Instructional Guide

Grade Level Eighth **Subject Physical Science** **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)
1st Nine Weeks		8.1 Identify steps within the scientific process. 8.1.B.4. Identifying examples of hypotheses.	Glencoe Science-Introduction to Physical Science, Pages 12-17.Pages 27-30. Workbook pages. Internet resources. Peer tutoring, study guides, Extra time on assignments, graphic organizers		
1st Nine Weeks		8.1.B.1. Applying process skills to interpret data from graphs, tables, and charts.	Glencoe Science- Introduction to Physical Science, Pages 56-59. Samples throughout text. Workbook pages. Internet resources for graphs, tables, charts. Peer tutoring, study guides, Extra time on assignments, graphic organizers		

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1st Nine Weeks		8.1.B.2.a. Identify controls in a scientific investigation. 8.1.B.2.b. Identify variables in a scientific investigation.	Glencoe Science-Introduction to Physical Science, Page 18. Internet Resources Peer tutoring, study guides, Extra time on assignments, graphic organizers		
1st Nine Weeks		8.1.B.3. Measuring dimension, volume, and mass using the *Systeme' Internationale d'Unites* (SI units).	Glencoe Science-Introduction to Physical Science, Pages 50-54. Workbook pages. Internet resources. Peer tutoring, study guides, Extra time on assignments, graphic organizers		
1st Nine Weeks		8.1.B.5. Identifying appropriate laboratory glassware, balances, time measuring equipment, and optical instruments used to conduct an investigation.	Glencoe Science-Introduction to Physical Science, Pages 19-20. Throughout text. Internet resources. Peer tutoring, study guides, Extra time on assignments, graphic organizers		

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1st Nine Weeks		8.2. Identify the structure of atoms, including the location of protons, neutrons, and electrons. 8.2.B.1. Identifying the charge of the subatomic particles.	Glencoe Science-Introduction to Physical Science, Pages 72-79. Pages 162-163. Workbook pages. Peer tutoring, study guides, Extra time on assignments, graphic organizers		
1st Nine Weeks		8.2.B.2.a. Identifying Democritus as a contributor to the atomic theory. 8.2.B.2.b. Identifying Dalton as a contributor to the atomic theory.	Glencoe Science-Introduction to Physical Science, Pages 73, 75. Workbook pages. Peer tutoring, study guides, Extra time on assignments, graphic organizers		
1st Nine Weeks		8.3. Determine the number of protons, neutrons, and electrons, and the mass of an element using the periodic table.	Glencoe Science-Introduction to Physical Science, Pages 81-84. Back text cover. Pages 162-164. Workbook Pages. Internet resources. Peer tutoring, study guides, Extra time on assignments, graphic organizers		

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1st Nine Weeks		8.3.B.1. Locating metals, nonmetals, metalloids, and noble gases on the periodic table.	Glencoe Science-Introduction to Physical Science, Pages 84-85. Pages 166-167. Workbook pages. Internet resources. Peer tutoring, study guides, Extra time on assignments, graphic organizers		
1st Nine Weeks		8.3.B.2. Using data about the number of electrons in the outer shell of an atom to determine its reactivity.	Glencoe Science-Introduction to Physical Science, Pages 163-165. Workbook pages. Peer tutoring, study guides, Extra time on assignments, graphic organizers		
1st Nine Weeks		8.4. State the law of conservation of matter.	Glencoe Science-Introduction to Physical Science, Page 74. Workbook pages. Peer tutoring, study guides, Extra time on assignments, graphic organizers		

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1st Nine Weeks		8.4.B.1. Balancing chemical equations by adjusting coefficients.	Glencoe Science-Introduction to Physical Science, Pages 195-196. Workbook pages. Internet resources. Peer tutoring, study guides, Extra time on assignments, graphic organizers		
**Teach at end of 2nd Nine Weeks if taught 1st Semester **Teach in 1st Nine Weeks if taught in 2nd Semester	CS 7 EC Apply Mendel's laws to determine phenotypic and genotypic probabilities of offspring	Prerequisite for Alabama High School Graduation Exam for Biology	Glencoe Science-Life Science, 126-132 . Workbook pages. Internet resources Peer tutoring, study guides, Extra time on assignments, graphic organizers		
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2nd Nine Weeks		8.5. Differentiate between ionic and covalent bonds.	Glencoe Science-Introduction to Physical Science, Pages 170-172. Pages 224-226. Workbook pages. Internet resources. Peer tutoring, study guides, Extra time on assignments, graphic organizers		
2nd Nine Weeks		8.5.B.1. Illustrating the transfer or sharing of electrons using electron dot diagrams.	Glencoe Science-Introduction to Physical Science, Pages 168-169. Workbook pages. Internet resources. Peer tutoring, study guides, Extra time on assignments, graphic organizers		

