

<b>Chemistry 350, Jasperse</b>	Reading
Topic <b>These Assume You are using McMurry 6</b>	Assignment
Intro. Octet Rule, Lewis Structure, Hybridization, Bonding	1.1-12
Formal Charge, Resonance, Hybridization + Shape; Drawing 3-D Shapes	1.7-1.14
Acid-Base Chemistry, Bond Rotation, Isomerism, Polarity, Intermolecular Forces, Solubility	2.1-2.11
Classification of Organic Compounds. The Functional Groups.	3.1-8
Formulas, Nomenclature, Conformations of Alkanes	4.1-7
Conformations and Stability of Acyclic Alkanes and Cycloalkanes	4.1-7
Conformations and Stability of Cyclohexanes	4.8-13
Catchup	Catchup
<b>Test 1. Chapters 1-4.</b>	
Alkane Chlorination. Factors to Think About in a Chemical Reaction.	5.1-8, 10.4-5
Transition States, Multistep Reactions, Halogenation of Higher Alkanes.	5.7-10, 10.4-5
Reactive Intermediates (Radicals, Cations, Anions)	5.7-10, 10.4-5
Chirality, R/S Classification of Chiral Carbons.	9.1-5
Miscellaneous Stereochemistry	9.1-5
Diastereomers; More than One Chiral Carbon	9.6-11
Nomenclature, Structure, Properties, Reactivity of Alkyl Halides.	10.1-5
The Sn2 Substitution Reaction.	11.1-5
The Sn1 Substitution Reaction.	11.6-10
NO CLASS	
The E1 and E2 Elimination Reactions. Substitution vs. Elimination?	11.11-16
Catchup	Catchup
Practice	Practice
<b>Test 2. Chapters 5,9,10,11</b>	<b>Test</b>
Alkenes: Structure, Nomenclature, Isomers.	6.1-7
Alkene Stability; Synthesis.	6.4-7
Synthesis of Alkenes; Classifying/Recognizing Reaction Mechanisms; Alkenes	7.1, 17.7
Addition of H-Cl, H-Br, and H-OH to Alkenes.	6.8-11
Oxymercuration/Dermercuration; Hydroboration/Oxidation; Hydrogenation	7.4-5
Addition of Halogens, Formation of Halohydrins; Epoxidation	7.2-3
	Skip 8.11
Oxidation Reactions of Alkenes	7.7-8
Catchup; Practice Problems	Catchup
<b>Test 3. Chapters 6,7</b>	<b>Test</b>
	Skip 10.12
Intro; Conjugation, Molecular Orbitals, Dienes, Allylic Cations, Additions to Dienes	14.1-4
More allylic cations/radicals/conjugation and Applications; Diels-Alder Reaction	14.3-6
Diels-Alder Reaction, Aromaticity	14.5-6
Aromaticity; Huckel's Rule, Complex Aromaticity, Application, Nomenclature	15.2-9
	Skip: 14.7-11
Electrophilic Aromatic Substitution: Intro, Mechanisms	16.1-6
Reactions in Detail: Halogenation, Nitration, Sulfonation, Alkylation, Acylation	16.1-6
Catchup; Addition to Disubstituted Benzenes; Synthetic Applications	16.7,10-12
Synthetic Applications; Practice	Practice
	Skip: 16.8-9
<b>Test 4. Chapters 14-16</b>	<b>Test</b>

## CHEMISTRY 350 PROBLEMS

These Assume You are using McMurry 6

Chapter	Recommended Book Problems
	<b><u>Test 1</u></b>
1	5, 9-12, 14, 15, 21, 23, 27, 30, 32a-c, 46
2	2, 5, 8-11, 13, 17, 20, 27, 28, 35-37, 39, 40, 43, 44, 49, 55, 56 Ch.5: 8, 9, 39, 40, 47
3	1, 4, 6, 8-12, 15, 16, 18, 19, 24-27, 29-32, 39, 43-45, 47, 49, 50
4	2-4, 6, 8, 11-13, 17 (draw), 24, 26, 29, 31-36, 38, 42
	<b><u>Test 2</u></b>
5	2, 3, 8, 9, 13, 14, 21, 21-23, 32, 37, 39, 40, 42, 44, 47
9	2, 3, 6-9, 12, 14, 15, 17, 19, 36, 38, 43-48, 50-53
10	1, 3, 4 (major), 5, 17a-d, 32
11	1, 2, 4, 5, 6, (OTs is best leaving group of all), 8, 11, 14-16, 20, 26-28, 29a-c, 31a-e, 32a-e, 35, 37, 40
	<b><u>Test 3</u></b>
6	1, 3-6, 9-11, 13-16, 23-26, 29-30, 38-42, 44
7	1-3, 5 (NBS = Br <sub>2</sub> ), 6-10, 13-16, 23, 24c-e, 25, 26(omit c), 27, 30-32, 35, 36a,b, 40, 43a-d
	<b><u>Test 4</u></b>
14	2, 3, 5-9, 20, 23, 25, 27 (major), 33, 34 (ignore stereo of phenyl group), 35, 37 (predict major), 38, 40
15	1, 2a,c,d, 3, 8, 9, 18b-d,f, 19c-e, g, 38a
16	1, 6, 9, 10, 13, 15, 23, 24b, 28, 29a,c-f, 30a,b, 31, 32a,c,d, 33b-d, 34 (just rank), 36, 45, 47-49, 50d, 51b,d, 52a, 53a