

Scope and Sequence

Subject/Title of Unit	Grade	6 Weeks	Estimated Time Frame (# of days)
Chemistry Unit 11 – Quantum Atomic Model	10 – 12	4 th cycle	10 days
TEKS/Student Expectations		Examples/Specifications:	
6A - describe the existence and properties of subatomic particles		6A – determine the arrangement of electrons in atoms and write electron configurations and orbital notations for atoms.	
8A - identify characteristics of atoms involved in chemical bonding		8A and 4D – relate the electron arrangement of an atom to its placement on the periodic table and its chemical reactivity.	
4D - describe the physical and chemical characteristics of an element using the periodic table and make inferences about its chemical behavior			
1A - demonstrate safe practices during field and laboratory investigations.		1A & B – conduct lab experiments safely and follow instructor guidelines regarding appropriate disposal of materials.	
1B - make wise choices in the use and conservation of resources and the disposal or recycling of materials.			
2A - plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting equipment and technology		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.	
2B - collect data and make measurements with precision		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.	
2C - express and manipulate chemical quantities using scientific conventions and mathematical procedures such as dimensional analysis, scientific notation, and significant figures			
2D - organize, analyze, evaluate, make inferences, and predict trends from data		2D & E – apply the steps of the scientific method to lab investigations.	
2E - communicate valid conclusions			

Language of Instruction:		Instructional Resources/Textbook Correlations:
Heisenberg uncertainty principle Hund's rule Aufbau order Energy level Sublevel Orbital Electron configuration Orbital notation		Glencoe Chemistry: Concepts and Applications – chapter 7 Quantum model lab Transition metal lab Valence electron activity Metal lab
		Weblinks/Other Resources:
Evaluation/External Assessment/Local Assessment:		Best Instruction Timeline:
TAKS test (1.1A, 1.2A-D, 4.7D-E) Teacher-designed test Laboratory reports and performance Quizzes Daily work Homework		5 days – electron arrangement and 2 labs 3 days – valence electron patterns and 2 labs 2 days – review and assessment