

Chemistry Schedule Combined Fourth Quarter

Chapter 20

Day	Topic	Objective	Homework
3-Apr	20.21	State the general rule for assigning oxidation numbers.	10-20, 39-42
	20.22	Define oxidation and reduction in terms of a change in oxidation number.	
3-Apr	20.31	Identify the two classes of chemical reactions	21-31, 43-47
	20.32	Balance a redox equation using the oxidation-number-change method.	
	20.33	Balance a redox equation using halfreactions.	
4-Apr	SS 20 - 717	Small-Scale Lab: HalfReactions, p 717	
5-Apr	Quiz		

Chapter 21

Day	Topic	Objective	Homework
6-Apr	21.01	How is energy produced in an electrochemical process?	
	21.02	How can energy be used to drive an electrochemical process?	
	21.11	Identify the type of chemical reaction that is involved in all electrochemical processes.	1-7, 26-38
	21.12	Describe how a voltaic cell produces electrical energy	
	21.13	Identify the current applications that use electrochemical processes to produce electrical energy	
	TD 21 - 730	Teacher Demo, p 730: A Redox Reaction	
7-Apr	21.21	Identify what causes the electrical potential of an electrochemical cell.	8-19, 39-45
	21.22	Determine the standard reduction potential of a half-cell.	
	21.23	Determine if a redox reaction is spontaneous or nonspontaneous.	
	TD 21 - 739	Teacher Demo, p 739: The Corrosion of Iron	
10-Apr	21.31	Distinguish between electrolytic and voltaic cells.	20-25, 46-53
	21.32	Describe some applications that use electrolytic cells.	
	TD 21 - 747	Teacher Demo, p 747: The Electrolysis of Water	
10-Apr	SS 21 - 752	Small-Scale Lab: Electrolysis of Water, p 752	
11-Apr	Quiz		
12-Apr	Chapter 20 and 21 Test		
13-Apr	Regents		

Chapter 22			
Day	Topic	Objective	Homework
24-Apr	22.01	How are hydrocarbons named?	1-13, 41-45
	22.02	What are the general properties of hydrocarbons?	
	22.11	Explain why a carbon atom forms four covalent bonds	
	22.12	Identify two possible arrangements of carbon atoms in an alkane.	
	TD 22 - 763	Teacher Demo, p 763: Methane Shape	
24-Apr	QL 22 - 778	Quick Lab: Isomers of Heptane, p 778	
25-Apr	22.21	Describe the structural characteristics of alkenes.	14-18, 46-47
	22.22	Define the structural characteristics of alkynes.	
26-Apr	CA 22 - 764	Class Activity, p 764: Model of Ethane	
	TD 22 - 765	Teacher Demo, p 765: Alkane Structures	
	CA 22 - 769	Class activity, p. 769 distinguish between the parent structures and the substituents in a branchedchain hydrocarbon.	
27-Apr	22.31	Explain how the properties of constitutional isomers differ.	19-27, 48-52
	22.32	Identify two types of stereoisomers.	
	TD 22 - 777	Teacher Demo, p 777: Enantiomers	
28-Apr	22.41	Identify the general structure of a cyclic hydrocarbon.	28-32, 53-55
	22.42	Describe bonding in a benzene ring.	
1-May	22.51	Identify the hydrocarbons in natural gas.	33-40, 56-58
	22.52	Describe the first step in the refining of petroleum.	
	22.53	Classify coal.	
1-May	SS 22 - 787	Small-Scale Lab: Hydrocarbon Isomers: p 787	
2-May	quiz		59-83 Evens

