What’s v ?
A monthly newsletter for physics teachers in LA and Orange Counties

Upcoming Events

April 6
Occidental Physics Day
Location: Occidental College
Time: 8:30 AM – 4:00 PM
A full day of Physics fun! A yearly event for nearly 50 years. Presentations by college and high school teachers.

For more information: members.dsxextreme.com/users/oxday/

April 11
PhysTEC Demo-Day
Location: CSULB PH2-122
Time: 4:30 – 5:30 PM
Topic: Thermodynamics, Fluids, Nuclear Physics

Contact: Michael Tran at michael.tran@csulb.edu to RSVP and request parking before 4/8.

April 20
SCAAPT Spring Mtg
Location: Santa Monica College
Another full day of Physics fun! Presenters in the past have included Demo Day veterans Bill Layton and James Lincoln

For more information: scaapt.org

April 25
PhysTEC Social Mixer
Location: CSULB MLSC Patio
Time: 4:30 – 6:00 PM
A fun event for all CSULB Physics majors, faculty and students interested in Physics. Food, fun and prizes!

May 16
PhysTEC Demo-Day
Location: CSULB PH2-122
Time: 4:30 – 5:30 PM
Topic: Favorite Activities & Projects after CST & AP
(please note: the later date due to AP Physics exam date)

Contact: Michael Tran at michael.tran@csulb.edu to RSVP and request parking before 5/13.

Check out more upcoming events at www.physicsatthebeach.com

PhysTEC Demo Days

The second Thursday of every month is a chance to collaborate with other physics teachers and share your favorite fun demonstrations and activities. This month, April 11, the topic will be Fluids, Thermodynamics and Nuclear Physics. So we hope to see you at 4:30 in PH2-122. Free (and close!) parking is provided and so is food!

Last month we continued our journey in Electricity and Magnetism. After several demos (see the photo highlights on page 2) Laura demonstrated cooking hot dogs in series and in parallel, using a board, nails and an extension cord. Everyone was then invited to make a hot dog board to take with them. Since this Demo Day was held on 3/14, in addition to the usual food items, we also had a fine selection of pies! Thanks Laura!

Change is in the Air: AP Physics

In addition to all the changes that will be coming over the next few years with the Next Generation Science Standards (see our December newsletter or nextgenscience.org), the College Board is redesigning AP Physics B. (Note: the Physics C course is not being revised.) Next year (2013-14) is the last year that AP Physics B will be offered. It will be replaced the next year (2014-2015) with a two year sequence AP Physics 1 and AP Physics 2, both Algebra-based. The primary reason for the change was the concern that AP Physics B encouraged very cursory coverage of too much content (“a mile wide & an inch deep”).

AP Physics 1, which is intended to be a first year course, will cover: Newtonian Mechanics; Rotational Dynamics and Angular Momentum; Work, Energy and Power; Mechanical Waves and Sound; and an Introduction to Electric Circuits.

AP Physics 2 will cover: Fluid Mechanics; Thermodynamics; Electricity and Magnetism; Optics; and atomic/nuclear physics.

In addition to the content changes, the overall structure of the course is changing as well. Inquiry is emphasized. The course framework is designed around 7 Big Ideas, such as “Big Idea 2: Fields existing in space can be used to explain interactions.” Each Big Idea has multiple Enduring Understandings, the core concepts students should retain. Each Enduring Understanding then has several items called Essential Knowledge. Learning Objectives were then written by pairing an Essential Knowledge with a Scientific Practice. These learning objectives specify what your students should know and be able to do. All exam questions will be developed from these learning objectives. There will a 3-hour AP exam for each course, but there will be fewer multiple choice questions (50) and free responses (4-5).

With these changes, schools that offer AP Physics B will need to decide what sequence of AP Physics they can/will offer.

Some Possible Course Sequences:

Junior Year
AP Physics 1 → AP Physics 2
AP Physics 1 → AP Physics C (Mech & E/M)
Honors Physics → AP Physics C (Mech & E/M)
AP Physics C (Mech) → AP Physics C (E/M)
Other Science → AP Physics 1

Senior Year
AP Physics 2
AP Physics C (Mech & E/M)
AP Physics C (E/M)
AP Physics 1

For those schools planning to replace Honors with AP 1, next year creates additional problems - what to teach in Honors, since AP 1 won’t exist yet, and what do they take the next year?

Full College Board workshops devoted to AP Physics 1 & 2, will not begin until summer 2014. For the latest CB information go to: http://advancesinap.collegeboard.org/science

If you have any questions or would like to contribute to this newsletter, please contact me at dwyer_k@auhsd.us or visit the website www.physicsatthebeach.com
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