

Instructional Guide

Grade Level Tenth Subject Chemistry School System Pickens County

School Year 2011-2012

Time Period (Pacing – when)	State Assessment Correlations	Standards/ Components (Pacing – what)	Resources/ Activities (Pacing – how) Curricular Alignment	Date of Common Formative Assessment (Pacing – how well)	Mapping Comments (What works what needs adjustment)
1 st 9 weeks 1 st week		CH.1. Differentiate among pure substances, mixtures, elements, and compounds. CH.1.B.1 Distinguishing between intensive and extensive properties of matter. CH.1.B.2 Contrasting properties of metals, nonmetals, and metalloids. CH.1.B.3 Distinguishing between homogeneous and heterogeneous forms of matter.	Modern Chemistry pages 3-21 Teaching Materials Flow Chart on matter PowerPoint Demo Flow Chart Chemistry Video Safety Video Lab Review Metals and Nonmetals Lab		

Time Period (Pacing – when)	State Assessment Correlations	Standards/ Components (Pacing – what)	Resources/ Activities (Pacing – how) Curricular Alignment	Date of Common Formative Assessment (Pacing – how well)	Mapping Comments (What works what needs adjustment)
2 nd week		CH.2 Describe the structure of carbon chains, branched chains, and rings. CH.2.a. Describe the structure of carbon chains CH.2.b. Describe the structure of branched chains CH.2.c. Describe rings	Modern Chemistry pages 711-739 PowerPoint Draw Structures		
3 rd week		CH.3. Use the periodic table to identify periodic trends, including atomic radii, ionization energy, electro negativity, and energy levels.	Modern Chemistry page 150-164 Explain Energy, Trends Electro negativity Use electro negativity Chart Demo Chart Work Electro negativity Problems		
4 th week		CH.3.B.1.a Utilizing electron configurations	Modern Chemistry page 133-150 Handouts PowerPoint Orbital Chart Practice		

Time Period (Pacing – when)	State Assessment Correlations	Standards/ Components (Pacing – what)	Resources/ Activities (Pacing – how) Curricular Alignment	Date of Common Formative Assessment (Pacing – how well)	Mapping Comments (What works what needs adjustment)
5 th week		CH.3.B.1.b Lewis dot structures/ Orbital Notations	Modern Chemistry pages 184-189 PowerPoint Practice Problem		
6 th week		CH.3.B.1.c Write Chemical Formulas	Modern Chemistry pages 178 Learn Polyatomic Ions Nomenclature Chart Formulas		
7 th week		CH.3.B.2. Calculating the number of protons, neutrons, and electrons in an isotope	Modern Chemistry pages 77-79 PowerPoint with Avogadro's Teach the mole Molar mass practice problems		
8 th week		CH.3.B.3. Utilizing benchmark discoveries to describe the historical development of atomic structure, including photoelectric effect, absorption, and emission spectra of elements.	Modern Chemistry Page 97-110 Power point Visible Spectrum project		

Time Period (Pacing – when)	State Assessment Correlations	Standards/ Components (Pacing – what)	Resources/ Activities (Pacing – how) Curricular Alignment	Date of Common Formative Assessment (Pacing – how well)	Mapping Comments (What works what needs adjustment)
9 th week		CH.4 Describe solubility in terms of energy changes associated with the solution process. CH.4.B.1 Using solubility curves to interpret saturation levels CH.4.B.2 Explaining the conductivity of electrolytic solutions	Modern Chemistry Pages 401-424 PowerPoint Handouts		
		Mid Terms			
2 nd Nine weeks 1 st Week		CH.4.B.3 Describing acids and bases in terms of strength, concentration, pH, and neutralization reactions CH.4.B.4 Describing factors that affect the rate of solution CH.4.B.5 Solving problems involving molarity, including solution preparation and dilution	Modern Chemistry Pages 401-424 PowerPoint Handouts		

Time Period (Pacing – when)	State Assessment Correlations	Standards/ Components (Pacing – what)	Resources/ Activities (Pacing – how) Curricular Alignment	Date of Common Formative Assessment (Pacing – how well)	Mapping Comments (What works what needs adjustment)
2 nd Week		CH.5. Use the kinetic theory to explain states of matter, phase changes, solubility, and chemical reactions. CH.6. Solve stoichiometric problems involving relationships among the number of particles, moles, and masses of reactants and products in a chemical reaction.	Modern Chemistry Pages 329-348 PowerPoint Demo Modern Chemistry 299-312 Teach the problems Practice Problem Find additional problems		
3 rd week & 4 th week		CH.6.B.1 Predicting ionic and covalent bond types and products given known reactants CH.6.B.2 Assigning oxidation numbers for individual atoms of monatomic and polyatomic ions CH.6.B.3 Identifying the nomenclature of ionic compounds, binary compounds, and acids	Modern Chemistry PowerPoint Models		

Time Period (Pacing – when)	State Assessment Correlations	Standards/ Components (Pacing – what)	Resources/ Activities (Pacing – how) Curricular Alignment	Date of Common Formative Assessment (Pacing – how well)	Mapping Comments (What works what needs adjustment)
5 th week		CH.6.B.4. Classifying chemical reactions as composition, decomposition, single replacement, or double replacement	Modern Chemistry PowerPoint Models		
6 th week		CH.6.B.5 Determining the empirical or molecular formula for a compound using percent composition data	Modern Chemistry pages 245-250 Present problems Provide information on practice		

Time Period (Pacing – when)	State Assessment Correlations	Standards/ Components (Pacing – what)	Resources/ Activities (Pacing – how) Curricular Alignment	Date of Common Formative Assessment (Pacing – how well)	Mapping Comments (What works what needs adjustment)
7 th week		CH.7.B.1.a Explain the behavior of the ideal gas law in terms of pressure, volume, temperature and number of particles. CH.7.B.1.b Explain Charles's Law Boyle's law, Gay-Lussac's law, CH.7.B.1.c Explain the combined gas law. CH.7.B.1.d Explain the ideal gas law.	Modern Chemistry page 361-388 Present problems Provide information on practice		

Time Period (Pacing – when)	State Assessment Correlations	Standards/ Components (Pacing – what)	Resources/ Activities (Pacing – how) Curricular Alignment	Date of Common Formative Assessment (Pacing – how well)	Mapping Comments (What works what needs adjustment)
8 th week		CH.8 Distinguish among endothermic and exothermic physical and chemical changes. CH.8.B.1 Calculating temperature change by using specific heat CH.8.B.2 Using Le Châtelier's principle to explain changes in physical and chemical equilibrium	Modern Chemistry page 532-533		
9 th week		CH.9.B.1 Identifying atomic and subatomic particles, including mesons, quarks, tachyons, and baryons CH.9.B.2 Calculating the half-life of selective radioactive isotopes CH.9.B.3. Identifying types of radiation and their properties CH.9.B.4. Contrasting fission and fusion CH.9.B.5 Describing carbon-14 decay as a dating method	Modern Chemistry 681-701 PowerPoint Lecture Internet materials		