

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.

• **Fidget Spinner Physics Sites**

tinyurl.com/WS-SpinnerFreq
tinyurl.com/WS-SpinDecay
wired.com/2017/05/physics-of-a-fidget-spinner/

Lots of students are playing with the gadget that's the rage: fidget spinners. First off, Matt Parker and Steve Mould measure fidget spinner speed by analyzing the sound frequency from the spinners with free/low-cost smartphone sound analysis software (I used a music tuning app with a frequency output myself), then Steve discusses and analyzes exponential decay properties of the spinners. This results in a very nice discussion of exponential change. Finally, Rhett Allain of dot-physics shows a complete moment of inertia experiment with a fidget spinner measuring the period of the spinner used as a pendulum bob and calculating the moment of inertia via the parallel axis theorem.

• **Smartphone battery dangers and safety**

tinyurl.com/WS-LiPolyBatt
androidcentral.com/what-makes-phone-battery-explode
wired.com/2017/01/why-the-samsung-galaxy-note-7-kept-exploding/

I used to think nothing of charging my smartphone on my bed; I'm now shopping for a slate-topped bedroom table. The dangers of defective, damaged, or accidentally pierced smartphone lithium ion polymer batteries are well illustrated in these videos. No wonder the airlines were concerned about flying with the Galaxy Note 7 smartphones after their recent recall. This is a genuine modern hazard in your students' own pockets and an interesting topic to include in your classroom discussion of batteries and energy. Note that these batteries swell as things go awry and you should particularly watch out for swelling smartphone cases.

• **Example Geogebra physics simulations and animations for physics teaching**

www.ophysics.com/waves1
www.geogebra.org/ukukuku

Delores tweeted: "An excellent tutorial on waves using GeoGebra Simulations"

Michael writes: "Tom Walsh has created a fairly comprehensive site for high school students. His interactives were created with Geogebra, which means that they work even on iPads. And if you are willing to spend a little time trying Geogebra (geogebra.org), you can modify these interactives for your needs. His contributions can be seen at www.geogebra.org/ukukuku."

Submitted to WNYPTA-L by Michael Magnuson of Canisius HS Science and to Twitter by Dolores Gende of Pine Crest School, ? (Dan, we have Gende at North Broward Preparatory School, Coconut Creek, FL)

• **Jeff Regester's YouTube Channel**

youtube.com/c/JeffRegester

Jeff has produced a YouTube channel of more than 100 videos, including a "mix of demos, puzzlers, derivations, tutorials and screencast example problems." Notable examples include: "Image Formation by a Plane Mirror," "Microscopes: How They Work," "AC Adapters Explained," "Resistors Heating," "Old and New Windshields" (inspired by an incident driving to the Atlanta AAPT meeting), and the "Spinning Water" series of three videos.

Submitted by Jeff Regester of Highpoint University physics

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