


## IPC Curriculum Bundle #1

<b>Title</b>		<b>Suggested Dates</b>
Safety, Scientific Methods, Measurements, & Models		8/25 – 9/11/2009 (9 days)

<b>Big Idea/Enduring Understanding</b>	<b>Guiding Questions</b>
Scientific methods are used to problem-solve, communicate, acquire new knowledge, and evaluate information to get answers to questions. Safety procedures will be followed when using equipment and taking measurements.	<p>Why will we have 180 safe days in IPC?</p> <p>How can I use scientific methods &amp; problem solving skills the rest of my life?</p> <p>Why do scientists use the metric system of measurement?</p>

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><b>1 For at least 40% of instructional time, conducts field and laboratory investigations using safe, environmentally appropriate, ethical practices, and investigations.</b></p> <p><b>1A</b> Demonstrate safe practices during field and laboratory investigations.</p>	<p>Including</p> <ul style="list-style-type: none"> <li>• Interpret MSDS</li> <li>• implement district safety program in every science class</li> </ul>	<p><a href="#">Texas Safety Standards</a></p> <p>“Science Safety Agreement”</p> <p>District safety rules and guidelines</p> <p>Safety Lab</p> <p>Lab Safety Power Point</p> <p>MSDS</p> <p>Safety Poster</p>
<p><b>1 For at least 40% of instructional time, conducts field and laboratory investigations using safe, environmentally appropriate, ethical practices, and investigations.</b></p> <p><b>1B</b> Make wise choices in the use and conservation of resources and the disposal or recycling of materials.</p>		
<p><b>2 Uses scientific methods during fields &amp; laboratory investigations.</b></p> <p><b>2A</b> Plan and implement investigative procedures including asking questions, formulating testable</p>	<p>Including</p> <ul style="list-style-type: none"> <li>• Model the steps of the scientific method</li> <li>• Write a scientific lab report</li> </ul>	

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hypotheses, and selecting equipment and technology.		
<b>2 Uses scientific methods during fields &amp; laboratory investigations.</b>  2B Collect data and make measurements with precision.	Including <ul style="list-style-type: none"> <li>• Measure with photogate timers, triple-beam balances, digital balances, thermometers, metric rulers, graduated cylinders, multimeters, and force meters with accuracy</li> </ul>	Flick Lab  Photogate Lab – <u>Investigations in Chemistry and Physics</u>
<b>2 Uses scientific methods during fields &amp; laboratory investigations.</b>  2C Organize, analyze, evaluate, make inferences, and predict trends from data,	Including <ul style="list-style-type: none"> <li>• Identify independent and dependant variables</li> <li>• Construct and interpret data from graphs and data table</li> </ul>	Helicopter Lab
<b>2 Uses scientific methods during fields &amp; laboratory investigations.</b>  2D Communicate valid conclusions.		
<b>3 Uses critical thinking and scientific problem solving to make informed decisions.</b>  3A Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information.		
<b>3 Uses critical thinking and scientific problem solving to make informed decisions.</b>  3B Draw inferences based on data related to promotional materials for products and services		
<b>3 Uses critical thinking and scientific problem solving to make informed decisions.</b>  3C Evaluate the impact of research on scientific thought, society, and the environment.		
<b>3 Uses critical thinking and scientific problem solving to make informed decisions.</b>  3D Describe connection between Physics and Chemistry and future careers.		