Appendix B: Daily Assignments

If your school year consists of 180 days, you can use this list of daily assignments to complete the course in one school year.

Week 1:

- ❑ Read the introduction and check out the course website
- ❑ Read pages 1-5, solving "Comprehension Check" problems 1&2.
- ❑ Read from page 6 to "Converting Between Units" on page 9, completing "Comprehension Check" problems 3&4 and completing Experiment 1.1.
- ❑ Read from "Converting Between Units" on page 9 to "Scientific Notation" on page 13, completing "Comprehension Check" problems 5&6.
- ❑ Read from "Scientific Notation" on page 13 to Experiment 1.2 on page 17, completing "Comprehension Check" problems 7&8.

Week 2:

- ❑ Complete Experiment 1.2 and read to "Measuring Mass" on page 19, completing "Comprehension Check" problems 9&10.
- ❑ Read from "Measuring Mass" on page 19 to "More on Density" on page 25, completing "Comprehension Check" problems 11-14.
- ❑ Read from "More on Density" on page 25 to the end of page 26, completing Experiment 1.3 and "Comprehension Check" problem 15
- ❑ Do problems 1-13 in the review.
- ❑ Do problems 14-22 in the review.

Week 3:

- ❑ Correct any of your errors in the review and study for the test.
- ❑ Take the test for Chapter 1.
- ❑ Read from page 37 to the end of Experiment 2.1 on page 39, completing Experiment 2.1.
- ❑ Read from the end of Experiment 2.1 on page 39 to "Mass Conservation: It's Not Just a Good Idea, It's the Law!" on page 42, completing "Comprehension Check" problems 1&2.
- ❑ Read from "Mass Conservation: It's Not Just a Good Idea, It's the Law!" on page 42 to "Elements and Compounds" on page 44, completing Experiment 2.2 and "Comprehension Check" problem 3.

Week 4:

- ❑ Read from "Elements and Compounds" on page 44 to the end of Experiment 2.3 on page 47, completing Experiment 2.3 and "Comprehension Check" problems 4&5.
- ❑ Read from the top of page 48 to the end of page 50, completing "Comprehension Check" problems 6&7.
- ❑ Read from the beginning of page 51 to "What's Wrong with Dalton's Theory: Part One" on page 54, completing "Comprehension Check" problems 8&9.
- ❑ Read from "What's Wrong with Dalton's Theory: Part One" on page 54 to the end of page 60, completing "Comprehension Check" problems 10&11.
- ❑ Do all problems in the review.

Week 5:

- ❑ Correct any of your errors in the review and study for the test.
- ❑ Take the test for Chapter 2.
- ❑ Read from the top of page 67 to "Defining the Atoms that Make Up an Element" on page 70, completing "Comprehension Check" problems 1&2.
- ❑ Read from "Defining the Atoms that Make Up an Element" on page 70 to the end of page 74, completing "Comprehension Check" problems 3&4.
- ❑ Read from the top of page 75 to the "The Electromagnetic Spectrum" on page 78, completing "Comprehension Check" problems 5&6.

Week 6:

- ❑ Read from the "The Electromagnetic Spectrum" on page 78 to the end of page 80, completing Experiment 3.1 and "Comprehension Check" problem 7.
- ❑ Read from the top of page 81 to the end of Experiment 3.2 on page 84, completing Experiment 3.2 and "Comprehension Check" problem 8.
- ❑ Read from the end of Experiment 3.2 on page 84 to "More on The Bohr Model" on page 87, completing "Comprehension Check" problems 9&10.
- ❑ Read from "More on The Bohr Model" on page 87 to the end of page 90, completing "Comprehension Check" problem 11.
- ❑ Do problems 1-12 in the review.

Week 7:

- ❑ Do problems 13-23 in the review.
- ❑ Correct any of your errors in the review and study for the test.
- ❑ Take the test for Chapter 3.
- ❑ Read from the top of page 97 to "Out with Orbits, In with Orbitals" on page 100, completing Experiment 4.1 and "Comprehension Check" problem 1.
- ❑ Read from "Out with Orbits, In with Orbitals" on page 100 to the end of page 104, completing "Comprehension Check" problems 2&3.

