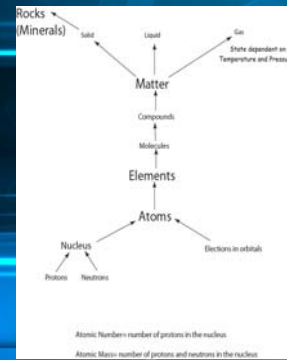


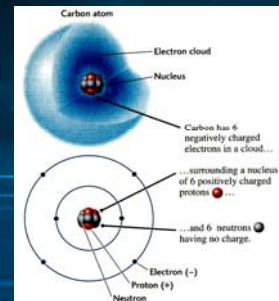
Atomic Structure and Elements

Atomic Structure of Elements



THE PERIODIC TABLE

Electron Structure of Carbon

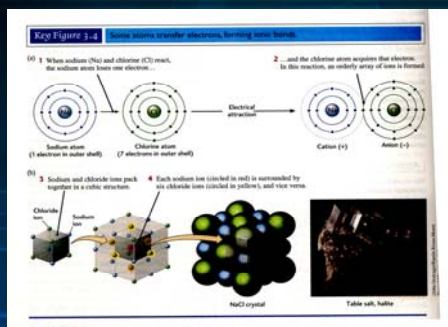


- Atomic Number= number of protons in the nucleus.
- Atomic Mass= number of protons + number neutrons in the nucleus
- Isotopes= same element with different atomic mass
- Ions= atoms carrying a charge from gaining or losing electrons

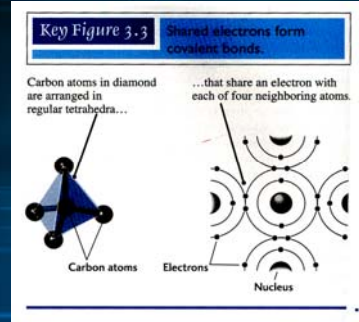
Atomic Bond Types

- 1) Ionic (electron transfer)
- 2) Covalent (shared electron)
- 3) Metallic (special type of covalent bond)
- 4) Van der Waals (transient weak attractive forces)

Ionic Bonding



Covalent Bonding



Elemental Abundances

- Whole Earth- Fe (35-40%), O (25-35%), Si (13-15%), Mg (2%)
- Average Crust- O (47%), Si (28%), Fe (5%), Mg (10%)
- Average Core- Fe (85-94%), Ni (5%), S (5%), O (5%)
- Entire Universe- 99% H and He