PCC Chemistry Assignments 2017-2018

PCC Week	Date	Textbook chapter	Chemistry Homework
0	Summer	Intro & ch 1	☐ Read textbook intro pp iii-x & check out the course websites: wachtler.org & http://www.bereanbuilders.com/olc/ddchem/ ☐ Print a set of the worksheets from the publisher: https://www.bereanbuilders.com/mkt/res/nb/9780996278461w.pdf ☐ Read pp 1-5, do "Comprehension Check" (CC) problems 1-2. ☐ Fill in Periodic Table worksheet with abbreviations, atomic numbers, & color code elements by type. ☐ Memorize periodic table elements #1-20: names, abbreviations, and atomic numbers.
1	11-Sep	Ch 1 Measuring	☐ Read from p 6-middle of p 9, do CC problems 3-4. ☐ Lab: Complete Experiment 1.1 Determining the Relationship Between in and cm, p 8 ☐ Read from p 9 "Converting Between Units" to middle of p 13, do CC problems 5-6. ☐ Read from p 13 "Scientific Notation" to p 17, do CC problems 7-8. ☐ Lab: Complete Experiment 1.2 Determining the Relationship Between cm^3 and mL, p 17 ☐ Read from p 18-19, do CC problems 9-10.
2	18-Sep	Ch 1 Measuring	☐ Read from p 19 "Measuring Mass" to top of p 25, do CC problems 11-14. ☐ Lab: Complete Experiment 1.3 Density, pp 25-26 ☐ Read p 25-end of chapter, do CC problem 15 ☐ Do all problems in the review. ☐ Correct any of your errors in the review and study for the test. ☐ Take the test for Chapter 1.
3	25-Sep	Ch 2 Matter	☐ Read p 37-39, do CC problem 1. ☐ Lab: Complete Experiment 2.1 Separating a Mixture of Salt and Chervil, pp 38-39 ☐ Read from p 40 "Homogenous & Heterogeneous Mixtures" to middle of p 42, do CC problem 2. ☐ Read from p 42 "Mass Conservation…" to middle of p 44, do CC problem 3. ☐ Lab: Complete Experiment 2.2 The Conservation of Mass, pp 42-43 ☐ Read from p 44 "Elements & Compounds" to p 50, do CC problems 4-7. ☐ Lab: Complete Experiment 2.3 Oh What a Difference Some Oxygen Makes, p 47
4	2-Oct	Ch 2 Matter	☐ Read from p 51 "Dalton's Atomic Theory" to middle of p 54, do CC problems 8-9. ☐ Read p 54 "What's Wrong with Dalton's Theory: Parts 1&2" to end of chapter, do CC problems 10-11. ☐ Do all problems in the review. ☐ Correct any of your errors in the review and study for the test. ☐ Take the test for Chapter 2.

