



WebSights

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WebSights features reviews of select sites presenting physics teaching strategies, as well as shorter announcements of sites of interest to physics teachers. All sites are copyrighted by their authors. This column is available as a web page at <http://PhysicsEd.BuffaloState.Edu/pubs/WebSights>. If you have successfully used a site to teach physics that you feel is outstanding and appropriate for *WebSights*, please email me the URL and describe how you use it to teach. The person submitting the best site monthly will receive a T-shirt.

• **The UVA Virtual Lab**, www.virlab.virginia.edu, by Prof. John Bean of the University of Virginia. A collection of 3-D virtual reality animations on the topics of microelectronics, nanoscience, and relevant physical science. I particularly enjoyed the short video podcasts describing how Van de Graaff generators and semiconductors work.

Submitted by John C. Bean, john-bean@virginia.edu

• **A Short Video Showing An Electrostatic-Caused Fire During Car Refueling**, http://www.pei.org/Index.aspx?p=stop_static, by the Petroleum Equipment Institute

will certainly grab your students' attention. Induced charge and spark phenomena are more traditionally taught in the classroom by constructing and demonstrating the electrophorus. There are many sets of on-line instructions for building inexpensive electrophoriii (including several by Bob Morse); a well-illustrated example is, <http://physiced.buffalostate.edu/SeatExpts/EandM/elephor>.

Submitted by Bob Morse, Physics Master at St. Albans School.

• **Atmospheric Optics**, <http://www.atoptics.co.uk>, by Les Crowley features gorgeous images of atmospheric optical phenomena. A catalog of atmospheric phenomena with explanations and an extensive collection of references. The August update includes an image containing six (!) natural rainbows.

Submitted to the phys-l listserv by Bernard Cleyet.

• **More Resources for Teaching Quantum Physics:**

Dan Styer at Oberlin College has an extensive page of information and links on teaching Quantum Mechanics at both the conceptual and advanced levels: <http://www.oberlin.edu/physics/dstyer/TeachQM> and the Quantum Exchange at comPADRE, <http://www.compadre.org/quantum/>

index.cfm bills itself as a collection of information and resources for teachers of quantum physics. [Dan: does this sentence apply only to the comPADRE site or both sites?] Materials cover both conceptual and advanced, but lean toward the latter and are grouped into five categories: pedagogy, applications, background, activities and tutorials. In addition to classroom materials, there are a number of physics education research papers on relevant topics posted.

Submitted by Brant Hinrichs, Associate Professor of Physics at Drury University, bhinrichs@drury.edu

• **Humorous Physics and Spoof Scientific Journals:**

The Journal of Irreproducible Results, <http://www.jir.com>, *The Null Hypothesis*, <http://www.null-hypothesis.co.uk>, and the *Annals of Improbable Research*, <http://www.improb.com>, have all been suggested for physics humor. All present amusing spoof articles, descriptions, jokes, and cartoons from physics and science.

• **The Wolfram Demonstrations Project** at <http://demonstrations.wolfram.com> is “...a web collection of freely

available, interactive demonstrations in math, science and many in physics.” These compiled Mathematics 6 demonstrations are somewhat akin to Physlets. Running these demonstrations requires the download and installation of a free Mathematica player (registration is suggested but not required). I enjoyed playing with the astronomical simulations particularly, although the modern physics, mechanics, and optics simulations also looked nice. I am a fan of other Wolfram sites, particularly the Integrator: <http://www.integrator.com>. The QuickMath website, <http://www.quickmath.com>, is another student favorite site powered by Mathematica, though sometimes it seems overwhelmed with users.