More Instructional Physics Simulations

This month’s issue features the work of the Physics Education Technology project at the University of Colorado http://phet.colorado.edu. This recent collection includes a growing database of lesson plans describing classroom use of the simulations. Other significant collections include the CoLoS site by Professor Fu-Kwan Hwang of the National Taiwan Normal University, http://www.phy.ntnu.edu.tw/ntnujava, and the Physlets site by Professors Wolfgang Christian and Mario Belloni at Davidson College, http://webphysics.davidson.edu/applets/applets.html. Most recently, Brian Whatcott pointed out to WebSights that Professor David Harrison of the University of Toronto Department of Physics has also produced an archive of Flash physics animations at http://www.upscale.utoronto.ca/GeneralInterest/Harrison/Flash/#misc.

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Physics Related Electronic Community Email Lists

There are several vibrant online communities of physics educators and researchers. These lists and their archives are terrific resources for physics educators seeking opinions, comments, expertise, and advice on physics teaching. Electronic lists are particularly valuable for teachers who do not have access to experienced physics teaching colleagues because they are in a small school setting or have schedule conflicts preventing collaboration. When joining a new list, please read the list frequently asked questions (FAQs) where available and “lurk” (read the list for a few days) before posting. Most lists appreciate pithy, on-topic posts following “netiquette” and eschew commercial advertisements—see http://physicshed.buffalostate.edu/PHYS-L. All can be set to “digest” mode, sending one single email of all list postings daily.

• Phys-L, the electronic forum for physics teachers, http://carnot.physics.buffalo.edu. About 700 physics educators and aficionados worldwide read and contribute to this list, which is quite eclectic in scope.

• Physshare, the sharing resources for high school physics teachers’ list at http://lists.psu.edu/archives/physhare.html. About 450 mostly high school physics teachers subscribe to this list.

• Modeling, the listserv for teachers using the Arizona State University/Hestenes Modeling Instruction in Physics at http://lists.asu.edu/archives/modeling.html. A topical compilation of postings edited by Jane Jackson is also available at http://modeling.asu.edu/listserv.html. About 1400 physics teachers, most of whom have attended modeling workshops, subscribe to this list, which focuses on modeling pedagogy and curriculum. A sample modeling curriculum in mechanics is freely available from http://modeling.asu.edu/modeling-HS.html.

• PhysLrnR, (Physics Learning Research) a research-focused list at http://listserv.boisestate.edu/cgi-bin/wa?SUBED1=physlrnr&A=1 run by Professor Dewey Dykstra at Boise State, is most appropriate for those undertaking scholarship in physics learning and teaching. About 200 physics education researchers subscribe to this specialized list.

• TAP-L, (Teaching Apparatus for Physics) http://www.wfu.edu/physics/pira, is also the unofficial list of the Physics Instructional Resource Association (PIRA). This small, specialized list is mainly populated by teachers seeking input on physics equipment, demonstrations, and labs.

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More Ideological Science

Last month’s column citations regarding science and physics teaching under ideological fire drew two reader-suggested sites: Swarthmore College biology’s Professor Colin Purrington has an Evolution Outreach site featuring ersatz science textbook stickers http://www.swarthmore.edu/NatSci/cpurrin1/evoOutreach12/evoops.htm, and Bobby Henderson’s mock alternative “Intelligent Design” page Church of the Flying Spaghetti Monster at http://www.venganza.org/. Henderson is a physics graduate of Oregon State University.

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