# TPT *WebSights* column draft for May, 2016:

*WebSights* features announcements and reviews of select sites of interest to physics teachers. 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 worthwhile and appropriate for *WebSights*, please email me the URL and describe how you use it to teach or learn physics at macisadl@buffalostate.edu.

**Whimsical Mechanics Entertainment Videos**

[youtube.com/v/LWGJA9i18Co](http://www.youtube.com/v/LWGJA9i18Co)

tinyurl.com/WS-OKGOupsideDown

youtube.com/v/IvUU8joBb1Q

The video performance art / music group OK GO has produced another compelling video, this time going to Russia and riding in the local equivalent of the NASA “Vomit Comet” – an aircraft that flies parabola producing microgravity in the main cabin, where the video was recorded. Lots of wonderfully cool effects by the performers, and their trademark balloons of colored paint. The “Upside Down and Inside Out” video is accompanied by a video on the making of the video, which is quite interesting.

The Wintergaten Marble machine is another music / performance art video using over 2000 marbles in a plywood device incorporating parts of a bass guitar, snare drum, orchestral bells. Another interdisciplinary physics / art / engineering style project. There are many related videos associated with this device and other music boxes volunteered by YouTube after viewing the Wintergaten machine video.

**Summer Professional Development for Physics teachers**

[phystec.org/pd/](http://www.phystec.org/pd/%22%20%5Ct%20%22xrefwindow)

modelinginstruction.org/workshops-2016/

[aapt.org/Conferences/sm2016/](http://aapt.org/Conferences/sm2015/)

As is traditional every May issue, I remind readers there are many physics teaching professional development opportunities and research experience for teachers (RET) opportunities, kindly collected at the Phystec website clearinghouse. In particular this summer there will be over fifty Modeling Physics (and related) courses offered in about 25 states and Thailand (see the excellent modeling instruction.org website). Also consider attending the late July AAPT National Meeting in College Park MD, and the Physics Education Research Conference (PERC) immediately following it. Have a great summer.

**PhDcomics TV releases new Physics videos on Black Holes. Gravitational Waves, Hawking Interview, Entanglement**

[*phdcomics.com/tv/*](http://www.phdcomics.com/tv/)

Jorge Cham’s “comic strip evolved into video site” has produced a number of new live and animated videos on physics topics of the day. The Gravitational Waves, Quantum Computing, Stephen Hawking Interview, Quantum Entanglement, Extra Dimensions, and Super Massive Black Holes videos are amongst his most popular video offerings.

**OAPT Newsletter**

[newsletter.oapt.ca/files/Lasers-A-Solution-Looking-For-A-Problem.html](http://newsletter.oapt.ca/files/Lasers-A-Solution-Looking-For-A-Problem.html)

[newsletter.oapt.ca/files/category-articles.html](http://newsletter.oapt.ca/files/category-articles.html)

The Ontario Canada section of the AAPT continues to produce an outstanding online newsletter with articles, lessons plans, commentary etc on physics teaching. Kudos to OAPT for another nice article / lesson discussing how to lead a class about lasers for HS students. Other offerings include demonstrations, activities, testing and evaluation, questioning strategies and discussions of physics pedagogy and reports from the travels of OAPT physics teachers.

**New free National Academies Press Publications**

Communicating Chemistry: A Framework of Sharing Science: A Practical Evidence-Based Guide

[nap.edu/catalog/23444/](http://www.nap.edu/catalog/23444/)

“…based on the best available empirical evidence from the research literature on informal learning, science communication, and chemistry education. The framework consists of five elements which can be applied broadly to any science communication event in an informal setting.” These five elements include goals and outcomes, knowing resources, deliberate design with evaluation, communication and reflection/follow-up. Nice references to Michael Faraday’s famous “Chemical History of a Candle” lectures.

Developing a National STEM Workforce Strategy: A Workshop Summary

[nap.edu/catalog/21900/](http://www.nap.edu/catalog/21900/)

Several government, industrial and policy organizations have been attempting to drive large scale system discussions of US STEM strategies. Locally I have become entangled with a regional STEM hub and nationally with the STEM Funder’s Network (SFN), all organizations attempting to promote STEM and most importantly to me, physics education. Initiatives like this make me hopeful for the future of physics teaching, though clearly we will be moving in an ever more interdisciplinary direction. This NAS publication collects and summarizes presentations and discussions from an NSF HER funded 2016 workshop.

Understanding the Chain Fountain

youtube.com/v/-eEi7fO0\_O0

Rutherford-physics.org.uk

A Royal Society / University of Cambridge (UK) video discussing the physics of the chain fountain, a very nice theoretical mechanics problem, developed so as to lead high school physics students to solve a real world challenging research problem. Solutions and conclusions are then used to develop variants of chains with other predicted behaviors. The Rutherford Physics Partnership at Cambridge is a physics education project supporting UK physics teachers and students associated with UK physics curricula and relevant testing as well as university entrance exam preparation and the transition to university physics. Sister projects address mathematics and engineering. Their motto: “Physics. You work it out.”