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2nd Nine Weeks		8.6. Define solution in terms of solute and solvent.	Glencoe Science-Introduction to Physical Science, Pages 220-223. Workbook pages. Peer tutoring, study guides, Extra time on assignments, graphic organizers		
2nd Nine Weeks		8.6.B.1. Defining diffusion and osmosis.	Not in textbook. Internet resources, other textbooks. Peer tutoring, study guides, Extra time on assignments, graphic organizers		
2nd Nine Weeks		8.6.B.2 Defining isotonic, hypertonic, and hypotonic solutions.	Not in textbook. Internet resources, other textbooks. Peer tutoring, study guides, Extra time on assignments, graphic organizers		

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2nd Nine Weeks		8.6.B.3 Describing acids and bases based on their hydrogen ion concentration.	Glencoe Science-Introduction to Physical Science, Pages 232-237. Workbook pages. Peer tutoring, study guides, Extra time on assignments, graphic organizers		
2nd Nine Weeks		8.7.Describe states of matter based on kinetic energy of particles in matter.	Glencoe Science-Introduction to Physical Science, Pages 102-114. Workbook pages. Peer tutoring, study guides, Extra time on assignments, graphic organizers		
2nd Nine Weeks		8.7.B.1. Explaining effects of temperature, concentration, surface area, and catalysts on the rate of chemical reactions.	Glencoe Science-Introduction to Physical Science, Pages 202-206. Workbook pages. Peer tutoring, study guides, Extra time on assignments, graphic organizers		

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2nd Nine Weeks		8.8. Identify Newton's three laws of motion.	Glencoe Science-Introduction to Physical Science, Chapter 11 Workbook pages. Internet resources, labs. Peer tutoring, study guides, Extra time on assignments, graphic organizers		
2nd Nine Weeks		8.8.B.1.a. Defining terminology such as acceleration and momentum. 8.8.B.2. Interpreting distance-time graphs	Glencoe Science-Introduction to Physical Science, Chapter 10. Workbook pages. Internet resources Peer tutoring, study guides, Extra time on assignments, graphic organizers		
2nd Nine Weeks		8.8.B.1.b. Defining terminology such as action and reaction forces, inertia, and friction.	Glencoe Science-Introduction to Physical Science, Pages 293, 323-324, 312-315. Workbook pages. Peer tutoring, study guides, Extra time on assignments, graphic organizers		

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2nd Nine Weeks		8.9. Describe how mechanical advantages of simple machines reduce the amount of force needed for work.	Glencoe Science-Introduction to Physical Science, Pages 412-414, 417-423. Workbook pages. Internet resources Peer tutoring, study guides, Extra time on assignments, graphic organizers		
2nd Nine Weeks		8.9.B.1. Describing the effect of force on pressure in fluids.	Glencoe Science-Introduction to Physical Science, Pages 116-123, 356-358. Workbook pages. Internet resources. Peer tutoring, study guides, Extra time on assignments, graphic organizers		

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2nd Nine Weeks		8.10. Differentiate between potential and kinetic energy.	Glencoe Science-Introduction to Physical Science, Pages 374-376, 380, Workbook pages. Internet resources Peer tutoring, study guides, Extra time on assignments, graphic organizers		
2nd Nine Weeks		8.11.a. Explain the law of conservation of energy and its relationship to energy transformation, including chemical to electrical.	Glencoe Science-Introduction to Physical Science, Pages 380-383. Workbook pages. Internet resources Peer tutoring, study guides, Extra time on assignments, graphic organizers		
2nd Nine Weeks		8.11.b. Explain the law of conservation of energy and its relationship to energy transformation, including chemical to heat.	Glencoe Science-Introduction to Physical Science, Pages 380-383. Workbook pages. Internet resources Peer tutoring, study guides, Extra time on assignments, graphic organizers		

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2nd Nine Weeks		8.11.c. Explain the law of conservation of energy and its relationship to energy transformation, including electrical to light.	Glencoe Science-Introduction to Physical Science, Pages 380-383. Workbook pages. Internet resources Peer tutoring, study guides, Extra time on assignments, graphic organizers		
2nd Nine Weeks		8.11.d. Explain the law of conservation of energy and its relationship to energy transformation, including electrical to mechanical.	Glencoe Science-Introduction to Physical Science, Pages 380-383. Workbook pages. Internet resources Peer tutoring, study guides, Extra time on assignments, graphic organizers		
2nd Nine Weeks		8.11.e. Explain the law of conservation of energy and its relationship to energy transformation, including electrical to sound.	Glencoe Science-Introduction to Physical Science, Pages 380-383. Workbook pages. Internet resources Peer tutoring, study guides, Extra time on assignments, graphic organizers		

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2nd Nine Weeks		8.12. Classify waves as mechanical or electromagnetic.	Glencoe Science-Introduction to Physical Science, Pages 462-466. Workbook pages. Internet resources Peer tutoring, study guides, Extra time on assignments, graphic organizers		
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