

# WORLD OF CHEMISTRY

## Chapter 13

### GASES

#### Objectives:

- \* To learn about atmospheric pressure and the way barometers work
- \* To learn the various units of pressure
- \* To understand the law that relates the pressure and volume of a sample of a gas, and to do calculations involving this law
- \* To learn about absolute zero
- \* To learn about the law relating the volume and temperature of a sample of a gas, and to do calculations involving this law
- \* To learn about the law relating the pressure and temperature of a sample of a gas, and to do calculations involving this law
- \* To learn about the law relating the volume and the number of moles of a sample of a gas, and to do calculations involving this law
- \* To learn about the law relating the pressure and the number of moles of a sample of a gas, and to do calculations involving this law
- \* To understand the Ideal Gas Law and use it in calculations
- \* To understand the combined gas law and the “Weinkauff Modification” of the Ideal Gas Law
- \* To understand the relationship between the partial and total pressure of a gas mixture, and to use this relationship in calculations
- \* To understand the relationship between laws and models (theories)
- \* To understand the postulates of the kinetic molecular theory and how It explains the gas laws
- \* To understand the term *temperature*
- \* To describe the properties of real gases
- \* To understand to molar volume of an ideal gas
- \* To learn the definition of STP
- \* To use these concepts and the Ideal Gas Law