

Scope and Sequence

Subject/Title of Unit	Grade	6 Weeks	Estimated Time Frame (# of days)
Chemistry Unit 13 – Chemical Bonding	10 – 12	5 th cycle	9 days
TEKS/Student Expectations		Examples/Specifications:	
4D - describe the physical and chemical characteristics of an element using the periodic table and make inferences about its chemical behavior		4D – relate the position of elements on the periodic table to their electron affinity (electronegativity) and predict the type of chemical bond that will be produced.	
8A - identify characteristics of atoms involved in chemical bonding		8A – relate valence electron arrangement and electron affinity to bond formation.	
8B - investigate and compare the physical and chemical properties of ionic and covalent compounds		8B – review the properties of substances based on bonding.	
8C - compare the arrangement of atoms in molecules, ionic crystals, polymers, and metallic substances		8C – draw Lewis dot diagrams to represent molecules.	
8D - describe the influence of intermolecular forces on the physical and chemical properties of covalent compounds		8D – relate the polarity of a molecule to its physical and chemical properties.	
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		2D & E – apply the steps of the scientific method to lab investigations.	

trends from data		
2E - communicate valid conclusions		
Language of Instruction:		Instructional Resources/Textbook Correlations:
Conductivity		Glencoe Chemistry: Concepts and Applications – chapter 9
Double bond		Molecular model lab
Ductile		Molecular polarity – surface tension
Electron affinity		Molecular polarity - chromatography
Malleable		
Metallic bond		
Ionic bond		
Covalent bond		
Polarity		
Triple bond		
Single bond		
Lewis diagram		
Evaluation/External Assessment/Local Assessment:		Weblinks/Other Resources:
Best Instruction Timeline:		
TAKS test (1.1A, 1.2A-D, 4.7D)		1 day – electron affinity and bond type prediction
Teacher-designed test		3 days – dot diagrams and molecular model lab
Laboratory reports and performance		3 days – polarity and labs
Quizzes		2 days – review and assessment
Daily work		
Homework		