



**Alliance For Physics Excellence (APEX)
 Fall Weekend Workshop – Cohort 1
 Physics Teacher Institute (PTI) Activity Schedule
 Alabama A & M University**



November 7-8, 2014

Day 1 - November 7, 2014

8:00 - 8:15 AM	<input type="checkbox"/> Welcome/Greetings/Announcements <input type="checkbox"/> Introduction of Eric R. Banilower & Sean Smith, Horizon Research Inc. http://www.horizon-research.com	Mohan Aggarwal AA&MU and APEX Leadership	Room 129 V. M. Chambers Building
8:15 - 8:45 AM	<input type="checkbox"/> Activity A: "Why start with what the learners think?" (30 minutes)	Jim Minstrell, Facet Innovation	
8:45 - 9:00 AM	<input type="checkbox"/> Force Activity #1: Review, "Weight vs. Mass" from AAPT/PTRA Force Supplement (15 minutes)	Jane & Jim Nelson AAPT/PTRA	
9:00 - 10:30 AM	<input type="checkbox"/> Electrical Field Activity #1: A Precursor Lesson (<i>Mapping a Gravitational Field</i>) (60 minutes) <input type="checkbox"/> Electrical Field Activity #1: Related Problems and Questions (30 minutes)		
10:30 - Noon	<input type="checkbox"/> Electrical Field Activity #2: <i>Mapping an Electrical Field</i> (90 minutes)		
Noon - 1:30 PM	Working Lunch: Activity C1: "Revisiting Three Basic Circuits" Activity C2: Video: "How does the battery know?" Class as a community of learners. Discussion (45 minutes)		
1:30 - 2:30 PM	<input type="checkbox"/> Electrical Field Activity #2: Related Problems and Questions (60 minutes)	Jane & Jim Nelson AAPT/PTRA	Room 129 V. M. Chambers Building
2:30 - 3:45 PM	<input type="checkbox"/> Circuit Activity #1: Review, "Cathy Coulomb Story" from AAPT/PTRA Circuit Supplement (15 minutes) <input type="checkbox"/> Electrical Field Activity #3: <i>How Can We Visualize Electrical Fields?</i> (60 minutes)		
3:45 - 4:45 PM	<input type="checkbox"/> Electrical Field Activity #4: <i>Visualizing an Electrical Field ... A Simulation</i> (60 minutes)		
4:45 - 5:15 PM	<input type="checkbox"/> Activity B: Elicitation "Force, Work, and Potential Energy in an Electrical Field" (30 minutes)	Jim Minstrell, Facet Innovation	

5:15 - 6:00 PM	<input type="checkbox"/> Electrostatics Activity #5: Review, “ <i>How Does The Electrical Force Vary With Distance?</i> ” from AAPT/PTRA Electrostatics Supplement <input type="checkbox"/> Electrical Field Activity #5: <i>Calculating Electrical Fields and Electrical Forces</i> (45 minutes)	Jane & Jim Nelson AAPT/PTRA	Room 129 V. M. Chambers Building
6:00 - 6:30 AM	<input type="checkbox"/> Electrical Field Activity #6: <i>Calculating Electrical Field and Electrical Potential</i> (30 minutes)		
Day 2 - November 8, 2014			
8:00 - 9:30 AM	<input type="checkbox"/> Electrical Field Activity #7: <i>Calculating Electrical Potential</i> (90 minutes)	Jane & Jim Nelson AAPT/PTRA	Room 129 V. M. Chambers Building
9:30 - 10:00 AM	<input type="checkbox"/> Activity C3: <i>Discussion of Learning Environment</i> <input type="checkbox"/> Activity C4: <i>Planning and Implementing Science Learning (Building on Learner Thinking)</i> (30 minutes)		
10:00 AM - 11:15	<input type="checkbox"/> One Pager” on Force : Field :: Energy : Potential Chart for AP students (15 minutes) <input type="checkbox"/> AP Physics 2006 Problem #3 (30 minutes) <input type="checkbox"/> AP Physics 2006B Problem #3 (30 minutes)		
11:15 AM - Noon	<input type="checkbox"/> AP Physics 2011 Problem #2 (45 minutes)	Jane & Jim Nelson AAPT/PTRA	
Noon – 12:45 PM	Working Lunch: Show video http://www.youtube.com/watch?v=3GkY-ZXnx4w , Discussion		
12:45 - 1:45 PM	<input type="checkbox"/> Projectile Motion Activity #6: <i>Basketball Shot</i> (60 minutes)	Jane & Jim Nelson AAPT/PTRA	Room 129 V. M. Chambers Building
1:45 - 2:00 PM	<input type="checkbox"/> Workshop Evaluation/Closing Remarks (15 minutes)	Mohan Aggarwal AA&MU and APEX Leadership	

Possible Items for Future Follow-up Session(s):

- Kinematics Activity #23B: *How Is Final Velocity Related To Time If The Acceleration Is Constant And the Initial Velocity Is Not Zero* (Inspired by Cynthia Phillips, Written by Jane Nelson)
- Making a Video* a Power Point presentation by Marius Schamschula
- Projectile Motion Activity #8: *Projectile at an Angle* (Projectile Motion Equations)