

Prep for Basic Chemistry  
Competency List for Fall 2011

#	Focus/Tasks	Tests (Date TBA)
1	<ul style="list-style-type: none"> <li>● Introductions</li> <li>● Syllabus/questions</li> <li>● Competency 1: Powers of Ten and Logarithms               <ul style="list-style-type: none"> <li>○ Assignments                   <ul style="list-style-type: none"> <li>▪ Text: Unit 3, pages 39-48</li> <li>▪ Evaluation Test, p. 49</li> </ul> </li> <li>○ Skills                   <ul style="list-style-type: none"> <li>▪ Powers of ten</li> <li>▪ Logarithms</li> </ul> </li> </ul> </li> </ul>	N/A
2	<ul style="list-style-type: none"> <li>● Competency 1 reviewed</li> <li>● Competency 2: Measurement concepts &amp; Dimensional analysis               <ul style="list-style-type: none"> <li>○ Assignments                   <ul style="list-style-type: none"> <li>▪ Text: Unit 4, pages 51-58</li> <li>▪ Evaluation Test, p. 59</li> </ul> </li> <li>○ Skills                   <ul style="list-style-type: none"> <li>▪ Rounding numbers</li> <li>▪ Accuracy &amp; Precision</li> <li>▪ Significant digits</li> <li>▪ Dimensional analysis</li> </ul> </li> </ul> </li> </ul>	Competency 1
3	<ul style="list-style-type: none"> <li>● Competency 2 reviewed</li> <li>● Competency 3: Metric system, Density, Specific gravity               <ul style="list-style-type: none"> <li>○ Assignments                   <ul style="list-style-type: none"> <li>▪ Text: Unit 5, pages 61-80</li> <li>▪ Evaluation tests, pp. 81-87</li> </ul> </li> <li>○ Skills                   <ul style="list-style-type: none"> <li>▪ The metric system                       <ul style="list-style-type: none"> <li>● Length</li> <li>● Volume</li> <li>● Mass</li> <li>● Volume &amp; mass of water</li> </ul> </li> <li>▪ Converting                       <ul style="list-style-type: none"> <li>● Within the metric system</li> <li>● Between metric &amp; English systems</li> </ul> </li> <li>▪ Temperature scales                       <ul style="list-style-type: none"> <li>● Celsius</li> <li>● Fahrenheit</li> <li>● Converting</li> </ul> </li> <li>▪ Density &amp; Specific gravity</li> </ul> </li> </ul> </li> </ul>	Competency 2

4	<ul style="list-style-type: none"> <li>• Competency 3 reviewed</li> <li>• Competency 4: Division and Properties of Matter <ul style="list-style-type: none"> <li>○ Assignments <ul style="list-style-type: none"> <li>▪ Text: Unit 6, pages 89-95</li> <li>▪ Evaluation Test, p. 97</li> </ul> </li> <li>○ Skills <ul style="list-style-type: none"> <li>▪ Matter <ul style="list-style-type: none"> <li>• Elements &amp; atoms</li> <li>• Compounds &amp; molecules</li> </ul> </li> <li>▪ States of matter</li> <li>▪ Chemical &amp; physical changes</li> </ul> </li> </ul> </li> </ul>	Competency 3
5	<ul style="list-style-type: none"> <li>• Competency 4 reviewed</li> <li>• Competency 5: Atomic structure <ul style="list-style-type: none"> <li>○ Assignments <ul style="list-style-type: none"> <li>▪ Text: Unit 7, pages 99-115</li> <li>▪ Evaluation tests, pp. 117-121</li> </ul> </li> <li>○ Skills <ul style="list-style-type: none"> <li>▪ Subatomic particles</li> <li>▪ Electron structure &amp; dot symbols</li> <li>▪ Ions</li> <li>▪ Periodic Table</li> <li>▪ Energy sublevels</li> </ul> </li> </ul> </li> </ul>	Competency 4
6	<ul style="list-style-type: none"> <li>• Competency 5 reviewed</li> <li>• Competency 6: Chemical bonding &amp; Formula writing <ul style="list-style-type: none"> <li>○ Assignments <ul style="list-style-type: none"> <li>▪ Text: Unit 8, pages 123-136</li> <li>▪ Evaluation tests, pp. 137 &amp; 139</li> </ul> </li> <li>○ Skills <ul style="list-style-type: none"> <li>▪ Ionic &amp; Covalent bonding</li> <li>▪ Ions &amp; Oxidation numbers</li> <li>▪ Formulas of compounds</li> <li>▪ Lewis formulas</li> </ul> </li> </ul> </li> </ul>	Competency 5
7	<ul style="list-style-type: none"> <li>• Competency 6 reviewed</li> <li>• Competency 7: Naming compounds <ul style="list-style-type: none"> <li>○ Assignments <ul style="list-style-type: none"> <li>▪ Text: Unit 9, pages 141-155</li> <li>▪ Evaluation tests, pp. 157-161</li> </ul> </li> <li>○ Skills <ul style="list-style-type: none"> <li>▪ Major classes of compounds</li> <li>▪ Naming binary compounds</li> <li>▪ Naming ternary compounds</li> <li>▪ Naming compounds of polyatomic ions</li> <li>▪ Naming ternary oxy-acids &amp; their salts</li> <li>▪ Naming salts with more than one positive ion</li> </ul> </li> </ul> </li> </ul>	Competency 6

