



Science  
Eighth Grade  
Core Curriculum

Unit Name: Nature of Science		6 Weeks Days to Teach: 1 <sup>st</sup> –and throughout the year	
Date Taught	TEKS	Content/Vocabulary	Guiding Questions
	<p>(1) Scientific processes. The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:</p> <p>(A) demonstrate safe practices during field and laboratory investigations; and</p> <p>(B) make wise choices in the use and conservation of resources and the disposal or recycling of materials.</p> <p>(2) Scientific processes. The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:</p> <p>(A) plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology;</p> <p>(B) collect data by observing and measuring;</p> <p>(C) organize, analyze, evaluate, make</p>	<p>Problem Hypothesis Procedures Manipulated/ Independent Variable Responding/Dependent Variable Controlled variables Results Data Circle Graph Line Graph Bar Graph Conclusion MSDS Model All Scientific Tools</p>	<p>What kind of questions can be tested?</p> <p>What are the variables affecting the experiment?</p> <p>How can the variables be controlled?</p> <p>What does the MSDS tell you?</p>



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	<p>inferences, and predict trends from direct and indirect evidence;</p> <p>(D) communicate valid conclusions; and</p> <p>(E) construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data.</p> <p>(3) Scientific processes. The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:</p> <p>(A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;</p> <p>(B) draw inferences based on data related to promotional materials for products and services;</p> <p>(C) represent the natural world using models and identify their limitations;</p> <p>(D) evaluate the impact of research on scientific thought, society, and the</p>		
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	<p>environment; and</p> <p>(E) connect Grade 8 science concepts with the history of science and contributions of scientists.</p> <p>(4) Scientific processes. The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:</p> <p>(A) collect, record, and analyze information using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, hot plates, dissecting equipment, test tubes, safety goggles, spring scales, balances, microscopes, telescopes, thermometers, calculators, field equipment, computers, computer probes, water test kits, and timing devices; and</p> <p>(B) extrapolate from collected information to make predictions.</p> <p>(5) Scientific processes. The student knows that relationships exist between science and technology. The student is expected to:</p>		
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	<p>(A) identify a design problem and propose a solution;</p> <p>(B) design and test a model to solve the problem; and</p> <p>(C) evaluate the model and make recommendations for improving the model.</p>		
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