Chapter 23

Day	Topic	Objective	Homework
3-May	23.01	What effect does a functional group have on an organic compound?	1-8, 32-36
	23.02	How are chemical reactions used in organic chemistry?	
	23.11	Classify organic compounds.	
	23.12	Identify the general formula of a halocarbon.	
	23.13	Describe how substitution reactions are used in organic chemistry.	
	CA 23 799	Class Activity, p 799: Functional Groups	
4-May	23.21	Identify the general formula of an alcohol.	9-15, 37-41
	23.22	Describe how addition reactions are used in organic chemistry	
	23.23	Identify the general formula of an ether.	
	23.24	Identify the general formula of an amine.	
	TD 23 - 808	Teacher Demo, p 808: Test for Unsaturation	
5-May	23.31	Identify the structural characteristic that an aldehyde and a ketone share.	16-23, 42-43
	23.32	Identify the general formula of a carboxylic acid.	
	23.33	Explain why dehydrogenation is classified as an oxidation reaction.	
	23.34	Identify the general formula of an ester.	
	TD 23 - 817	Teacher Demo, p 817: Oxidation of Alcohols	
8-May	23.41	Describe how addition polymers are formed.	24-31, 44-45
	23.42	Describe how condensation polymers are formed.	
	TD 23 - 826	Teacher Demo, p 826: Making Nylon	
8-May	QL 23 - 818	Quick Lab: Testing for an Aldehyde, p 818	
9-May	SS 23 - 828	Small-Scale Lab: Polymers, p 828	46-68 evens
10-May	Quiz		
	Review		
11-May	Chapter 22 and 23 Exam		
12-May	regents		

Chapter 24

Day	Topic	Objective	Homework
15-May	24.01	What are the characteristics of the four main types of biological molecules?	1-7, 41-44
	24.02	What is the function of anabolism and catabolism in a cell?	
	24.11	Identify the two major cell types that occur in nature	
	24.12	Describe Photosynthesis	
	CA 24 - 839	Class Activity, p 839: Living and Nonliving Things	
15-May	SS 24 - 849	Small-Scale Lab: The Egg: A Biochemical Storehouse, p 849	
16-May	24.21	Construct the general formula for carbohydrates.	8-15, 45-50
	CA 24 - 843	Class Activity, p. 843 Classify sugars as reducing or nonreducing.	
17-May	24.31	Construct the general structure of an amino acid.	16-21, 51-56
	24.32	Identify the differences in the properties of peptides and proteins	
	24.33	Describe how enzymes affect the rates of reactions in living things	
	TD 24 - 846	Teacher Demo, p 846: Protein in Hard Tissue	
18-May	24.41	Identify the physical property that distinguishes lipids from other biological molecules.	22-28, 57-62
	SA 24 - 851	Student Activity, p 851: Better Butter	
19-May	24.51	Identify the functions of DNA and RNA.	29-34, 63-71
	24.52	Identify the number of bases of DNA required to specify one amino acid in a peptide chain	
	24.53	Define gene mutations.	
	24.54	Identify two examples of DNA technology.	
	CA 24 - 858	Class Activity, p 858: Genetic Code	
22-May	24.61	Describe the function of ATP in the cell.	35-40, 72-77
	24.62	Describe what happens to biological molecules and energy during catabolism and anabolism.	
22-May	QL 24 - 856	Quick Lab: A Model of DNA, p 856	
23-May	quiz		78-104 even

Chapter 25			
Day	Topic	Objective	Homework
24-May	25.01	What happens when an unstable nucleus decays?	1-8, 34-41
	25.02	How is the structure of atoms altered during fission and fusion?	
	25.03	How does nuclear chemistry affect your life?	
	25.11	Explain how nuclear reactions differ from chemical reactions.	
	25.12	Describe the three main types of nuclear radiation.	
25-May	25.21	Describe the type of decay a radioisotope undergoes.	9-17, 42-49
	25.22	Solve problems that involve half-life	
	25.23	Identify the two ways transmutations can occur.	
26-May	SS 25 - 887	Small-Scale Lab: Radioactivity and Half-Lives, p 887	
30-May	25.31	Describe what happens in a nuclear chain reaction.	18-25, 50-52
	25.32	Distinguish fission reactions from fusion reactions.	
31-May	25.41	Identify three devices that are used to detect radiation.	26-33, 53-56
	25.42	List some practical uses of radioisotopes.	
1-Jun	quiz		57-88 evens
	Review		
2-Jun	Chapter 24 and 25 Exam		