Chemistry Conversions

To Convert	Use	Where To Find	What it Looks Like
Moles to Moles	**Stoichiometric Coefficients**	**Balanced Chemical Equation** $2H_2 + O_2 \rightarrow 2H_2O$	$12mol\ H_2 * \frac{1mol\ O_2}{2mol\ H_2} = 6mol\ O_2$
Grams to Moles	**Molar Mass**	**Periodic Table** $H = 1.00\ g/mol$	$12gH_2 * \frac{1mol\ H_2}{2.00g\ H_2} = 6mol\ H_2$
Moles to Grams	**Molar Mass**	**Periodic Table** $H = 1.00\ g/mol$	$1molH_2 * \frac{2.00g\ H_2}{1mol\ H_2} = 2g\ H_2$
Grams to Grams	**Molar Mass and Stoichiometric Coefficients**	**Balanced Chemical Equation** $2H_2 + O_2 \rightarrow 2H_2O$ **Periodic Table** $H = 1.00\ g/mol$ $O = 16.00\ g/mol$	$12g\ H_2 * \frac{1mol\ H_2}{2.00g\ H_2} * \frac{1mol\ O_2}{2mol\ H_2} * \frac{32.0g\ O_2}{1mol\ O_2} = 96g\ O_2$
Moles to Atoms	**Avogadro's Number**	**Conversion Sheet** $1mol = 6.022 * 10^{23} atoms$	$2mol\ H_2 * \frac{2mol\ H}{1mol\ H_2} * \frac{6.022 * 10^{23} atomsH}{1molH} = 2.41 * 10^{24} atoms\ H$
Grams to Liters	**Density**	**Given** $H_2O = 1.00\ g/mL$	$20g\ H_2O * \frac{1mL\ H_2O}{1g\ H_2O} = 20mL\ H_2O$

Conversion Flow Chart