SOS/AAPT SPRING 2013 MEETING PROGRAM

Dublin Jerome High School Saturday, March 9, 2013 9:00 AM – 2:30 PM

8:30 AM – 9:15 AM	SOS/AAPT Executive Committee meeting (This meeting is not officially a part of the Spring Meeting. Anyone interested in getting more involved is encouraged to attend.)
9:00 AM – 9:25 AM	**Registration, Coffee & Pastries**
9:25 AM – 9:30 AM	**Welcome & Introductions**
	Keynote speakers:
9:30 AM – 10:15 AM	Kathy Koenig, University of Cincinnati Flipped Classroom I
10:20 AM – 11:05 AM	Brooke Morin, The Ohio State University Flipped Classroom II
11:15 AM – 12:15	**Parallel Sessions - Choose ONE** Lenore Horner, The Seven Hills GeoGebra Rick Jacox, Ontario High School Podcast
12:15 AM – 1:00	**Lunch and Networking**
1:00 PM – 1:45 PM	**Contributed Talks**
1:00 PM – 1:15 PM	James F. Sullivan, University of Cincinnati Introductory Physics Courses in the Semester System
1:15 PM – 1:45 PM	Gordon J. Aubrecht, II, Ohio State University, Columbus and Marion, Ohio 1. How Earth's temperature is reflected on smaller geographic scales 2. Why formative assessment can be useful to teachers
1:45 PM – 1:50 PM	**"How I Do It" Presentations**
	Richard Taylor, Depart. of Physics & Engineering, Muskingum Univ. Projectile Motion with Air Resistance: Computer Lab for Calculus-Based Physics
2:00 PM – 2:30 PM	**General Business Meeting and Door Prizes**

SOS/AAPT would like to thank Barb Hilligoss and Dublin Jerome High School for hosting our meeting and the national AAPT for sending us the door prizes.

Abstracts

James F. Sullivan, Department of Physics, University of Cincinnati, Cincinnati, OH 45221-0011. (513) 556-4872, james.sullivan@uc.edu.

Introductory Physics Courses in the Semester System,

Beginning in the autumn of 2012 the University of Cincinnati, as well as many other institutions in Ohio changed from a quarter (term) calendar to a semester calendar. At this time the state also initiated a TAG program that attempts to insure uniform courses throughout the state system of higher education. A report on how these changes in the two basic introductory Physics Courses (Calculus-based and algebra/Trigonometry based) at the University of Cincinnati will be given here.

Gordon J. Aubrecht, II, Department of Physics, Ohio State University, Columbus and Marion, Ohio

How Earth's temperature is reflected on smaller geographic scales

One consequence of human use of energy is emission of greenhouse gases. Many nonscientists (as well as a few real scientists) do not think that climate change could be caused by human actions. Reasons range from doubt that tiny humans could affect an entire planet to belief that human life on Earth will soon end. Science is about experimental data, reasoning from those data, and theoretical perspectives supported by the data. Svante Arrhenius provided (in 1896) the first theoretical (and compelling) reasons that carbon dioxide could influence Earth's energy budget. Multiple sources of modern data underlie the belief of virtually all climate scientists that humans are changing our climate. Earth's temperature is rising. Is the rise distributed uniformly around the world? We compare the world record to the US and Australian records, and those to records in a small part of the US to see what the temperature data show.

Why formative assessment can be useful to teachers

Formative assessments can allow teachers to understand what is and is not working in their classrooms for the purpose of changing how they teach various content. We have helped middle and high school teachers approach formative assessment of open-ended questions. We ask that teachers identify (written) student ideas for the pretest and see how they might affect the way they present content; then for the posttest, we ask them to identify on the basis of changes in responses and the sorts of responses how they would change their teaching of the content the next time. This study presents a model, as well as its application, for the development of formative assessments in the classroom in a rurally located, city high-needs district in the state of Ohio. Results indicate changes not only in the way teachers view their pedagogical approaches,