

Concept 4.3

Chemical bonds join atoms to one another

Ionic Bonds - occur when an atom transfers an electron to another atom.

Covalent Bonds - form when two atoms share electrons.

Number of Bonds: The number of bonds an atom can form usually equals the number of additional electrons needed to fill its highest energy level.

Molecules - Two or more atoms held together by covalent bonds.

Chemical formula - tells the number and types of atoms in a molecule.

Structural formula - indicates how atoms in a molecule are linked by bonds.

- Each line between symbols represents a single covalent bond.

Space-filling model - color coded spheres symbolize atoms in a three-dimensional model

Chemical Reactions - Changes which result in the formation of one or more substances.

Chemical equations - used to describe chemical reactions.

Reactants - starting materials

Products - ending materials