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5	9-Oct	Ch 3 Atoms & Elements	☐ Read from p 67 to bottom of p 70 “Abbreviating and Arranging Elements”, do CC problems 1-2. ☐ Read pp 70-74, do CC problems 3-4. ☐ Read from p 75 “Light Waves” to middle of p 78, do CC problems 5-6. ☐ Read from p 78 “The Electromagnetic Spectrum” to the end of p 80, do CC problem 7. ☐ optional extra credit: Lab 3.1 The Wavelength of Microwaves, pp 79-80 ☐ Lab: Complete Experiment 3.2 Flame Tests, pp 83-84
6	16-Oct	Ch 3 Atoms & Elements	☐ Read p 81 “The Energy of Light” to the end of Experiment 3.2 on p 84, *skip CC problem 8*. ☐ Read from top of p 84 to middle of p 87, do CC problems 9-10. ☐ Read from p 87 “More on The Bohr Model” to end of chapter, do CC problem 11. ☐ Do all problems in the review, *skip #s 11, 12, 15, 16, 17, 18* ☐ Correct any of your errors in the review and study for the test. ☐ Take the test for Chapter 3, *skip #10, 11, 13*
7	23-Oct	Ch 4 Modern View of Atoms	☐ Read p 97-middle of p 100, do CC problem 1. ☐ Lab: Complete Experiment 4.1 Interfering Light, pp 97-98 ☐ Read p 100-top of 104 “Out with Orbits, In with Orbitals” do CC problems 2-3. ☐ Read from p 104 “Do Electrons Really Behave Like Waves?” to p 109, do CC problems 4-6. ☐ Read from p 110 “Lewis Structures for Elements” to middle of p 112, do CC problems 7-8. ☐ Read from p 112 “Metals, Nonmetals, & the In-Betweens” to middle of p 114, do CC problem 9. ☐ Lab: Complete Experiment 4.2 Comparing a Metal and a Nonmetal, pp 112-113
8	30-Oct	Ch 4 Modern View of Atoms	☐ Read from p 114 “Ionic Compounds” to middle of p 118, do CC problems 10-13. ☐ Read p 118-end of chapter “An Important Characteristic of Ionic Compounds”. ☐ Lab: Complete Experiment 4.3 Electrolytes and Nonelectrolytes, pp 118-119 ☐ 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.
9	6-Nov	Ch 5 Covalent Compounds	☐ Read p 127-middle of p 131, do CC problems 1-2. ☐ Read from p 131 “More Complicated Lewis Structures” to middle of p 134, do CC problem 3. ☐ Read from p 134 “Naming Covalent Compounds” to middle of p 139, do CC problems 4-7. ☐ Lab: Complete Experiment 5.1 Bending Water, pp 139-140 ☐ Read from p 139 “A Consequence of Polar Covalent Bonds” to p 142, do CC problems 8-9. ☐ Read from p 143 “Molecules in 3 Dimensions” to p 147, do CC problems 10-12.

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10	13-Nov	Ch 5 Covalent Compounds	☐ Read from p 148 “Is It Polar?” to middle of p 151, do CC problems 13-14. ☐ Read from p 151 “Why is Polarity Important?” to end of chapter, do CC problem 15. ☐ Lab: Complete Experiment 5.2 Polar and Nonpolar, p 151 ☐ Do all problems in the review. ☐ Correct any of your errors in the review and study for the test. ☐ Take the test for Chapter 5.
20-Nov			Thanksgiving Holiday
11	27-Nov	Ch 6 Physical & Chemical Change	☐ Read p 161-middle of 167, do CC problems 1-3. ☐ Lab: Complete Experiment 6.1 Cool It pp, 165-166 ☐ Read from p 167 “The Kinetic Theory of Matter” to top of p 171, do CC problems 4-5. ☐ Lab: Complete Experiment 6.2 In Between and All Around, pp 167-168 ☐ Read from p 171 “An Important Exception: Water” to middle of p 176, do CC problem 6. ☐ Read p 176-179 “Balancing Chemical Equations”, do CC problems 7-9. ☐ Read from p 180 “The Mathematical Nature of Chemical Equations” to middle of 183, do CC problems 10-12. ☐ Lab: Complete Experiment 6.3 Copper-Plated Nails, pp 183-184
12	4-Dec	Ch 6 Physical & Chemical Change	☐ Read from p 183 “Single & Double Displacement Reactions” to middle of p 185, do CC problem 13. ☐ Lab: Complete Experiment 6.4 Burning Iron, pp 185-186 ☐ Read from p 185 “Combustion Reactions” to end of chapter, do CC problem 14. ☐ Do all problems in the review. ☐ Correct any of your errors in the review and study for the test. ☐ Take the test for Chapter 6.
13	11-Dec	Ch 7 Stoichi-ometry	☐ Read p 197-201, do CC problems 1-4. ☐ Read from p 201 “Using the Mole Concept” to the middle of p 204, do CC problem 5. ☐ Lab: Complete Experiment 7.1 How “Wet” Is Hydrated Copper Sulfate?, pp 202-203 ☐ Read p 204-206 “Moles Infesting Chemical Equations”, do CC problems 5-6. ☐ Read from p 206 “There is a Limit!” to the middle of p 212, do CC problems 7-9. ☐ Lab: Complete Experiment 7.2 The Limiting Reactant, pp 206-208 ☐ Read p 212-215 “Stoichiometry Gets Massive”, do CC problems 10-12.
18-Dec, 25-Dec, 1-Jan			Christmas Break 3 weeks off

