

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/](http://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](mailto:macisadl@buffalostate.edu).

• **STEMcoding project releases “Physics of Video Games” Hour of Code activity**

[go.osu.edu/hourofcode](http://go.osu.edu/hourofcode)  
[hourofcode.com](http://hourofcode.com)

Until recently, the world’s most popular K12 computer science website, [hourofcode.com](http://hourofcode.com), did not have any physics-focused coding activities. Hence, the STEMcoding project, [u.osu.edu/stemcoding](http://u.osu.edu/stemcoding), just released the “Physics of Video Games” Hour of Code video tutorial on [hourofcode.com/learn](http://hourofcode.com/learn). The “Physics of Video Games” coding activities are intended for absolute beginner programmers in grades 9-12 and they were designed with significant feedback from high school physics teachers. The STEMcoding project, which was recently selected for the AIP Meggers Award, is led by Prof. Chris Orban from Ohio State University and Prof. Richelle Teeling-Smith from the University of Mt. Union.

*Submitted by Prof. Chris Orban <[orban@physics.osu.edu](mailto:orban@physics.osu.edu)>.*

• **Classroom Discourse: New NSF CADREk12 website has links to K-12 resources**

[cadrek12.org/argumentation-critique-other-discursive-stem-practices](http://cadrek12.org/argumentation-critique-other-discursive-stem-practices)

This new NSF Discovery Research K-12 program CADRE (Community for Advancing Discovery Research in Education) website has links to NSF-funded K-12 STEM projects in curriculum and professional development on argumentation, critique, and discourse in the classroom. Also videos, articles, books, and papers in research and development on classroom discourse. I particularly enjoyed the professional development videos presenting student discourse and argumentation, particularly well developed here in mathematics. Highly reminiscent of modeling physics discourse adapted to non-physics grade school students.

*Posted to Modeling-L by Jane Jackson*

• **Nick Berry’s “Datagenetics” Blog**

[datagenetics.com/blog/august32016/index.html](http://datagenetics.com/blog/august32016/index.html)  
<[datagenetics.com/blog.html](http://datagenetics.com/blog.html)  
[datagenetics.com/index.html](http://datagenetics.com/index.html)

Educated as an Aeronautical and Astronautical Engineer, Nick is currently a “professional data miner” working for Facebook with interests in gamification and data privacy. I have been greatly enjoying his blog of over 280 posts dating

back to 2009 on self-avowed “geekery” including topics like physics, mathematics, computing, game theory, engineering, and so forth. I was first drawn to Nick’s excellent post on LaGrange points, and his interesting posts on cooling spaces with fans, windmill efficiency, gravitation, golf ball design, aircraft design and so forth include much fascinating physics, including introductory mathematical analyses. His posts on triangular truss analysis, optimizing ice cream cones via simple calculus, “vestigial” trigonometry functions, credit card number check digit algorithms, and best line fitting are joyous nerdery. Berry also posts on current and historical news events, various standards, and a very nice set of posts with an accompanying TEDx talk on data security and password/PIN code analyses from hacked and widely available data sets (go look for your own PIN right now, and change it accordingly). Take a few minutes to scan some of these posts (and update your PIN).

• **Another Feynman talk on YouTube**

[tinyurl.com/WS-FeynmanNano](http://tinyurl.com/WS-FeynmanNano)  
[en.wikipedia.org/wiki/There%27s\\_Plenty\\_of\\_Room\\_at\\_the\\_Bottom](http://en.wikipedia.org/wiki/There%27s_Plenty_of_Room_at_the_Bottom)  
[www.zyvex.com/nanotech/feynman.html](http://www.zyvex.com/nanotech/feynman.html)  
[en.wikipedia.org/wiki/Photolithography](http://en.wikipedia.org/wiki/Photolithography)

In 1959 Nobel Laureate Richard Feynman gave a now-famous prescient talk at APS entitled “There’s Plenty of Room at the Bottom” describing the potentials and opportunities in nanotechnology and nanoscale research. There are several transcripts and websites dedicated to that talk, which did not itself advance the field, though it did inspire some others (Feynman offered two \$1000 prizes for miniaturizing text and creating a tiny motor). Much later many scholars of nanotechnology “rediscovered” and acknowledged the speech. I was recently made aware of a YouTube recording of “Tiny Machines” recapitulating and updating that speech that Feynman made 25 years later in 1984, barefoot at Esalen Institute, Big Sur, CA. Included in the 1 hour 20 minute talk are several minor and human mathematical errors, a description of the photolithographic process for making integrated circuits, and a lot of Feynman charm.

*Tweeted to the official Twitter account of the Institute of Physics*