Week 8:

- ❑ Read from the beginning of page 105 to the end of page 109, completing "Comprehension Check" problems 4-6.
- ❑ Read from the beginning of page 110 to "Metals, Nonmetals, and the In-Betweens" on page 112, completing "Comprehension Check" problems 7&8.
- ❑ Read from "Metals, Nonmetals, and the In-Betweens" on page 112 to "Ionic Compounds" on page 114, completing Experiment 4.2 and "Comprehension Check" problem 9.
- ❑ Read from "Ionic Compounds" on page 114 to "An Important Characteristic of Ionic Compounds" on page 118, completing "Comprehension Check" problems 10-13.
- ❑ Read from "An Important Characteristic of Ionic Compounds" on page 118 to the end of page 120, completing Experiment 4.3.

Week 9:

- ❑ Do all problems in the review.
- ❑ Correct any of your errors in the review and study for the test.
- ❑ Take the test for Chapter 4.

- ❑ Read from the top of page 127 to "More Complicated Lewis Structures" on page 131, completing "Comprehension Check" problems 1&2.
- ❑ Read from "More Complicated Lewis Structures" on page 131 to "Naming Covalent Compounds" on page 134, completing "Comprehension Check" problem 3.

Week 10:

- ❑ Read from "Naming Covalent Compounds" on page 134 to "A Consequence of Polar Covalent Bonds" on page 139, completing "Comprehension Check" problems 4-7.
- ❑ Read from "A Consequence of Polar Covalent Bonds" on page 139 to the definition of a polar covalent molecule on page 141, completing Experiment 5.1.
- ❑ Read from the definition of a polar covalent molecule on page 141 to Example 5.4 on page 146, completing "Comprehension Check" problems 8&9.
- ❑ Read from Example 5.4 on page 146 to the end of page 147, completing "Comprehension Check" problems 10-12.
- ❑ Read from the beginning of page 148 to "Why is Polarity Important?" on page 151, completing "Comprehension Check" problems 13-14.

Week 11:

- ❑ Read from "Why is Polarity Important?" on page 151 to the end of page 153, completing Experiment 5.2 and "Comprehension Check" problem 15.
- ❑ Do problems 1-6 in the review.
- ❑ Do all problems 7-14 in the review.
- ❑ Correct any of your errors in the review and study for the test.
- ❑ Take the test for Chapter 5.

Week 12:

- ❑ Read from page 161 to Experiment 6.1 on page 165, completing "Comprehension Check" problems 1&2.
- ❑ Read from Experiment 6.1 on page 165 to "The Kinetic Theory of Matter" on page 167, completing Experiment 6.1 and "Comprehension Check" problem 3.
- ❑ Read from "The Kinetic Theory of Matter" on page 167 to the definition of the Kinetic Theory of Matter on page 169, completing Experiment 6.2.
- ❑ Read from the definition of the Kinetic Theory of Matter on page 169 to "Chemical Reactions" on page 172, completing "Comprehension Check" problems 4&5.
- ❑ Read from "Chemical Reactions" on page 172 to "Balancing Chemical Equations" on page 176, completing "Comprehension Check" problem 6.

Week 13:

- ❑ Read from "Balancing Chemical Equations" on page 176 to "The Mathematical Nature of Chemical Equations" on page 180, completing "Comprehension Check" problems 7-9.
- ❑ Read from "The Mathematical Nature of Chemical Equations" on page 180 to "Single and Double Displacement Reactions" on page 183, completing "Comprehension Check" problems 10-12.
- ❑ Read from "Single and Double Displacement Reactions" on page 183 to "Combustion Reactions" on page 185, completing Experiment 6.3 and "Comprehension Check" problem 13.
- ❑ Read from "Combustion Reactions" on page 185 to the end of page 188, completing Experiment 6.4 and "Comprehension Check" problem 14.
- ❑ Do problems 1-13 in the review.

Week 14:

- ❑ Do problems 14-16 in the review.
- ❑ Correct any of your errors in the review and study for the test.
- ❑ Take the test for Chapter 6.
- ❑ Read from page 197 to the end of Example 7.1 on page 200, completing "Comprehension Check" problems 1&2.
- ❑ Read from the end of Example 7.1 on page 200 to Experiment 7.1 on page 202, completing "Comprehension Check" problems 3&4.

