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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.

Newton's Universal Law of Gravitation experiments, lessons and activities: This past week considerable discussion took place on the PHYS-L listserv regarding teaching Newton's Universal Law of Gravitation in the laboratory (https://carnot.physics.buffalo.edu/archives/2007/02_2007/threads.html). John Walker's FourmiLab webpage "Bending Spacetime in the Basement" at http://www.fourmilab.ch/gravitation/foobar/ shows details for building and operating your own Cavendish torsion balance for observing (not measuring) gravitations attraction. Such observations can be practically and readily done in the classroom, though there are also videos on the page demonstrating modern and "ancient Greek materials" versions of the torsion balance. Similar Cavendish demonstrations were done with water bottles, boxes of sand, and a piece of recording tape for a suspension by Zacharias at MIT in the 1950s.

Several PHYS-L contributors also pointed out simulations where orbits can be modeled for multi-body solar systems. Paul Lulai of St. Anthony Village Sr. HS points out several simulations he likes:

–http://www.ii.uam.es/~jlara/investigacion/ecomm/gravitacion/grav.html looks at orbits and how their paths (circular, elliptical, etc.) depend on original velocities.

–http://tinyurl.com/2ehopm is the Maryland Virtual HS simulation of Newton's Universal Law of Gravitation. You can state the mass of each object and the position of each object, and the simulation will plot your data.

John Denker pointed out a motion applet from the Physics Education Technology project at the University of Colorado physics department (http://phet.colorado.edu/) called My Solar System: http://phet.colorado.edu/simulations/orbits/orbits.swf. I find this last PhET applet reminiscent of the excellent but venerable Gravitation Ltd 5.0 shareware for Macintosh by Jeff Rommereide, still freely obtainable from http://tinyurl.com/ywb89b. It still runs fine on my Mac under classic, but I had to increase the virtual memory provided to the program.

DOI: 10.1119/1.2715431

Follow-up Sites on Electronics and Professional Development Opportunities: Pat Viele of Cornell Physics points out another collection of Teacher and Student Internships and Opportunities at Science.gov 4.0, http://www.science.gov/internships/index.html, in addition to the PTEC.org website at http://ptec.org. I was reminded of two more electronics teaching sites: Tony Kuphalt's All About Circuits free textbook and webpage at http://www.allaboutcircuits.com/ and Bill Beatty's Electronics Hobbyist page at http://amasci.com/amateur/elehob.html.

DOI: 10.1119/1.2715432

Doppler Effect Interactive Collection and Superparamagnetic Effect Video Sites: Mike Belling, physics teacher at Pembroke HS, pointed out these two sites: http://molebash.com/doppler/home.htm.The title of the website is The Doppler Effect: An Interactive Lesson. The site is focused on the Doppler effect as it relates to sound. It contains a series of videos in which students have to predict the location of a honking horn from either inside or outside a moving vehicle. It also contains a number of Java applets that demonstrate the Doppler effect and sonic booms.

http://www.hitachigst.com/hdd/research/recording_head/pr/PerpendicularAnimation.html: This Hitachi website contains an entertaining and informative flash movie that explains how data storage density is increasing tenfold by orienting the magnetic bits perpendicularly rather than longitudinally. The movie clearly explains the concept of the superparamagnetic effect as well as showing how magnetism is used to store data on hard drives. The video is an exceptionally well-done parody of the old "Schoolhouse Rock" songs that used to air on TV in the U.S. in the '70s and '80s on Saturday mornings.

DOI: 10.1119/1.2715433

Wine Glass Resonance Video

Ed Gruber, science research coordinator/physics teacher at Eastchester HS, points out a nice video demonstrating resonant vibrations and standing waves in a wine glass at http://www.acoustics.salford.ac.uk/feschools/waves/waterglass-1video.htm. The video is in super slow-mo and shows the standing wave clearly in the water.

DOI: 10.1119/1.2715434