

Course: Fifth Grade Pre-AP Science			Designated Six Weeks: Throughout the Year		
Unit: Safety and Process Skills			Days to Teach: Throughout the Year		
TEKS	Guiding Questions	Assessment	Vocabulary	Instructional Strategies	Resources/ Weblinks

<p><u>Safety</u> 5.1 A Demonstrate safe practices and the use of safety equipment as described in the Texas Safety Standards during classroom and outdoor investigations.</p> <p>5.1 B Make informed choices in the conservation, disposal, and recycling of materials.</p> <p><u>Tools</u> 5.4 A Collect, record, analyze information using tools, including calculators, microscopes, cameras, computer, hand lenses, metric rulers, Celsius thermometers, prisms, mirrors, pan</p>	<p>Where is everything located in the lab?</p> <p>What precautions are used to ensure safety in the lab?</p> <p>What are the procedures for using lab equipment?</p>	<p>Safety Quiz</p>	<p>Safety Symbol Precaution All tools listed in 5.4A</p>	<p>Show pictures of safety equipment</p> <p>Show icons of safety lab requirements on lab handouts.</p> <p>Teacher models safe use of equipment</p>	<p>Lab Safety Powerpoints: http://science.pppst.com/labwork.html</p> <p>The Science Spot: Activities for measuring using various units of measurement. http://sciencespot.net/Pages/classmetric.html</p>

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<p>balances, triple beam balances, spring scales, graduated cylinders, beakers, hot plates, meter sticks, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observations of habitats or organisms such as terrariums and aquariums.</p> <p>5.4B Use safety equipment, including safety goggles and gloves.</p> <p>5.2A Describe, plan and implement simple experimental investigations testing one variable;</p> <p>5.2B Ask well-defined questions formulate testable hypothesis, and select and use appropriate equipment and technology</p>	<p>What is a testable question/experiment/hypothesis?</p> <p>How do you design and implement a testable experiment? If then.... statements?</p> <p>What is a hypothesis and how do you form one?</p> <p>What is a variable in an experiment?</p>	<p>Write testable questions.</p> <p>Write an experimental hypothesis.</p>	<p>Hypothesis Conclusion Procedure Experiment Evidence Investigation Inquiry Limitations Testing Valid Testable Control Variable Repeatable Responsible Communicate Line graph Data chart Bar graph</p>	<p>Making Data Tables and Graphs</p> <p>How To Make Valid Conclusion</p> <p>CBD Lab- Gummy Bear Graphing (Required)</p> <p>Lab Safety Quiz</p>	<p>Science Lab Equipment: http://staff.tuhsd.k12.az.us/gfoster/standard/labeq.htm</p> <p>Safe Science Video: UnitedStreaming http://www.discoveryeducation.com/?ErrMsg=Please%20provide%20a%20Username%20and%20Password&returnUrl=player%2Ediscoveryeducation%2Ecom%2Findex%2Ecfm%3FguidAssetId%3D84D2F0CF%2D1249%2D4AF8%2DB28F%2D3EDED34F1C50%26blnFromSearch%3D1%26productcode%3DUS&query_string=</p> <p>Creating Graphs: http://nces.ed.gov/nceskids/graphing/Classic/</p>
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<p>5.2C Collect information by detailed observations and accurate measuring;</p> <p>5.2D Analyze and interpret information to construct reasonable explanations from direct (observable) and indirect (inferred) evidence.</p> <p>5.2E Demonstrate that repeated investigations may increase the reliability of results;</p> <p>5.2F Communicate valid conclusions in both written and verbal forms;</p> <p>5.2G Construct appropriate simple graphs, tables, maps and charts using technology including computers, to organize, examine and evaluate information.</p>	<p>How do you collect data?</p> <p>What should a data table and graph look like?</p> <p>Why do I need to communicate my findings and how is it done?</p>	<p>Construct a simple bar graph.</p> <p>Given a table, communicate some valid conclusions.</p>	<p>Metric Centimeter(cm) Meter(m) Gram(g) Millimeter (ml) Kilometer(km) Kilogram(kg) Model System Interpret Reliable</p>	<p>Provide examples of various graphs found in newspapers, magazines, or the internet. Analyze the differences and commonalities.</p>	<p>Graphing Lessons: http://www.teach-nology.com/teachers/lesson_plans/math/graphing/</p> <p>Scientific Method: http://www.biology4kids.com/files/studies_scimethod.html</p> <p>Scientific Method WebQuest: http://mrscienceut.net/scientificmethod.html</p>
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<p><u>Critical Thinking</u> 5.3A In all fields of science, analyze, evaluate and critique scientific explanations by using empirical evidence, logical reasoning and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student.</p> <p>5.3B Evaluate the accuracy of the information related to promotional materials for products and services such as nutritional labels.</p> <p>5.3C Draw or develop a model that represents how something works or looks that cannot be seen such as how a soda dispensing machine works.</p>					<p>Thinking Like A Scientist: http://schoolscience.rice.edu/duker/life/lifescithink.html</p>
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