

Planned Course: Physics I		Course Number: S403	Department: Science
Unit: History, Math, Science, Measurement Systems		Grade Level: 11-12	
Estimated Time: 2 weeks		Level/Track:	Date Approved: 8/24/09
PA Academic Standards	Core Concepts (in question format) • Skills/Knowledge	Activities/Strategies/Study Skills (identify some activities as remedial or enrichment activities)	Assessments (include types and topics)

<p>3.1.12 Unifying Themes</p> <p>B. Apply concepts of models as a method to predict and understand science and technology.</p> <p>C. Assess and apply patterns in science and technology.</p> <p>D. Analyze scale as a way of relating concepts and ideas to one another by some measure.</p> <p>E. Evaluate change in nature, physical systems and man made systems.</p> <p>3.2.12 Inquiry and design</p> <p>A. Evaluate the nature of scientific and technological knowledge.</p> <p>C. Apply the elements of scientific inquiry to solve multi step problems.</p>	<p>► What is physics?</p> <ul style="list-style-type: none"> Recognize that physics is the most basic science. Recognize the areas within physics. Understand the fundamental steps of the scientific method. <p>► How are measurements made in physics?</p> <ul style="list-style-type: none"> Use the SI system of measurement. Understand how basic units are used to form derived units. Discern between accuracy and precision of measurement instruments. Correctly record measurements using significant figures. Use methods of dimensional analysis to convert between measurement systems. 	<ul style="list-style-type: none"> Take notes on explanations from lectures. Engage in discussions of history of physics as far back as Aristotle and ending with Newton. Demonstrate problem solving techniques at the blackboard. Do computer research on the building of the "paper Tower Lab assignment" Answer homework questions from text and/or worksheets. (Ch 1 pgs 8 & 9) Use scientific method while performing laboratory experiments. In first lab construct "Paper Tower" Study text Chapter 1 "About Science" Take notes from text reading assignments and additional explanations from lectures. Answer homework 	<ul style="list-style-type: none"> Completion of homework. Discussion of homework assignments. Class participation in discussions of topics surrounding everyday events illustrating the assignments. Written reports of laboratory exercises. Class participation Written Chapter test Written pop quiz(s) Written reports of laboratory exercises
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3.4.12 Physical Science, Chemistry and Physics C. Apply the principles of motion and force.	▶ How is math used as the language of physics? • Understand how to use equations to describe patterns found in natural phenomena.	questions from text and from worksheets. • Perform laboratory exercise dealing with: "Measurement of Length"			
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