8	<ul style="list-style-type: none"> <li>• Competency 7 reviewed</li> <li>• Competency 8: Classifying and balancing chemical equations <ul style="list-style-type: none"> <li>○ Assignments <ul style="list-style-type: none"> <li>▪ Text: Unit 10, pages 163-167 <i>only</i> <ul style="list-style-type: none"> <li>• STOP at <b>Part 3. Redox</b> (Skip the rest)</li> </ul> </li> <li>▪ Evaluation Test 1, p. 185 <i>only</i></li> <li>▪ Classifying chemical reactions worksheet</li> </ul> </li> <li>○ Skills <ul style="list-style-type: none"> <li>▪ Classify chemical equations</li> <li>▪ Parts of a chemical equation</li> <li>▪ Balance equations by inspection</li> </ul> </li> </ul> </li> </ul>	Competency 7
9	<ul style="list-style-type: none"> <li>• Competency 8 reviewed</li> <li>• Competency 9: Weight relations in chemistry <ul style="list-style-type: none"> <li>○ Assignments <ul style="list-style-type: none"> <li>▪ Text: Unit 11, pages 193-213</li> <li>▪ Evaluation tests 1 &amp; 2, pp. 215 &amp; 217</li> </ul> </li> <li>○ Skills <ul style="list-style-type: none"> <li>▪ Atomic mass &amp; Atomic weight</li> <li>▪ Isotopes</li> <li>▪ Atomic mass &amp; the Mole</li> <li>▪ Molar mass of a compound</li> <li>▪ Molecular mass &amp; the Mole</li> <li>▪ General Mole concept</li> <li>▪ Percentage composition</li> <li>▪ Empirical &amp; Molecular formulas</li> <li>▪ Hydrated compounds</li> </ul> </li> </ul> </li> </ul>	Competency 8
10	<ul style="list-style-type: none"> <li>• Competency 9 reviewed</li> <li>• Competency 10: The concentration of solutions <ul style="list-style-type: none"> <li>○ Assignments <ul style="list-style-type: none"> <li>▪ Text: Unit 13, pages 239-270</li> <li>▪ Evaluation tests 1-5, pp. 271-279</li> </ul> </li> <li>○ Skills <ul style="list-style-type: none"> <li>▪ Definition &amp; components of a solution</li> <li>▪ Methods of expressing concentration</li> <li>▪ Dilutions</li> <li>▪ Titration</li> <li>▪ pH</li> </ul> </li> </ul> </li> </ul>	Competency 9
N/A	Competency 10 test	Competency 10

NOTE: **No class November 25** (Thanksgiving break)

**Last class date is December 16\***

\*December 16 is also the last date to do any missed tests and/or retakes.