Summer professional development for physics teachers

It’s time to start thinking about your own professional development for summer 2010. In addition to the Summer Meeting of our Association in beautiful Portland, OR, July 17-21, www.aapt.org, there are a large number of physics teacher professional development opportunities around the country. A favorite Arizona State University Modeling Physics website, modeling.asu.edu/MW_nation.html, lists over 50 (!) summer workshops, mainly in Modeling Physics, held in more than 25 U.S. states. Some of these workshops include graduate or undergraduate college credit, and some are partially or fully grant supported. As the ASU website notes: “Modeling Workshops are peer-led. Modeling Instruction is one of two K-12 science programs designated by the U.S. Department of Education as EXEMPLARY.”

Retired Cornell Physics Librarian Pat Viele has also assembled a collection of 30-plus professional development opportunities for physics teachers; her collection is on the Connotea website at preview.tinyurl.com/pvielePD. DOI: 10.1119/1.3393078

Galileo’s “falling bodies” experiment “re-created” at Pisa, www.tinyurl/galileo-pisa

Science writer, broadcaster, and journalist Dan Falk has produced a narrated slide show showing the 2009 dropping of water bottles of different sizes from the leaning tower of Pisa by Steve Shore of the University of Pisa Physics Department. The demonstration was related to the 400th anniversary of Galileo’s experimentation with the telescope and the International Year of Astronomy, www.400years.org. The slide show overview of the falling bodies experiment includes period costumes and an analysis appropriate for introductory physics students. The slide show narration, excerpted from the CBC Radio Ideas documentary “Looking Up on Galileo,” written by Falk and available at www.cbc.ca/ideas/features/looking-up, discusses the replication of Galileo’s experimentation. Dan Falk hosts a website at http://danfalk.ca.

Galileo is a figure of considerable fame and almost cult-like legend, and may have never actually conducted the falling body experiment at Pisa, though it is widely ascribed to him. A legendary disclaimer Eppur si muove (“and yet it moves”) is also widely ascribed to him after his recantation of the heliocentric model of the solar system, though it is unlikely he actually said this. Bits of his body were preserved and venerated, and are still visible at the Museo di Storia del Scienza in Florence, Italy. Freshman physics students still revel in the sight of Galileo’s right hand middle finger at brunelleschi.imss.fi.it/museum/esim.asp?c=300251. Galileo cut a remarkable figure in both fact and legend. DOI: 10.1119/1.3393079

Baseball Physics: Physics and the boys of summer, phys.csuchico.edu:16080/baseball/

David Kagan of California State University Chico Department of Science Education writes about his baseball physics website, “It’s April and the baseball season is about to begin. Just click on You Can Understand the Physics of Baseball Activities to find a collection of 20 mini-labs to help your students understand projectile motion, Newton’s laws, air resistance, the Magnus force, center of mass, and many other topics in mechanics all based on the national pastime.” DOI: 10.1119/1.3393080

The Science 360 News Service, news.science360.gov

Bill Dodd of Ticonderoga HS Physics and Tom Kenyon of Cuba Rushford HS Physics recently shared some comments through the NY physics teachers’ list OPHUN-L about the Science360 website. Science360 is sponsored by the National Science Foundation and gathers news daily from the NSF and other funding agencies, press releases, popular and peer-reviewed journals, colleges and universities, public and private labs, and other sources. One can subscribe and receive a daily morning email full of links to current articles and stories, together with a Science360 picture and video of the day. The collection of science videos at the site is news.science360.gov/files/video. DOI: 10.1119/1.3393081

Over a century of Popular Science magazine online and free, preview.tinyurl.com/popsci137free

On the PHYS-L listserv, Tim Folkerts of Barton Community College Physics and Michael Porter of Colonel By Secondary School Physics discussed the new free Popular Science magazine archive supported by Google technology. When viewing any issue in the archive, clicking the “Google Books” link at the bottom on the image leads to a much nicer interface for viewing and reading the issues. I enjoyed a short article from the July 1893 issue of Popular Science by Prof. Frederick Guthrie, F.R.S., titled “Teaching Physics,” discussing how his students manufactured and calibrated their own instruments (barometers, thermometers, coils and spectrosopes).

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