

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.

• **Annual reminder: Get your summer physics professional development plans under way**

The PTEC project has assembled a clearinghouse for physics teacher professional development opportunities at www.ptec.org/pd/. The critically acclaimed Modeling Physics summer workshops offered nationwide (modeling.asu.edu/MW_nation.html) are listed there, as are AAPT/PTRA workshops, QuarkNet sites and Research Experience for Teachers (RET) opportunities. And for an unparalleled professional development activity, consider attending the AAPT National Meeting July 28–August 1 in Philadelphia, PA (aapt.org/).

• **Report on HS Physics Teacher Preparation**, www.aip.org/statistics/trends/reports/hsteachprep.pdf, by Casey Langer Tesfaye and Susan White of the American Institute of Physics (AIP)

This brief (eight-page) February 2012 report presents statistics from a 2009 survey of over 2500 U.S. physics teachers. Self-reported data include U.S. physics teacher academic background and teaching experience, teacher preparation self-efficacy, physics classroom activities, sources of answers to teacher questions about physics content, and teacher preferences for teaching physics versus other subjects.

• **Building a Grad Nation: Progress and Challenge in Ending the High School Dropout Epidemic**, www.americaspromise.org/

Although this 98-page report (12-page executive summary) does not specifically address physics, it is important for all physics educators to review the big picture in U.S. grade schools from time to time. Funded by a nonpartisan non-profit organization supported by corporations and foundations, *Building a Grad Nation* describes and analyzes data from the U.S. national and state HS graduation rates for the class of 2010, looking at changes from the classes of 2002, 2008, and 2009. States that have progressed in improving percentages of graduating HS freshmen are described (KY, NY) as well as those that have regressed (NV). Statistics are presented and discussed for ‘dropout factory’ high schools—those graduating 60% or fewer freshmen on time. The report chronicles the reduction of dropout factories, mainly in the Southern states (TX, FL, GA) and presents a “Civic Marshall Plan” intended to rebuild our “broken school system.” Interestingly, since 2002 the U.S. national graduation rate has shown only a modest 3% gain to about 75% for all and 60% for minority students—the Civic Marshall Plan goal is 90% by 2020 (and not looking likely). Greatest recent gains seem to be made in the suburban schools, with the rural and urban area graduation rates stalling, and overall

only about half of the states improved their graduation rates in 2009. The report’s analysis of the potential and real economic impacts to states and the nation of graduating even modest percentages of dropouts makes a powerful political point (quite independent from the large gain in the quality of life for those graduates receiving a HS diploma). By reframing the issue of school dropout as a loss of individual earning power, taxpayer cost, global economic competitiveness and national economic growth, the need for some kinds of school reforms can be made palatable to U.S. citizens of all political persuasions. *Building a Grad Nation* also makes interesting policy reading on the topics of elementary reading, absenteeism, early warning indicator and interventions systems (EWS), mentoring partnerships, effective schools, raising the compulsory attendance age, career training, dropout recovery, national service, transparency, and longitudinal data collection via vignettes illustrating relevant practices taken from across grade schools (though focused on HS) in the U.S. An insightful read.

• **Science Adventures blog by Peter Newbury of the University of British Columbia Physics and Astronomy**, blogs.ubc.ca/polarisdotca/

Newbury is a lecturer of Physics and Astronomy at UBC and Science Teaching and Learning Fellow with the Carl Wieman Science Education Initiative. His *Science Adventures* blog first came to my attention through a citation on the Modeling-L mailing list due to interest in his post of February 13. That entry, “Problem Solving Like a Physics,” [Dan: Physicist?] describes the use of scaffolding problem-solving strategies to support student struggles with problems (in an upper-division undergraduate E&M class in this case, though the results are generalizable). His postings on the uses of Twitter fostering timely naked-eye astronomy and on classroom motivation are also interesting reading.

• **Collective Intelligence and Problem Solving** <DOI: 10.1126/science.1193147>

Also making the rounds on Modeling-L recently is a discussion of group problem solving characteristics emergent from a 29 Oct 2010 *Science* article on *Evidence for a Collective “Intelligence Factor in the Performance of Human Groups”* (Wolley, Chabris, Pentlands, Hashmi and Malone, 2010). The abstract is freely available and suggests that success in group problem solving is “...correlated with the average social sensitivity of group members, the equality in distribution of conversational turn-taking, and the proportion of females in the group.”