**AP Chemistry Unit 9 Tentative Agenda** Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Kinetic Molecular Theory (Solids, Liquids, and Gases)

| **Date** | **Agenda** |
| --- | --- |
| Friday 1/24 | * Begin KMT notes. * Homework   + Read Chapter 10 (Review how to do calculations; most are familiar. Things you might miss if you’re not careful: Avogadro’s hypothesis, lab procedure for collecting gases over water, calculating RMS speed of a gas particle, Figure 10.17, Figure 10.18, P & T conditions in which gases deviate most from the ideal gas law, do not worry about the Van der Waals equation.   + Reread Chapter 11. Our focus this time is on solids, liquids, and gases (pay particular attention to 11.3-11.6), but this is a good time to review intermolecular forces (there will be some of these questions on the test.) Once again, the info in 11.7 is not something that I expect College Board to test, but I think that you have a better chance of understanding it this time around so give it a read. |
| Monday 1/27 | * Finish KMT (Chapters 10-11 notes) * Work KMT Problems * Homework   + Mastering 1-20 |
| Tuesday 1/28 | * Work KMT Problems * Homework   + Mastering 21-40   + Prelab for at least one of the labs. |
| Wednesday 1/29 | * Inquiry Lab – Determine the melting point of phenyl salicylate. There will be no handout for this lab. You will determine the procedure and I will approve it if it is reasonable. You will be provided with common laboratory equipment, phenyl salicylate, a Labquest, and a temperature probe. * Molar Mass of Oxygen Lab – You will be given a procedure for this lab. You will verify that the molar mass of oxygen is indeed 32.0 g/mol. * Homework   + Mastering 41-60   + Prelab for the lab that you haven’t done yet. |
| Thursday 1/30 | * Inquiry Lab – Determine the melting point of phenyl salicylate. * Molar Mass of Oxygen Lab – You will verify that the molar mass of oxygen is indeed 32.0 g/mol. * Homework   + Mastering 61-80 |
| Friday 1/31 | * Chapter 10 (with just a little 11) quiz * Mastering Day * Homework   + Mastering 81-102 |
| Monday 2/3 | * Labs Due * Review * Hint of the day: Review Thermochemistry. There will be a few multiple choice questions about thermochemistry on the test. * Homework   + Mastering Due 11:59 PM |
| Tuesday 2/4 | * Unit 9 Test |
| Wednesday 2/5 | * Go over test |

**Learning Objectives:**

**LO 2.3 The student is able to use aspects of particulate models (i.e., particle spacing, motion, and forces of attraction) to reason about observed differences between solid and liquid phases and among solid and liquid materials. [See SP 6.4, 7.1]**

Essential knowledge 2.A.1: The different properties of solids and liquids can be explained by differences in their structures, both at the particulate level and in their supramolecular structures.

a. Solids can be crystalline, where the particles are arranged in a regular 3-D structure, or they can be amorphous, where the particles do not have a regular, orderly arrangement. In both cases, the motion of the individual particles is limited, and the particles do not undergo any overall translation with respect to each other. Interparticle interactions and the ability to pack the particles together provide the main criteria for the structures of solids.

b. The constituent particles in liquids are very close to each other, and they are continually moving and colliding. The particles are able to undergo translation with respect to each other and their arrangement, and movement is influenced by the nature and strength of the intermolecular forces that are present.

c. The solid and liquid phases for a particular substance generally have relatively small differences in molar volume because in both cases the constituent particles are very close to each other at all times.

d. The differences in other properties, such as viscosity, surface tension, and volumes of mixing (for liquids), and hardness and macroscopic crystal structure (for solids), can be explained by differences in the strength of attraction between the particles and/or their overall organization.

e. Heating and cooling curves for pure substances provide insight into the energetics of liquid/solid phase changes.

