

WebSights features announcements and reviews of select sites of interest to physics teachers. All sites are copyrighted by their authors. This column is available as a web page at PhysicsEd.BuffaloState.Edu/pubs/WebSights/. If you have successfully used a physics website that you feel is outstanding and appropriate for WebSights, please email me the URL and describe how you use it to teach or learn physics—macisadl@buffalostate.edu.

Posters (and more) for physics classrooms

<http://expertvoices.nsd.org/pats-picks/>

A teacher requested assistance finding free physics-themed and physics promoting posters suitable for classrooms this month on the OPUN-L electronic mailing list for New York physics teachers. Brendan Noon pointed out several good sources:

- American Physical Society free posters: <http://www.aps.org/careers/student/>, <http://www.physicsmatters.org/poster.html>, <http://www.aps.org/programs/women/reports/poster.cfm>, and <http://www.physicscentral.com/>
- Optical Society of America posters: http://www.osa.org/foundation/youth_education/classroom_materials/posters.aspx and, as part of their 50th anniversary celebration of the laser, OSA is distributing a nice \$15 kit demonstrating laser transmission of audio signals—see details (and more posters) at the LaserFest website <http://laserfest.org/about/materials.cfm>.
- A number of organizations that do not formally advertise posters online (at least in readily found locations) but regularly print and distribute them to teachers upon request were also mentioned, including JPL, NASA, Fermilab, The Perimeter Institute, NIST (metric posters) and NASA EOS and NOAA (climate change science). These last organizations may require some patient email exchanges to get those particular posters that are being promoted, are in stock etc. A recent edition of Pat Viele's weekly blog *Pat's Picks for STEM Educators* dealt with posters <http://expertvoices.nsd.org/pats-picks/> and includes URLs for these latter organizations. *Pat's Picks for STEM Educators* frequently features physics teaching ideas and she also reads and excerpts several of the physics teachers lists.

Suggested by postings from Brendan Noon and Pat Viele.

Physics To Go online newsletter passes 100th edition

<http://www.physicstogo.org>

In other online newsletter news, the APS/ComPADRE biweekly online newsletter *Physics To Go* recently passed its 100th edition and is still going strong. Congratulations to the editor, Ed Lee and his hardworking team. Check out their archives.

Off the shelf inexpensive digital high-speed photography from CASIO

http://exilim.casio.com/products_exfs10.shtml

There has been considerable high school physics teacher discussion online about the new addition of the inexpensive

(just under \$100 on Amazon.com) EX-FS10 to the EXILIM line of CASIO digital cameras. These cameras can shoot high-speed videos (up to 1000 frames/s) at high-speed shutter speeds (up to 1/40,000 s), and will shoot continuously into a circular buffer that you save by releasing the shutter button, making some high-speed event capture reasonably possible without external triggering electronics. The EXILIM series has been around a while now, but only recently have we seen these price drops. Vernier Software has updated its low-cost flagship data analysis software product Logger Pro to properly analyze data from these cameras, <http://www.vernier.com/innovate/innovativeuse114.html>. So far this low-cost technology niche seems to belong to CASIO, and those of us who teach introductory mechanics are pretty excited with the new toy. Here is also a nice pair of (non-physicist) reviews of the EX-FS10 (with quite dated prices) at <http://www.digitalcamerareview.com/>

Suggested by postings from Alan Zollner, Michael Magnuson, and the Vernier Software newsletter.

What's happening in introductory college physics curriculum funding: The NSF TUES program

Recently, the National Science Foundation <http://www.nsf.gov> revamped its longstanding flagship program for introductory science curriculum development known as the Course Curriculum and Laboratory Improvement or CCLI program. The new program known as Transforming Undergraduate Education on Science, Technology, Engineering and Mathematics or TUES emphasizes the transformation of undergraduate STEM education by incorporating recent advances in learning theory and research. A new publication by the NSF and AAAS titled *New Challenges, New Strategies: Building Excellence in Undergraduate STEM Education* available from <http://cliconference.org/files/2010/02/2009.pdf> describes the changes to TUES from CCLI, although the only physics-specific example seems to be the implementation of NCSU's SCALE-UP curricular transformation at Ithaca College. Compelling program changes emphasize instructional transformations explicitly incorporating inquiry, active investigation, new instructional strategies, hands on experience using modern equipment, building learning communities, developing faculty expertise through professional development, and rigorously assessing and evaluating student achievement. Such transformations are largely informed by scholarly literature collected and described in the freely available book *How Students Learn from the National Academy of Science* at http://www.nap.edu/catalog.php?record_id=10126 (and there's a bit more PER in that work). Both freely downloadable works make insightful reading for physics faculty, and are important citations for faculty seeking external funding for curriculum development.