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14	8-Jan	Ch 7 Stoichi-ometry	☐ Read from p 206 “There is a Limit!” to the middle of p 212, do CC problems 7-9. ☐ Lab: Complete Experiment 7.2 The Limiting Reactant, pp 206-208 ☐ Read p 212-215 “Stoichiometry Gets Massive”, do CC problems 10-12.Read from p 216 “A Practical Application of Stoichiometry” to end of chapter.
15	15-Jan	Ch 7 Stoichi-ometry	☐ Lab: Complete Experiment 7.3 The Amount of $NaHCO_3$ in Alka-Seltzer, pp 216-217 ☐ Do all problems in the review. ☐ Correct any of your errors in the review and study for the test. ☐ Take the test for Chapter 7.
16	22-Jan	Ch 8 More Stoichi-ometry	☐ Read p 227-230, do CC problems 1-2. ☐ Lab: Complete Experiment 8.1 Percent Yield, pp 227-228 ☐ Read from p 230 “Percent Yield” to p 235, do CC problems 3-6. ☐ Read from p 235 “Determining Empirical Formulas of Metal Oxides” to p 239, do CC problems 7-8. ☐ Read from p 239 “More Complicated Combustion Analysis” to p 243, do CC problems 9-11. ☐ Read from p 243 “Polyatomic Ions” to end of chapter, do CC problems 12-14. ☐ Do all problems in the review. ☐ Correct any of your errors in the review and study for the test. ☐ Take the test for Chapter 8.
17	29-Jan	Ch 9 Solutions	☐ Read p 257-259, do CC problem 1. ☐ Read from p 260 “Solubility” to p 263, do CC problem 2-3. ☐ Lab: Complete Experiment 9.1 Temperature and Solubility, pp 260-262 ☐ Read from p 263 “Some Ionic and Polar Covalent Chemicals…” to p 266, do CC problems 4. ☐ Lab: Complete Experiment 9.2 Forming a Precipitate, p 264 ☐ Read from p 266 “Concentration” to p 270, do CC problems 5-6. ☐ Lab: Complete Experiment 9.3 The Importance of Concentration, pp 266-267 ☐ Read from p 270 “Using Molarity in Stoichiometry” to middle of p 274, do CC problems 7-10.
18	5-Feb	Ch 9 Solutions	☐ Read from p 274 “This is Depressing!” to end of chapter, do CC problems 11-13. ☐ Lab: Complete Experiment 9.4 Freezing Point Depression, pp 274-275 ☐ Do all problems in the review. ☐ Correct any of your errors in the review and study for the test. ☐ Take the test for Chapter 9.

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19	12-Feb	Ch 10 Gases	☐ Read p 289-middle of p 294, do CC problem 1. ☐ Lab: Complete Experiment 10.1 Boyle's Law, p 292 ☐ Read from p 294 "Charles's Law" to top of p 298, do CC problem 2. ☐ Lab: Complete Experiment 10.2 Charles's Law, pp 294-295 ☐ Read from p 298 "The Combined Gas Law" to p 300, do CC problems 3-4. ☐ Read from p 300 "It's Got to Be Ideal" to top of p 304, do CC problems 5-7. ☐ Read from p 304 "Gases in Stoichiometry" to middle of p 310, do CC problems 8-10. ☐ Read from p 304 "Gases in Stoichiometry" to middle of p 310, do CC problems 8-10. ☐ Read p 310-313 Vapor Pressure & Boiling Point", do CC problem 11.
19-Feb			President's Day Holiday
20	26-Feb	Ch 10 Gases	☐ Lab: Complete Experiment 10.3 Boiling Water with Ice, p 312 ☐ Read from p 313 "Vapor Pressure & Dalton's Law" to end of chapter. ☐ Lab: Complete Experiment 10.4 The Concentration of Hydrogen Peroxide, pp 314-316 ☐ Do all problems in the review. ☐ Correct any of your errors in the review and study for the test. ☐ Take the test for Chapter 10.
21	5-Mar	Ch 11 Acids & Bases	☐ Read p 325-middle of p 329, do CC problems 1-2. ☐ Lab: Complete Experiment 11.1 Litmus Tests, pp 327-328 ☐ Read from p 329 "The Chemical Definition of Acids and Bases" to p 334, do CC problems 3-5. ☐ Read from p 335 "Determining Chemical Eq. for Acid/Base Reaction" to p 341, do CC problems 6-8.
22	12-Mar	Ch 11 Acids & Bases	☐ Lab: Complete Experiment 11.2 Anthocyanins as Acid/Base Indicators, 339-340 ☐ Read from p 341 "Acid/Base Neutralization" to middle of p 347, do CC problems 9-10.
23	19-Mar	Ch 11 Acids & Bases	☐ Lab: Complete Experiment 11.3 The Percent of Acetic Acid in Vinegar, 345-347 ☐ Read from p 347 "Diluting Acid and Bases" to end of chapter, do CC problem 11. ☐ Do all problems in the review. ☐ Correct any of your errors in the review and study for the test. ☐ Take the test for Chapter 11.
24	26-Mar	Ch 12 Reduction & Oxidation	☐ Read p 357-middle of p 363, do CC problem 1-2. ☐ Read p 363-367 "Reduction and Oxidation", do CC problem 3. ☐ Lab: Complete Experiment 12.1 Oxidation States of Iron, pp 366-367 ☐ Read from p 368 "The Basics of Batteries" to the top of p 372, do CC problems 4-5.

