Dan MacIsaac, Column Editor, Physics Department,
SUNY-Buffalo State College, Buffalo, NY 14222; macisadl@buffalostate.edu

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.*

The Engineer Guy/ by Bill Hammock of University of Illinois at Urbana-Champaign; www.engineerguy.com

This site claims to host "the most irreverent & playful engineering videos ever made" and one video in particular www.engineerguy.com/videos/video-pop-can.htm analyzes the leverages used for lifting the nonremovable aluminum pop-can tab (the trick is not to fight the pressure in the can, but try to use it to assist in first venting the can with a second class lever lifting the rivet, then changing to a first-class lever after venting and depressing the punch out). Over a dozen other short (mostly about three-minute) videos discuss engineering and design underlying coffee percolator bubble pumps, whiffletrees, Geiger counters, matches, light bulbs, chairs, cell phones, and concrete. A nice compendium of engineering and physics concepts cleverly used in everyday technology, humorously presented.

Brought to my attention by Kevin O'Donnell, Nuclear Medicine Engineering group, Toshiba Corporation

Mathematical Doodling and mathematical food cutting, balloon twisting, paper musical instruments, music organs, etc. by Vi Hart; vihart.com/doodling/

An inveterate doodler recently emailed me a link to a set of mathematical doodling games she has been trying called *Doodling in Math Class: Snakes and Graphs*, described in a fascinating and entertaining video at vihart.com/doodling. The author, Vi Hart, describes herself as a "recreational mathemusician," and her doodling videos combine doodling, mathematics, graph theory, knot theory, topology, high-speed banter, and deadpan puns. Hart also presents doodling videos on infinite series, number theory, prime numbers, Sierpinski's triangle, Pascal's triangle, fractals, and binary trees. Hart's dad's math sculpture pages discussing slicing bagels into interlocked mobius strips www.georgehart.com/bagel/bagel.html were published previously in this column. Teachers should be warned that her banter does at times disparage standard classroom direct instruction, and that a Google search on doodling and concentration might encourage you and your students in off-task doodling anywhere.

Brought to my attention by Andromeda MacIsaac, Civil Engineering student at Dalhousie University

PBS Circus Physics; www.pbs.org/opb/circus/classroom/circus-physics/

This physics-centric site is part of a much larger site devoted to the PBS series "CIRCUS," but is well done and engaging. Numeric and video analysis activities and classroom guides are available addressing juggling and projectile motion, dog acts and Newton's laws, trapeze artists and conservation of linear momentum and the pendulum, acrobats and angular momentum and center of mass, and tricks involving centripetal motion and the conservation of energy. The site includes online activities, downloadable QuickTime videos, and teacher activity guides, mainly pitched to a conceptual/algebra physics audience.

Brought to my attention on PHYS-L by Dwight Souder, Crestview HS Physics, Ashland, OH

Trolling the physics teaching blogs:

–Frank Noschese prepared a series of compelling videos of cart collision demonstrations at fnoschese.posterous.com/colliding-carts, where the carts have different masses and speeds. Compellingly, the carts have large hoops on them that flex during the collisions and one can readily and convincingly see that the hoop distortions are equal by watching carefully or stepping through the videos frame by frame. Noschese used this activity to introduce Newton's third law. The hoops are widely available from a variety of sources, including Vernier Software & Technology, the Science Source, and Carolina Scientific, and these videos show why. Also, Noschese's "Action-Reaction" blog post on the $2 Interactive Whiteboard at fnoschese.wordpress.com recently received an Edublog award. Congrats to Frank.

–Dan Fullerton's "Physics in Flux: Rethinking High School Physics" weblog at aplusphysics.com/flux/ was also cited in the professional lists recently, particularly a post from one of his past H.S. students—"The Five Most Helpful Things To Remember From High School Physics," available at tinyurl.com/5physthings. Like Noschese's blog, Fullerton's blog also has a sidebar collecting over a dozen physics teaching and closely related blogs.

Frank Noschese teaches physics at John Jay H.S., and Dan Fullerton teaches physics at Irondequoit H.S. in New York.