

Scope and Sequence

Subject/Title of Unit	Grade	6 Weeks	Estimated Time Frame (# of days)
PreAP Chemistry Unit 9 – Chemical Quantities	10 – 12	4 th cycle	12 days
TEKS/Student Expectations		Examples/Specifications:	
<p>2C - express and manipulate chemical quantities using scientific conventions and mathematical procedures such as dimensional analysis, scientific notation, and significant figures</p> <p>11B - demonstrate the use of symbols, formulas, and equations in describing interactions of matter such as chemical and nuclear reactions</p> <p>1A - demonstrate safe practices during field and laboratory investigations.</p> <p>1B - make wise choices in the use and conservation of resources and the disposal or recycling of materials.</p> <p>2A - plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting equipment and technology</p> <p>2B - collect data and make measurements with precision</p> <p>2C - express and manipulate chemical quantities using scientific conventions and mathematical procedures such as dimensional analysis, scientific notation, and significant figures</p> <p>2D - organize, analyze, evaluate, make inferences, and predict trends from data</p> <p>2E - communicate valid conclusions</p>	<p>2C – measure quantities of chemicals using mass and moles, and solve problems using mass, moles, and Avogadro’s number. Determine the mole ratios in chemical reactions through lab investigation.</p> <p>11B – use the chemical formula to determine formula mass and percentage composition, and use percent data to determine the chemical formula of a substance. Determine the formula of a hydrated salt through lab investigation.</p> <p>1A & B – conduct lab experiments safely and follow instructor guidelines regarding appropriate disposal of materials.</p> <p>2A – use the scientific method when planning a controlled experiment, including the identification and selection of appropriate equipment, and the development of a suitable hypothesis.</p> <p>2B & C– using the metric system, measure quantities to the correct number of significant digits using scientific notation as appropriate. Convert between units as needed and round to the correct number of digits when reporting a calculated answer.</p> <p>2D & E – apply the steps of the scientific method to lab investigations.</p>		

Language of Instruction:		Instructional Resources/Textbook Correlations:
Mole Avogadro's number Dimensional analysis Formula mass Percentage composition Empirical formula Molecular formula		Glencoe Chemistry: Matter and Change – chapter 11 Nomenclature review activity – web Counting by Mass and Volume lab activity Percentage composition lab Mol-mass lab Advanced hydrate lab
		Weblinks/Other Resources:
		http://fsc.fernbank.edu/chemistry/nomen.html
Evaluation/External Assessment/Local Assessment:		Best Instruction Timeline:
TAKS test (1.1A, 1.2A – D, 4.8C) Teacher-designed test Laboratory reports and performance Quizzes Daily work Homework		1 day – nomenclature review activity 5 days – solving mass, mol, particle problems including 2 labs 4 days – percent composition and formula determination including 2 labs 2 days – review and assessment