**LO 2.4 The student is able to use KMT and concepts of intermolecular forces to make predictions about the macroscopic properties of gases, including both ideal and nonideal behaviors. [See SP 1.4, 6.4]**

**LO 2.5 The student is able to refine multiple representations of a sample of matter in the gas phase to accurately represent the effect of changes in macroscopic properties on the sample. [See SP 1.3, 6.4, 7.2]**

**LO 2.6 The student can apply mathematical relationships or estimation to determine macroscopic variables for ideal gases. [See SP 2.2, 2.3]**

**LO 2.12 The student can qualitatively analyze data regarding real gases to identify deviations from ideal behavior and relate these to molecular interactions. [See SP 5.1, 6.5, connects to 2.A.2]**

**LO 2.16 The student is able to explain the properties (phase, vapor pressure, viscosity, etc.) of small and large molecular compounds in terms of the strengths and types of intermolecular forces. [See SP 6.2]**

**LO 2.22 The student is able to design or evaluate a plan to collect and/or interpret data needed to deduce the type of bonding in a sample of a solid. [See SP 4.2, 6.4]**

**LO 2.29 The student can create a representation of a covalent solid that shows essential characteristics of the structure and interactions present in the substance. [See SP 1.1]**

**LO 2.31 The student can create a representation of a molecular solid that shows essential characteristics of the structure and interactions present in the substance. [See SP 1.1]**

