## Unit 7 Study Guide

The student will be able to:
Determine molecular mass using a periodic table.
Convert from moles to grams multiply by molecular weight.
Convert from grams to moles divide by molecular weight
Convert from moles to molecules. Multiply by $6.02 \times 10^{23}$
Convert from molecules to moles. Divide by $6.02 \times 10^{23}$
Convert from grams to molecules. divide by molecular weight, Multiply by 6.02 x $10^{23}$
Convert from molecules to grams. Divide by $6.02 \times 10^{23}$, multiply by molecular weight.
Know Avogadro's number. $6.02 \times 10^{23}$
Determine Percent composition from mass.
Determine percent composition from a formula.
Determine the total mass and divide the mass of each element by the total mass.

Determine Empirical formulas from mass and from percent composition.
Percent to mass
Mass to moles
Divide by small
Multiply until whole
Determine the molecular formula from empirical formula when given molar mass. Determine empirical mass and then divide the molar mass by the empirical mass.
Determine Empirical formula from the molecular formula.
Simplest ratio of elements.