Week 15:

- ❑ Read from Experiment 7.1 on page 202 to the end of Experiment 7.1 on page 203, completing Experiment 7.1.
- ❑ Read from the end of Experiment 7.1 on page 203 to "There is a Limit!" on page 206, completing "Comprehension Check" problems 5&6.
- ❑ Read from "There is a Limit!" on page 206 to the definition of limiting reactant on page 208, completing Experiment 7.2.
- ❑ Read from the definition of limiting reactant on page 208 to "Stoichiometry Gets Massive" on page 212, completing "Comprehension Check" problems 7-9.
- ❑ Read from "Stoichiometry Gets Massive" on page 212 to "A Practical Application of Stoichiometry" on page 216, completing "Comprehension Check" problems 10-12.

Week 16:

- ❑ Read from "A Practical Application of Stoichiometry" on page 216 to the end of page 217, completing Experiment 7.3.
- ❑ Do problems 1-13 in the review.
- ❑ Do problems 14-20 in the review.
- ❑ Correct any of your errors in the review and study for the test.
- ❑ Take the test for Chapter 7.

Week 17:

- ❑ Read from page 227 to the end of Experiment 8.1 on page 228, completing Experiment 8.1.
- ❑ Read from the top of page 229 to "Empirical and Molecular Formulas" on page 232, completing "Comprehension Check" problems 1-3.
- ❑ Read from "Empirical and Molecular Formulas" on page 232 to "Determining Empirical Formulas of Metal Oxides" on page 235, completing "Comprehension Check" problems 4-6.
- ❑ Read from "Determining Empirical Formulas of Metal Oxides" on page 235 to "More complicated Combustion Analysis" on page 239, completing "Comprehension Check" problems 7&8.
- ❑ Read from "More complicated Combustion Analysis" on page 239 to "Polyatomic Ions" on page 243, completing "Comprehension Check" problems 9-11.

Week 18:

- ❑ Read from "Polyatomic Ions" on page 243 to the end of page 247, completing "Comprehension Check" problems 12-14.
- ❑ Do problems 1-12 in the review.
- ❑ Do problems 13-20 in the review.

- ❑ Correct any of your errors in the review and study for the test.
- ❑ Take the test for Chapter 8.

Week 19:

- ❑ Read from page 257 to Experiment 9.1 on page 260, completing "Comprehension Check" problem 1.
- ❑ Read from Experiment 9.1 on page 260 to the paragraph that starts "As a side note" on page 262, completing Experiment 9.1.
- ❑ Read from the paragraph that starts "As a side note" on page 262 to the end of page 264, completing "Comprehension Check" problems 2&3 and Experiment 9.2.
- ❑ Read from page 265 to the end of Experiment 9.3 on page 267, completing "Comprehension Check" problem 4 and Experiment 9.3.
- ❑ Read from the end of Experiment 9.3 on page 267 to "Using Molarity in Stoichiometry" on page 270, completing "Comprehension Check" problems 5&6.

Week 20:

- ❑ Read from "Using Molarity in Stoichiometry" on page 270 to "This is Depressing!" on page 274, completing "Comprehension Check" problems 7-10.
- ❑ Read from "This is Depressing!" on page 274 to Example 9.7 on page 276, completing Experiment 9.4.
- ❑ Read from Example 9.7 on page 276 to the end of page 279, completing "Comprehension Check" problems 11-13.
- ❑ Do problems 1-13 in the review.
- ❑ Do problems 14-23 in the review.

Week 21:

- ❑ Correct any of your errors in the review and study for the test.
- ❑ Take the test for Chapter 9.
- ❑ Read from page 289 to the end of page 291, completing "Comprehension Check" problem 1.
- ❑ Read from page 292 to "Charles's Law" on page 294, completing Experiment 10.1.
- ❑ Read from "Charles's Law" on page 294 to Example 10.1 on page 296, completing Experiment 10.2.

Week 22:

- ❑ Read from Example 10.1 on page 296 to "This Law is Ideal!" on page 301, completing "Comprehension Check" problems 2-5.
- ❑ Read from "This Law is Ideal!" on page 301 to "Dalton's Law of Partial Pressures" on page 306, completing "Comprehension Check" problems 6-9.
- ❑ Read from "Dalton's Law of Partial Pressures" on page 306 to Experiment 10.3 on page 312, completing "Comprehension Check" problem 10.
- ❑ Read from Experiment 10.3 on page 312 to Experiment 10.4 on page 314, completing "Comprehension Check" problem 11 and Experiment 10.3.
- ❑ Read from Experiment 10.4 on page 314 to the end of page 316, completing Experiment 10.4. Also, do problems 1-9 in the review.