**Mastering Chemistry Assignment Breakdown**

| [**#**](http://session.masteringchemistry.com/myct/yui-dt0-href-ordinal) | [**TITLEShow Descriptions**](http://session.masteringchemistry.com/myct/yui-dt0-href-title) | | | | | **DIFFICULTY** | | **MEDIAN TIME** | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**This Course**](http://session.masteringchemistry.com/myct/yui-dt0-href-courseDifficulty) | [**System**](http://session.masteringchemistry.com/myct/yui-dt0-href-systemDifficulty) | [**This Course**](http://session.masteringchemistry.com/myct/yui-dt0-href-formattedCourseTime) | [**System**](http://session.masteringchemistry.com/myct/yui-dt0-href-formattedSystemTime) |
| 1 | [Problem 10.3](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088594) | | | | | -- | 1 | -- | 3m |
| 2 | [Problem 10.7](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088595) | | | | | -- | 1 | -- | 4m |
| 3 | [Problem 10.9](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088596) | | | | | -- | 1 | -- | 4m |
| 4 | [Chapter 10 Question 1 - True/False](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088537) | | | | | -- | 1 | -- | <1m |
| 5 | [Chapter 10 Question 1 - Multiple Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088538) | | | | | -- | 1 | -- | 1m |
| 6 | [Chapter 10 Question 3 - Multiple Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088597) | | | | | -- | 1 | -- | <1m |
| 7 | [Chapter 10 Question 4 - Multiple Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088572) | | | | | -- | 2 | -- | 1m |
| 8 | [Chapter 10 Question 5 - Multiple Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088678) | | | | | -- | 2 | -- | 1m |
| 9 | [Problem 10.10](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088598) | | | | | -- | 1 | -- | 4m |
| 10 | [± Using a Barometer to Measure Atmospheric Pressure](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088574) | | | | | -- | 2 | -- | 8m |
| 11 | [Problem 10.21](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088693) | | | | | -- | 1 | -- | 6m |
| 12 | [Problem 10.18](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088922) | | | | | -- | 2 | -- | 5m |
| 13 | [Chapter 10 Reading Quiz Question 1](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088908) | | | | | -- | 1 | -- | <1m |
| 14 | [Chapter 10 Question 1 - Bimodal](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088909) | | | | | -- | 1 | -- | 1m |
| 15 | [Chapter 10 Question 8 - Multiple Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088577) | | | | | -- | 1 | -- | 2m |
| 16 | [Boyle's Law](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088910) | | | | | -- | 2 | -- | 7m |
| 17 | [± Avogadro's Law](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088924) | | | | | -- | 2 | -- | 4m |
| 18 | [± Charles's Law](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088694) | | | | | -- | 1 | -- | 5m |
| 19 | [± Changes in Temperature](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088695) | | | | | -- | 1 | -- | 6m |
| 20 | [Go Figure 10.5](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088912) | | | | | -- | 1 | -- | <1m |
| 21 | [Go Figure 10.7](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088579) | | | | | -- | 4 | -- | 3m |
| 22 | [Problem 10.63](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088580) | | | | | -- | 1 | -- | 8m |
| 23 | [Problem 10.108](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088927) | | | | | -- | 2 | -- | 4m |
| 24 | [Problem 10.125](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088928) | | | | | -- | 2 | -- | 11m |
| 25 | [Chapter 10 Question 10 - Bimodal](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088915) | | | | | -- | 2 | -- | 2m |
| 26 | [Chapter 10 Question 11 - Bimodal](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088930) | | | | | -- | 1 | -- | 2m |
| 27 | [Chapter 10 Question 12 - Multiple Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088931) | | | | | -- | 2 | -- | 1m |
| 28 | [Chapter 10 Question 15 - Multiple Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088932) | | | | | -- | 1 | -- | 1m |
| 29 | [± The Ideal Gas Law](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088700) | | | | | -- | 3 | -- | 6m |
| 30 | [± Deriving Gas Law Formulas](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088917) | | | | | -- | 1 | -- | 6m |
| 31 | [Problem 10.33](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088942) | | | | | -- | 1 | -- | 1m |
| 32 | [Problem 10.37](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088962) | | | | | -- | 4 | -- | 6m |
| 33 | [Problem 10.43](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088919) | | | | | -- | 1 | -- | 10m |
| 34 | [Problem 10.46](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088945) | | | | | -- | 2 | -- | 8m |
| 35 | [Problem 10.48](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088947) | | | | | -- | 2 | -- | 14m |
| 36 | [Chapter 10 Question 20 - Multiple Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088949) | | | | | -- | 1 | -- | <1m |
| 37 | [Chapter 10 Question 21 - Multiple Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088982) | | | | | -- | 1 | -- | 1m |
| 38 | [Chapter 10 Question 3 - True/False](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088983) | | | | | -- | 1 | -- | 1m |
| 39 | [Chapter 10 Question 13 - Algorithmic](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088964) | | | | | -- | 1 | -- | 1m |
| 40 | [± Characterization of a Gas Using Experimental Data](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088966) | | | | | -- | 3 | -- | 17m |
| 41 | [± Analysis of a Magnesium-Aluminum Alloy](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088969) | | | | | -- | 5 | -- | 26m |
| 42 | [± Gas Density and Molar Mass](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33088990) | | | | | -- | 3 | -- | 13m |
| 43 | [± Gas Law Stoichiometry](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089108) | | | | | -- | 4 | -- | 7m |
| 44 | [± Gas Laws](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089111) | | | | | -- | 2 | -- | 10m |
| 45 | [± Stoichiometric Relationships with Gases](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089147) | | | | | -- | 2 | -- | 10m |
| 46 | [Give It Some Thought: 10.6](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089132) | | | | | -- | 1 | -- | 1m |
| 47 | [± Application of Empirical Gas Law Relationships](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089137) | | | | | -- | 3 | -- | 9m |
| 48 | [Chapter 10 Question 41 - Bimodal](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089138) | | | | | -- | 2 | -- | 2m |
| 49 | [± Dalton's Law of Partial Pressure](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089183) | | | | | -- | 2 | -- | 7m |
