


IPC Curriculum Bundle #10

Title		Suggested Dates
Chemical Reactions		3/22 – 4/16/2010 (19 days)

Big Idea/Enduring Understanding	Guiding Questions
Atoms combine and recombine to form different compounds. These combinations and recombinations are made possible through the exchange of energy. Atoms form bonds to acquire a stable arrangement of electrons.	How are chemical reactions different from nuclear reactions? Why does the law of conservation of mass require balancing chemical equations?

The resources included here provide teaching examples and/or meaningful learning experiences to address the District Curriculum. In order to address the TEKS to the proper depth and complexity, teachers are encouraged to use resources to the degree that they are congruent with the TEKS and research-based best practices. Teaching using only the suggested resources does not guarantee student mastery of all standards. Teachers must use professional judgment to select among these and/or other resources to teach the district curriculum.

Knowledge & Skills with Student Expectations	District Specificity/Examples	Suggested Resources (See note above)
<p>8 The student knows that changes in matter affect everyday life.</p> <p>8C Investigate and identify the law of conservation of mass.</p>	<p>Including</p> <ul style="list-style-type: none"> • Identify the parts of a chemical equation • Reactants • Product • Balance chemical equations • Determine the number of atoms in a chemical compound • Classify different reaction types • Synthesis • Decomposition • Combustion • Single displacement • Double displacement • <i>demonstrate that mass is conserved when substances undergo chemical change and that the number and kind of atoms are the same in the reactants and products</i> 	<p>RXN Lab (Reaction Lab)</p> <p>“Comparing Molecules” – <u>Investigations in Physics and Chemistry</u></p> <p>“Chemical Changes Lab” – <u>Investigations in Physics and Chemistry</u></p> <p>“Fire Videos” - <u>http://streaming.discoveryeducation.com/search/assetDetail.cfm?guidAssetID=799447FF-C1C6-4821-AE17-168CB0882BB5</u></p> <p><u>http://streaming.discoveryeducation.com/search/assetDetail.cfm?guidAssetID=35792cf5-7de8-4164-abac-1bb1bd74ddd5&tabDisplay=districtContent&rand=73C519F5-1560-0CC5-36560C13DAB6BDB8</u></p>
<p>9 The student knows how solution chemistry is a part of everyday life.</p> <p>9B Relate the concentration of ions in a solution to physical and chemical properties.</p>	<p>Including</p> <ul style="list-style-type: none"> • pH • Strong acid • Weak acid • Strong base 	<p>“Acids, Bases, and pH Lab” – <u>Investigations in Physics and Chemistry</u></p> <p>Acid Lab (Zinc and HCl, Snake (dehydration of sugar) demonstrations)</p>

IPC Curriculum Bundle #10

	<ul style="list-style-type: none">• Weak base• Reactivity• Know the pH scale, common acids and bases	Have students compare the taste of crushed Vitamin C (acid), and Ivory Soap (base).
9 The student knows how solution chemistry is a part of everyday life. 9C Simulate the effects of acid rain on soil, buildings, statues, or microorganisms.	Including <ul style="list-style-type: none">• Propose ways to eliminate or reduce acid rain	“Acid Rain Lab” – <u>Investigations in Physics and Chemistry</u>