Week 23:

- ❑ Do problems 10-23 in the review.
- ❑ Correct any of your errors in the review and study for the test.

- ❑ Take the test for Chapter 10.
- ❑ Read from page 325 to Experiment 11.1 on page 327.
- ❑ Read from Experiment 11.1 on page 327 to "The Chemical Definition of Acids and Bases" on page 329, completing Experiment 11.1 and "Comprehension Check" problems 1&2.

Week 24:

- ❑ Read from "The Chemical Definition of Acids and Bases" on page 329 to the end of page 334, completing "Comprehension Check" problems 3-5.
- ❑ Read from page 335 to Experiment 11.2 on page 339, completing "Comprehension Check" problems 6&7.
- ❑ Read from Experiment 11.2 on page 339 to "Acid/Base Neutralization" on page 341, completing Experiment 11.2 and "Comprehension Check" problem 8.
- ❑ Read from "Acid/Base Neutralization" on page 341 to Experiment 11.3 on page 345, completing "Comprehension Check" problems 9&10.
- ❑ Read from Experiment 11.3 on page 345 to "Diluting Acid and Bases" on page 347, completing Experiment 11.3

Week 25:

- ❑ Read from "Diluting Acid and Bases" on page 347 to the end of page 348, completing "Comprehension Check" problem 11. Also, do problems 1-10 in the review.
- ❑ Do problems 11-21 in the review.
- ❑ Correct any of your errors in the review and study for the test.
- ❑ Take the test for Chapter 11.
- ❑ Read from page 357 to Example 12.2 on page 361, completing "Comprehension Check" problem 1.

Week 26:

- ❑ Read from Example 12.2 on page 361 to Experiment 12.1 on page 366, completing "Comprehension Check" problems 2&3.
- ❑ Read from Experiment 12.1 on page 366 to the end of page 367, completing Experiment 12.1.
- ❑ Read from page 368 to the end of Experiment 12.2 on page 369, completing Experiment 12.2.
- ❑ Read from the end of Experiment 12.2 on page 369 to "Counting Electrons and Balancing Simple Redox Equations" on page 374, completing "Comprehension Check" problems 4-6.
- ❑ Read from "Counting Electrons and Balancing Simple Redox Equations" on page 374 to "Electroplating" on page 378, completing "Comprehension Check" problems 7-9.

Week 27:

- ❑ Read from "Electroplating" on page 378 to the end of page 380, completing Experiment 12.3 and "Comprehension Check" problem 10.
- ❑ Do all problems in the review.
- ❑ Correct any of your errors in the review and study for the test.
- ❑ Take the test for Chapter 12.
- ❑ Read from page 387 to "Specific Heat Capacity" on page 391, completing "Comprehension Check" problems 1-3.

Week 28:

- ❑ Read from "Specific Heat Capacity" on page 391 to "Measuring Heat" on page 393, completing Experiment 13.1 and "Comprehension Check" problem 4.
- ❑ Read from "Measuring Heat" on page 393 to Experiment 13.2 on page 397, completing "Comprehension Check" problems 5&6.
- ❑ Read from Experiment 13.2 on page 397 to the end of the experiment on page 399, completing Experiment 13.2.
- ❑ Read from the end of Experiment 13.2 on page 399 to Experiment 13.3 on page 403, completing "Comprehension Check" problems 7-9.
- ❑ Read from Experiment 13.3 on page 403 to "The Heat Associated with Chemical Reactions" on page 406, completing Experiment 13.3 and "Comprehension Check" problem 10.

Week 29:

- ❑ Read from "The Heat Associated with Chemical Reactions" on page 406 to the end of page 408, completing Experiment 13.4 and "Comprehension Check" problem 11.
- ❑ Do problems 1-13 in the review.
- ❑ Do problems 14-23 in the review.
- ❑ Correct any of your errors in the review and study for the test.
- ❑ Take the test for Chapter 13.