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1-Apr			Spring Break
25	9-Apr	Ch 12 Reduction & Oxidation	☐ Lab: Complete Experiment 12.2 A Simple Galvanic Cell, pp 368-369 ☐ Read from p 372 "Analyzing Galvanic Cells" to top of p 376, do CC problems 6-7. ☐ Read from p 376 "Batteries that You Can Actually Use" to end of chapter, do CC problems 8-10.
26	16-Apr	Ch 12 Reduction & Oxidation	☐ Lab: Complete Experiment 12.3 Electroplating, pp 378-379 ☐ 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.
27	23-Apr	Ch 13 Heat	☐ Read p 387-top of p 391, do CC problems 1-3. ☐ Read from p 391 "Specific Heat Capacity" to middle of p 393, do CC problem 4. ☐ Lab: Complete Experiment 13.1 Specific Heat Capacity, p 391 ☐ Read from p 393 "Measuring Heat" to top of p 400, do CC problems 5-8. ☐ Lab: Complete Experiment 13.2 A Calorimetry Experiment, pp 397-399
28	30-Apr	Ch 13 Heat	☐ Read from p 400 "More Detailed Calorimetry Experiments" to p 406, do CC problems 7-10. ☐ Lab: Complete Experiment 13.3 Melting Ice, p 403 ☐ Read from p 406 "The Heat Associated with Chemical Reactions" to end of chapter, do CC problem 11.
29	7-May	Ch 13 Heat	☐ Lab: Complete Experiment 13.4 An Endothermic Reaction, p 407 ☐ Do all problems in the review. ☐ Correct any of your errors in the review and study for the test. ☐ Take the test for Chapter 13.
30	14-May	Ch 14 Thermo-dynamics	☐ Read p 417-middle of p 419, do CC problem 1. ☐ Lab: Complete Experiment 14.1 Measuring ΔH, pp 418-419 ☐ Read from p 419 "Enthalpy Change and Bond Energies" to middle of p 427, do CC problems 2-5. ☐ Read p 427-430 "Activation Energy", do CC problem 6. ☐ Read p 430-434 "Thermodynamics", do CC problems 7-8.
31	21-May	Ch 14 Thermo-dynamics	☐ Read from p 434 "Changes in Entropy" on p 434 to top of p 439, do CC problems 9-11. ☐ Read p 439-443 "The Gibbs Free Energy", do CC problem 12. ☐ Lab: Complete Experiment 14.2 Determining ΔS for a Physical Change, pp 442-443 ☐ Read from p 443 "Gibbs Free Energy and Hess' Law" to end of chapter, do CC problem 13. ☐ Do all problems in the review. ☐ Correct any of your errors in the review and study for the test. ☐ Take the test for Chapter 14.

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28-May			Memorial Day Holiday
32	4-Jun		☐ Last Day of Chemistry.