

## Ch. 4 – Chemical Quantities and Aqueous Reactions

FP- “For Practice”- found within the chapter (FMP is for more practice), **CC**- “Conceptual Connection” – found within the Chapter, **SAQ**- Self-Assessment Quiz, numbered questions (with no acronym) are exercises at the end of the chapter. **Complete all parts to each question unless otherwise specified.**

**\*\* - Means answer and explain/show work- see selected SAQ and CC questions**

Required Topics for Notes	Video Title	Video Link	Length	Problems	Pages
Stoichiometry, directions for mass to mass stoichiometry problems, limiting reactant, theoretical yield, actual yield, percent yield, excess reactant	Stoichiometry	<a href="http://www.bozemanscience.com/ap-chem-028-stoichiometry">http://www.bozemanscience.com/ap-chem-028-stoichiometry</a>  <a href="https://www.youtube.com/watch?v=FgsJ2Ztl08U">https://www.youtube.com/watch?v=FgsJ2Ztl08U</a> Watch the first 15 minutes or so (or more if you are clueless about stoichiometry)	Watch only the first 6:30	FP 4.1, FP 4.2 (notice the units are in kg, not grams), **CC 4.1, **CC 4.3 39, 139 (these diagram problems are SUPER important for AP exam)	139-150 *I will teach how to do the math for EX. 4.3 and EX. 4.4 so skim for now
Solution, solute, solvent, aqueous solution, concentrated, dilute, molarity (with formula), stock solution (with dilution formula)	Solutions and Molarity	<a href="http://www.bozemanscience.com/science-videos/2010/12/9/solutions-and-molarity.html">http://www.bozemanscience.com/science-videos/2010/12/9/solutions-and-molarity.html</a>	10:27	FP 4.5, FP 4.6 (hint: go from M to moles to grams), **CC 4.5, FP 4.7, **CC 4.6, **CC 4.7	151-157 * Don't worry about EX. 4.8 right now
Diagram or drawing showing NaCl dissolving in water, electrolytes, strong electrolytes, strong acid, weak acid, soluble, insoluble, first three lines of table 4.1, precipitation reaction, precipitate, molecular equation, complete ionic	Molecular, Ionic and Net Ionic Equations	<a href="http://www.bozemanscience.com/ap-chem-027-chemical-equations">http://www.bozemanscience.com/ap-chem-027-chemical-equations</a>	9:38	FP 4.9, Drawing of reaction on page 163 (with particles for both products and reactants), **CC 4.8, FP 4.12, **SAQ 11	158-167

equation, spectator ion					
Neutralization reaction (including pattern for reactions on p. 170), hydronium ion, titration (we are going to do one of these labs soon!), equivalence point, indicator,	Neutralization Reactions	<a href="http://www.bozemanscience.com/ap-chem-030-neutralization-reactions">http://www.bozemanscience.com/ap-chem-030-neutralization-reactions</a>	6:03	85, 87	168-172 *Don't worry about EX. 4.15 yet
Redox Reactions, oxidation, reduction, oxidation number (DO NOT define or even read about oxidizing and reducing agents on p. 179- AP took that out and it's confusing)	Redox Reactions: Crash Course Chemistry #10 -This video has some HILARIOUS jokes, so I command you to laugh and enjoy yourself ;)	<a href="https://www.youtube.com/watch?v=IQ6FBA1HM3s">https://www.youtube.com/watch?v=IQ6FBA1HM3s</a>	7:30 – watch only first 7:30	FP 4.17, FP 4.18, **SAQ Q13, 93	175-179