| 50 | [Problem 10.71](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089185) | | | | | -- | 2 | -- | 6m |
| 51 | [Chapter 10 Question 58 - Bimodal](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089151) | | | | | -- | 2 | -- | 3m |
| 52 | [The Kinetic Molecular Theory of Gases](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089139) | | | | | -- | 2 | -- | 5m |
| 53 | [Chapter 10 Question 42 - Multiple Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089175) | | | | | -- | 1 | -- | 1m |
| 54 | [± Effusion and Molar Mass](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089186) | | | | | -- | 2 | -- | 8m |
| 55 | [Problem 10.89](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089244) | | | | | -- | 2 | -- | 2m |
| 56 | [Problem 10.84](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089245) | | | | | -- | 1 | -- | 2m |
| 57 | [Chapter 10 Question 50 - Multiple Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089268) | | | | | -- | 2 | -- | 1m |
| 58 | [Chapter 10 Question 56 - Multiple Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089374) | | | | | -- | 2 | -- | 1m |
| 59 | [Give It Some Thought: 10.11](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089198) | | | | | -- | 1 | -- | 1m |
| 60 | [Go Figure 10.22](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089199) | | | | | -- | 1 | -- | 1m |
| 61 | [Go Figure 10.23](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089375) | | | | | -- | 1 | -- | <1m |
| 62 | [Go Figure 10.25](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089200) | | | | | -- | 1 | -- | <1m |
| 63 | [Phases of Matter](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089250) | | | | | -- | 1 | -- | 3m |
| 64 | [Problem 11.11](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089275) | | | | | -- | 3 | -- | 4m |
| 65 | [Problem 11.12](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089416) | | | | | -- | 2 | -- | 3m |
| 66 | [Problem 11.2](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089637) | | | | | -- | 1 | -- | 2m |
| 67 | [Go Figure 11.10](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089700) | | | | | -- | 3 | -- | 1m |
| 68 | [Problem 11.15](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089675) | | | | | -- | 1 | -- | 1m |
| 69 | [Problem 11.20](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089640) | | | | | -- | 1 | -- | 2m |
| 70 | [Problem 11.26](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089707) | | | | | -- | 1 | -- | 2m |
| 71 | [Chapter 11 Question 9 - Multiple-Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089743) | | | | | -- | 2 | -- | 2m |
| 72 | [Chapter 11 Question 10 - Multiple-Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089724) | | | | | -- | 3 | -- | 1m |
| 73 | [Chapter 11 Question 2 - True/False](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089709) | | | | | -- | 1 | -- | 1m |
| 74 | [Chapter 11 Question 11 - Multiple-Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089710) | | | | | -- | 1 | -- | 1m |
| 75 | [Chapter 11 Question 12 - Multiple-Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089744) | | | | | -- | 2 | -- | 1m |
| 76 | [Chapter 11 Question 13 - Multiple-Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089678) | | | | | -- | 1 | -- | 1m |
| 77 | [Chapter 11 Question 23 - Multiple-Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089679) | | | | | -- | 1 | -- | 1m |
| 78 | [Chapter 11 Question 33 - Multiple-Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089725) | | | | | -- | 1 | -- | 1m |
| 79 | [Chapter 11 Question 34 - Multiple-Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089680) | | | | | -- | 1 | -- | 1m |
| 80 | [Chapter 11 Question 35 - Multiple-Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089712) | | | | | -- | 2 | -- | 1m |
| 81 | [Chapter 11 Question 45 - Multiple-Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089714) | | | | | -- | 1 | -- | 1m |
| 82 | [Chapter 11 Question 46 - Multiple-Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089726) | | | | | -- | 1 | -- | <1m |
| 83 | [Chapter 11 Question 47 - Multiple-Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089749) | | | | | -- | 1 | -- | 1m |
| 84 | [Chapter 11 Reading Quiz Question 4](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089764) | | | | | -- | 2 | -- | 1m |
| 85 | [Chapter 11 Question 44 - Multiple-Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089715) | | | | | -- | 2 | -- | 1m |
| 86 | [Chapter 11 Question 48 - Multiple-Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089729) | | | | | -- | 1 | -- | <1m |
| 87 | [Problem 11.4](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089766) | | | | | -- | 2 | -- | 7m |
| 88 | [Problem 11.39](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089731) | | | | | -- | 1 | -- | 3m |
| 89 | [Go Figure 11.21](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089718) | | | | | -- | 1 | -- | 1m |
| 90 | [Problem 11.40](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089804) | | | | | -- | 1 | -- | 1m |
| 91 | [Chapter 11 Question 53 - Multiple-Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089822) | | | | | -- | 5 | -- | 2m |
| 92 | [Chapter 11 Question 54 - Multiple-Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089823) | | | | | -- | 1 | -- | 1m |
| 93 | [Chapter 11 Question 58 - Multiple-Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089785) | | | | | -- | 1 | -- | 1m |
| 94 | [Vapor Pressure, Boiling Point, and Intermolecular Forces](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089809) | | | | | -- | 3 | -- | 7m |
| 95 | [Chapter 11 Reading Quiz Question 8](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089826) | | | | | -- | 2 | -- | 1m |
| 96 | [Chapter 11 Reading Quiz Question 7](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089811) | | | | | -- | 2 | -- | 2m |
| 97 | [Chapter 11 Question 60 - Multiple-Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089812) | | | | | -- | 2 | -- | 1m |
| 98 | [Chapter 11 Question 61 - Multiple-Choice](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089789) | | | | | -- | 3 | -- | 1m |
| 99 | [Chapter 11 Question 7 - Bimodal](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089813) | | | | | -- | 1 | -- | 1m |
| 100 | [Chapter 11 Question 8 - Bimodal](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089776) | | | | | -- | 1 | -- | <1m |
| 101 | [Chapter 11 Question 15 - Bimodal](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089793) | | | | | -- | 1 | -- | <1m |
| 102 | [Problem 11.78](http://session.masteringchemistry.com/myct/itemView?showStatsForCourse=1110976&view=solution&showStats=1&assignmentProblemID=33089778) | | | | | -- | 1 | -- | 1m |
| **Average:** | |  | **Total:** |  |
| **--** | | **1.7** | **--** | **344m** |