

Stamford Public Schools Professional Learning Plan 2011-2012

High School Science

Please complete the below action planning template to delineate your department's/school's proposal for professional learning experiences during the 2011-12 school year (in the sequence in which the experiences will occur).

Action Item <i>(Type of professional learning activity)</i>	Proposed Date and Location(s)	Professional Development Experience <i>What will participants do?</i>	Anticipated Outcome <i>Participants will know and be able to:</i>	Evaluation of Professional Development <i>How will the professional learning be assessed at the four levels of evaluation?</i>
Laying the Foundation in Science, Module 5, Full Day PD	August 30, 2011	Biology: Measurement and Statistics <ul style="list-style-type: none"> • Participants will discuss and develop student skills related to measurements and statistics in the biology classroom. • Participants will experience lessons that incorporate microscopes and graphing calculators. • Participants will discuss data analysis and its inclusion in laboratory reports 	<ul style="list-style-type: none"> • Participants will prepare more of their students for AP level science courses. 	
		Chemistry: Mathematics and the Periodic Table <ul style="list-style-type: none"> • Participants will discuss mathematical problem solving strategies in chemistry and investigate relationships between elements on the periodic table • Participants will use labs as a way of solidifying student understanding of periodic trends and their role in chemical behavior • Participants will examine AP style questions and common 	<ul style="list-style-type: none"> • Participants will prepare more of their students for AP level science courses. 	

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		<p>student misconceptions to further develop the instructional strategies designed to promote student success</p>		
		<p>Physics: Kinematics, 2 Dimensional Motion, Impulse and Momentum</p> <ul style="list-style-type: none"> • Participants will investigate kinematics, 2 dimensional motion, momentum and impulse • Participants will perform experiments exploring acceleration in one and two dimensions • Participants will perform activities that emphasize graphing and vectors to enhance understanding and development of concepts • Participants will engage in exercises and examine assessments that strengthen problem solving and analysis of motion 	<ul style="list-style-type: none"> • Participants will prepare more of their students for AP level science courses. 	<p><u>Level 1:</u> EZTraxx survey, Evaluation at Session, 3-2-1 Exit Slip <u>Level 2:</u> Application of learning individually and in groups during the session <u>Level 3:</u> Building Science Administrator to perform classroom visits to observe implementation of program based on exit slips from teachers at the end of the session</p>
<p>Introduction to Physics Curriculum, District Wednesday, 2 hours (second</p>	<p>September 14, 2011</p>	<p>Physics</p> <ul style="list-style-type: none"> • Participants will review district curriculum documents that were developed by the physics curriculum committee over the summer. 	<ul style="list-style-type: none"> • Participants will modify classroom instruction based on the new curriculum documents 	

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hour voluntary paid)				
Laying the Foundation in Science, Module 6, Full Day PD	November 8, 2011	Biology: Chemistry of Life and Cells II <ul style="list-style-type: none"> Participants will investigate the laws of thermodynamics and kinetics in the context of biology Participants will incorporate probeware and modeling techniques as they explore enzyme catalysis and membrane structure 	<ul style="list-style-type: none"> Participants will prepare more of their students for AP level science courses. 	<u>Level 1:</u> EZTraxx survey, Evaluation at Session, 3-2-1 Exit Slip <u>Level 2:</u> Application of learning individually and in groups during the session <u>Level 3:</u> Building Science Administrator to perform classroom visits to observe implementation of program based on exit slips from teachers at the end of the session
		Chemistry, Intermolecular Forces and Condensed States of Matter <ul style="list-style-type: none"> Participants will use a variety of techniques to explore intermolecular forces and the solid and liquid states Participants will use computer simulations, probeware, and traditional lab activities Participants will discuss common student misconceptions and strategies to overcome those obstacles Participants will examine Pre-AP assessments to better prepare their students for the expectations of AP science. 	<ul style="list-style-type: none"> Participants will prepare more of their students for AP level science courses. 	
		Physics: Dynamics; Work, Power	<ul style="list-style-type: none"> Participants will prepare more of 	

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		<p>and Energy</p> <ul style="list-style-type: none"> • Participants will explore dynamics, Newton’s laws, free body diagrams, work, power and energy • Participants will perform experiments using carts and ramps and use technology to investigate Newton’s 2nd Law and the effects of friction • Participants will use a roller coaster lab to develop concepts of work, power and energy • Participants will practice with free body diagrams and their importance in problem solving 	<p>their students for AP level science courses.</p>	
<p>Science Assessment, District Wednesday, 2 hours (second hour voluntary paid)</p>	<p>November 9, 2011 [December 14 is a school-based PD day]</p>	<ul style="list-style-type: none"> • Participants will preview science midterms • Participants will use common questions to analyze data from Quarter 1 District Benchmark Science Assessments 	<ul style="list-style-type: none"> • Participants will have an understanding of the types of questions, concepts, and skills that will be on the science midterms. • Participants will use Quarter 1 District Benchmark Assessment data analysis to inform their instruction for this year and in future years. 	
<p>Data Analysis for Science Midterms, District Wednesday, 2 hours (second hour voluntary</p>	<p>February 8, 2012</p>	<ul style="list-style-type: none"> • Participants will use common questions to analyze data from science midterm assessments 	<ul style="list-style-type: none"> • Participants will use District Midterm Assessment data analysis to inform their instruction for this year and in future years. • Participants’ instructional practices will align with curriculum expectations 	

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paid)				
Science Laboratory Safety, Early Release Day PD	April 11, 2012	<ul style="list-style-type: none"> Participants will be informed about required personal protective safety gear and science laboratory classroom safety regulations. 	<ul style="list-style-type: none"> Participants will be aware of and follow OSHA safety regulations in the science laboratory classrooms and storage/preparation areas. 	<p><u>Level 1:</u> EZTraxx survey, Evaluation at Session, 3-2-1 Exit Slip</p> <p><u>Level 2:</u> Application of learning individually and in groups during the session</p> <p><u>Level 3:</u> Building Science Administrator to perform classroom visits to observe implementation of program based on exit slips from teachers at the end of the session</p>
Science Safety Update, District Wednesday, (second hour voluntary paid)	May 9, 2012	<ul style="list-style-type: none"> Participants will report on safety needs for their laboratories: MSDS sheets, personal safety gear, etc. Participants will provide feedback on progress of science safety plans being implemented 	<ul style="list-style-type: none"> Participants will report the condition of their safety equipment and inform the district of any deficiencies that need correction. 	