Week 30:

- ❑ Read from page 417 to the end of Experiment 14.1 on page 419, completing Experiment 14.1.
- ❑ Read from the end of Experiment 14.1 on page 419 to "Enthalpy Change and Hess's Law" on page 422, completing "Comprehension Check" problems 1&2.
- ❑ Read from "Enthalpy Change and Hess's Law" on page 422 to "Activation Energy" on page 427, completing "Comprehension Check" problems 3-5.
- ❑ Read from "Activation Energy" on page 427 to "Thermodynamics" on page 430, completing "Comprehension Check" problem 6.
- ❑ Read from "Thermodynamics" on page 430 to "Changes in Entropy" on page 434, completing "Comprehension Check" problems 7&8.

Week 31:

- ❑ Read from "Changes in Entropy" on page 434 to "The Gibbs Free Energy" on page 439, completing "Comprehension Check" problems 9-11.
- ❑ Read from "The Gibbs Free Energy" on page 439 through "Comprehension Check" problem 12 on page 442, completing "Comprehension Check" problem 12.
- ❑ Read from the end of "Comprehension Check" problem 12 in page 442 to the end of page 445, completing Experiment 14.2 and "Comprehension Check" problem 13.
- ❑ Do problems 1-10 in the review.
- ❑ Do problems 11-20 in the review.

Week 32:

- ❑ Correct any of your errors in the review and study for the test.
- ❑ Take the test for Chapter 14.
- ❑ Read from page 453 to "What Things Affect the Rate of a Chemical Reaction?" on page 455, completing "Comprehension Check" problem 1.

- ❑ Read from "What Things Affect the Rate of a Chemical Reaction?" on page 455 to "Collision Theory" on page 457, completing Experiment 15.1 and "Comprehension Check" problem 2.
- ❑ Read from "Collision Theory" on page 457 to "Determining Reaction Orders" on page 462, completing "Comprehension Check" problem 3.

Week 33:

- ❑ Read from "Determining Reaction Orders" on page 462 to "Activation Energy, Temperature, and the Rate Constant" on page 467, completing "Comprehension Check" problems 4&5.
- ❑ Read from "Activation Energy, Temperature, and the Rate Constant" on page 467 to step 12 of Experiment 15.2 on page 470, completing "Comprehension Check" problems 6&7.
- ❑ Read from step 12 of Experiment 15.2 on page 470 to "How Catalysts Work" on page 471, completing Experiment 15.2 and "Comprehension Check" problem 8.
- ❑ Read "How Catalysts Work" on page 471 to the end of page 475, completing "Comprehension Check" problems 9-11.
- ❑ Do problems 1-13 in the review.

Week 34:

- ❑ Do problems 14-22 in the review.
- ❑ Correct any of your errors in the review and study for the test.
- ❑ Take the test for Chapter 15.
- ❑ Read from page 483 to "The Equilibrium Constant" on page 486, completing Experiment 16.1 and "Comprehension Check" problem 1.
- ❑ Read from "The Equilibrium Constant" on page 486 to "Ignoring Things" on page 490, completing "Comprehension Check" problems 2&3.

Week 35:

- ❑ Read from "Ignoring Things" on page 490 to "Why Salt Melts Ice" on page 494, completing "Comprehension Check" problems 4-6.
- ❑ Read from "Why Salt Melts Ice" on page 494 to "More on Le Chatelier's Principle" in page 497, completing "Comprehension Check" problem 7.
- ❑ Read from "More on Le Chatelier's Principle" in page 497 to "Le Chatelier's Principle and Temperature" on page 500, completing Experiment 16.2 and "Comprehension Check" problem 8.
- ❑ Read from "Le Chatelier's Principle and Temperature" on page 500 to "Le Chatelier's Principle and Pressure" on page 503, completing Experiment 16.3 and "Comprehension Check" problem 9.
- ❑ Read from "Le Chatelier's Principle and Pressure" on page 503 to the end of page 507, completing "Comprehension Check" problems 10&11.

Week 36:

- ❑ Do problems 1-8 in the review.
- ❑ Do problems 9-18 in the review.
- ❑ Correct any of your errors in the review and study for the test.
- ❑ Take the test for Chapter 16.
- ❑ Celebrate the fact that you are done with chemistry!