**AP CHEMISTRY CHAPTER 11 – Solids & Liquids**

**VOCABULARY (30)**

amorphous solid

capillary action

covalent-network solids

critical pressure

critical temperature

crystal lattice

crystalline solid

dipole-dipole forces

dynamic equilibrium

heat of fusion

heat of sublimation

heat of vaporization

hydrogen bonding

intermolecular forces

ion-dipole forces

ionic solids

London dispersion forces

metallic solids

molecular solids

normal boiling point

normal melting point

phase changes

phase diagram

polarizability

surface tension

triple point

unit cell

vapor pressure

viscosity

volatile

**OBJECTIVES**

1. Understand and be able to describe the intermolecular attractive interactions (ion-dipole, dipole-dipole, London dispersion, hydrogen bonding) that exist between molecules or ions, and be able to compare the relative strengths of intermolecular attractions in substances based on their molecular structure, or physical properties.
2. Understand the concept of polarizability.
3. Understand the concepts of viscosity and surface tension in liquids.
4. Know the names of the various phase changes for a pure substance.
5. Interpret heating curves and be able to calculate quantities related to temperature and enthalpies of phase changes.
6. Define critical pressure, critical temperature, vapor pressure, normal boiling point, normal melting point, critical point, and triple point.
7. Be able to interpret and sketch phase diagrams; know how water’s phase diagram differs from most other substances and why.
8. Classify solids based on their bonding/intermolecular forces and understand how difference in bonding relates to physical properties.