

Rutherford High School
AP Chemistry
Mr. Rojowski

AP Chemistry Summer Assignment

AP Chemistry is a college level course that contains material from both Chemistry 1 and Chemistry 2 courses taught in college. Since we are trying to cover two college semesters in a little less than one academic high school year, it is essential to get a head start by reviewing, reinforcing and expanding (on a college level) the information you learned in Chemistry 1.

The reading material and Review Exercises are from Chemistry -The Study of Matter and Its Changes 2nd Ed, Brady and Holum.

Show all work for Review Exercises involving problems. Include equations, formulas, and substitutions with the correct units when needed. Please note the numbers printed in blue have answers in Appendix D at the back of the book.

The assignment must be completed by the first week of school, and you will be tested on the material during the first few weeks.

Structure of Matter

A. Atomic Theory:

- Read Chp 2 pp 37-80 • Read Chp 6 pp 221-260
- Review Exercises pp 81-85: • Review Exercises pp 262-265:
 - #2.1,2 #6.14,16,17-23
 - #2.8,10,11,12 #6.25-27
 - #2.16,17 #6.28-35
 - #2.19,20,22-26 #6.42-53
 - #2.27-32 #6.55-59
 - #2.33-42 #6.60-83
 - #2.45-64 #6.93-96
 - #2.65-75 #6.100,102-104
 - #2.76-85 #6.108,111
 - #2.86-103
 - #2.108-114
 - #2.116-120
 - #2.122-124
 - #2.128-133

B. Chemical Bonding

- Read Chp 7 pp 269-300 • Read Chp 8 pp 309-356
- Review Exercises pp 302-305: • Review Exercises pp 262- 265:
 - #7.2-5,9,11,12 #8.1-10
 - #7.13-15,17 #8.29-31,35,37
 - #7.19-24 #8.50,51
 - #7.28,30,33,35
 - #7.48-53
 - #7.59,61,63,65,66
 - #7.72,73
 - #7.75,76
 - #7.82,83
 - #7.91

States of Matter

A. Gases

- Read Chp 10 pp 399-429
- Review Exercises pp 432-437:
#10.15-17,19,21,23,25,27
#10.34-38,40,44,46,48,50
#10.53-54,56
#10.60,62,64
#10.69-70
#10.72-84

B. Liquids and Solids

- Read Chp 11 pp 441-480
- Review Exercises pp 483-488:
#11.1-4
#11.5-9
#11.15-22
#11.34-39
#11.40-43
#11.51-55
#11.93-98
#11.106-108
#11.116-119

C. Solutions

- Read Chp 12 pp 493-530
- Review Exercises pp 543-537:
#12.1-12
#12.24-25
#12.26-27
#12.31-37
#12.38-43

#12.48,49,53,54
Stoichiometry

A. Mole Relations

- Review Exercises pp 118-122:
#3.14,17,19,21,24,26,28
#3.36,38
#3.34,46,48,50

B. Reactions

- Review Exercises pp 118-122:
#3.64,65
#3.69-76
#3.77-79
#3.81,82