub>O** # of Water Molecules = \_\_\_\_\_  
# of Hydrogen atoms = \_\_\_\_\_, # of Oxygen atoms = \_\_\_\_\_

**6CO<sub>2</sub>** # of Carbon Dioxide Molecules = \_\_\_\_\_  
# of Carbon atoms = \_\_\_\_\_, # of Oxygen atoms = \_\_\_\_\_

**“Atoms are not created nor are they destroyed but they may be rearranged”**

- **In a chemical equation you will have the same number of atoms on the left side of the equation as you have on the right side of the equation.**

**BALANCE THE FOLLOWING EQUATION**



**Define & Compare:**

**Atoms:**

**Elements:**

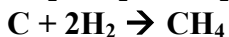
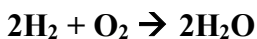
**Molecules:**

**Compounds:**

**Ionic Bonds = the atoms lose or gain electrons**

**(Many elements on the left of the periodic table combine with elements toward the right side of the periodic table by ionic bonding. – NaCl – Salt)**

**Covalent Bonds = the atoms share electrons (Oxygen & Carbon are two examples of elements that tend to form covalent type bonds)**



## NUTRIENTS OF LIFE – FOUND IN LARGE QUANTITIES IN LIVING THINGS

- **CARBOHYDRATES** = Sugars (simplest =  $C_6H_{12}O_6$ ) (Starches & Fiber)
- **FAT** = Many Carbons & Hydrogen and a few Oxygen
- **PROTEINS** = A variety of Carbon, Hydrogen, Nitrogen and Oxygen that make up amino acids.
- **NUCLEIC ACIDS** = (DNA or RNA) Sugar, Phosphate and Nitrogen Bases.
- **WATER** = NO ENERGY – essential to life as we know it. -  $H_2O$

**Photosynthesis:** The Conversion of light energy into chemical energy stored in organic compounds.



**Cell Respiration:** The process in which cells make ATP (energy) by breaking down organic compounds.



**Define & give examples of the following:**

**Acid:**

**Base:**

**Enzyme:**

**pH:**

**pH Scale:**