Unit #9 Regents Chemistry

Gases and Vapor

Text	Unit Objectives:
14.2	1. Know the relationship between pressure and volume for a gas and be able to do calculations if the temperature remains constant (Boyles Law).
14.2	2. Know the relationship between temperature and volume for a gas and be able to do calculations if the pressure remains constant (Charles Law).
14.2	3.Be able to solve problems for gases using the combined gas law.
14.3	4. Be able to solve pressure problems using Dalton's Law of partial pressures.
14.4	5. Know how the relationship between the mass of a gas molecule and the rate of diffusion for the gas (Graham's Law).
14.5	6. Know the kinetic theory of gases and how this theory for an ideal gas differs from a real gas.
10.2	7. Avogadro's Hypothesis which states that equal volume of different gases under the same conditions will have an equal number of particles.
10.3	8. Molar volume of a gas (1 mole of gas at STP occupies 22.4L of space).
10.2	9. Know the meaning of STP (standard temperature and pressure) and be able to make required changes if the conditions of pressure and/or temperature are different.
12.2	10. Learn how to do stoichiometry problems in which you are given the volume of gas of one product/reactant and asked to solve for a different product/reactant.
13.2	11. Learn the difference between vapor and a gas and how vapor pressure is related to boiling point.
13.3	12. Be able to distinguish between evaporation and boiling and the relative temperatures at which each take place.

Essential Vocabulary

Avogadro's Hypothesis, Avogadro's Number, Boyle's Law, Charles' Law, Dalton's Law, Gas, Gas Laws, Graham's Law, Ideal Gas, Kinetic Theory of Gases, Molar Volume, Pressure, STP

Announcements:

1. You need to bring your calculator every day for this unit.