

## Chemistry 12

### Unit 1 Outline - Reaction Kinetics

To obtain Learning Outcomes go to <http://www.bced.gov.bc.ca/irp/chem1112/ch12lo.htm>  
For Notes, Worksheets and Help Video, go to <http://sd67.bc.ca/teachers/dcolgur/> (or just Google "Colgur")

"SW" refers to HEBDEN'S Student Workbook - the text we use.

1. Brief demonstration of what reaction rates mean.
2. Read top half of page 1 of Unit 1 Notes. (on Chem 12 Webpage)
3. Read p. 1-2 SW and do Ex. 1-5 on p. 2 of SW (Check answers in the back)
4. Look at video clips on Dissociation and Changing a Formula Equation to Ionic (left column of Chem 12 Webpage.)
5. Read bottom of p. 1 of Unit 1 Notes.
6. Read "Unit 1 Notes" section on Calculations Involving Reaction Rates from p. 2 to half way down p. 4. Do the problems on the notes.
7. Print and Do "Hand-In Assignment #1" from the right column of the Chem 12 web page.
8. Read section on "Measuring Reaction Rates" from the middle of p. 4 to bottom of p. 5 of Unit 1 notes.
9. Read bottom of p. 2 and top of p. 11 in SW and do Ex. 6 (p.3), 18, 19 (p.11) of SW.
10. Experiment on Measuring Reaction Rates.
11. Read Section on Monitoring Reaction Rates from p. 6 to top of p.8 of Unit 1 Notes.
12. Read Section 1-2 from p. 2-5 of SW. Do Ex. 7-9 on p. 5 of SW.
13. Experiment 18-B -Factors Which Affect Reaction Rate
14. Read section on "Factors Affecting Rate" from p. 8-12 of Unit 1 Notes.
15. Read section 1-3 in SW. p. 5-9. Do Ex. 10, 11 p. 7 and 12-17 p. 8-10 of SW.
16. Print and do "Hand-In Assignment # 2" from the Chem 12 Webpage.
17. Read through section on Everyday situations which require control of reaction rate on p. 13 of Unit 1 Notes. Also read through points a-g on bottom of p. 10 of SW.
18. Read intro on "Collision Theory" on p. 14 of Unit 1 Notes. Also read p. 12 of SW.
19. Do Ex. 20-22 on p. 12 of SW.
20. Read section on Enthalpy and  $\Delta H$  on p. 15 of Unit 1 Notes. Also read p. 13-16 of SW.
21. Do Ex. 24-28 on bottom of p. 16 of SW.
22. Read Section on "Kinetic Energy Distributions" from p. 16 to middle of p. 21 in Unit 1 Notes. Also read p. 17-19 in SW.
23. Do Ex. 29-32 on pages 19-20 SW.
24. Read section on Activation Energy from p. 21-28 of Unit 1 notes.

25. Read Section 1-8 from p. 20-22 in SW.
26. Do Ex. 33-37 on p. 23 of SW.
27. Read Section on " $E_a$ ,  $\Delta H$  and bond strengths for forward and reverse reactions" from p. 28 to half way down p. 31 in Unit 1 Notes.
28. Read p. 24-25 in SW. Do Ex. 41-45 on p. 25 of SW.
29. Print and do Worksheet 1-2 from Chem 12 Webpage. (Note, you could also do Worksheet 1-1 if you have time. I don't assign that one to the class any more. )
30. Read section on Reaction Mechanisms from p. 31-36 of Unit 1 notes.
31. Read Section 1-9 from p. 26-27 of SW.
32. Do Ex. 48-53 on p. 28 of SW.
33. Read section on Catalysts from p. 37-40 of Unit 1 Notes.
34. Read p. 29-33 of SW.
35. Do Ex. 54-55 on p. 30 of SW and Ex. 56-61 on p. 34 of SW.
36. Read Section 1.13 on Some Uses of Catalysts from p. 34-36 of SW.
37. Do Ex. 62-63 on p. 36 of SW.
38. Print and do Worksheet 1-3 from the Chem 12 Web page.
39. Study "Hints for Unit 1" on left column of Chem 12 Web page.
40. OPTIONAL - Do Review Unit 1 on Chem 12 Web page.
41. Do "Provincial Questions for Unit 1" from Teacher. (I can e-mail them to you.)
42. Test on Unit 1 - Reaction Kinetics