# TPT *WebSights* column draft for March 2024:

*WebSights* features announcements and reviews of select sites of interest to learners and teachers of introductory physics. 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 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).

**Resources for the Total Solar Eclipse of 8 April 2024**

<https://science.nasa.gov/eclipses/future-eclipses/eclipse-2024/>

<https://science.nasa.gov/sun/helio-big-year/>

<https://science.nasa.gov/eclipses/citizen-science/>

<https://astrolab.fas.harvard.edu/LightSound.html>

<https://www.acb.org/what-are-best-mobile-or-web-apps-blind-people>

<https://eclipse2024.org/>

<https://buffaloeclipse.org/science/>

<http://tinyurl.com/WS-RPSeclipseday>

<http://tinyurl.com/WS-WGBHeclipse>

<https://www.sciencefriday.com/educational-resources/model-eclipses/>

<https://www.aapt.org/resources/eclipse2017/>

<https://www.sciencefriday.com/educational-resources/eclipse-party-activities/>

<https://buffaloeclipse.org/safety/>

<https://preventblindness.org/solar-eclipse-and-your-eyes>

<https://www.scientificamerican.com/article/still-a-glaring-problem-how-a-solar-eclipse-can-fry-your-eyes/>

<https://www.cbsnews.com/baltimore/news/eclipse-eye-damage/>

We are preparing for a great early April astronomical show here in Buffalo and across much of the US, and we have already cancelled classes. We are getting our pinhole projectors and eclipse glasses ready for this event, both one of Nature’s most spectacular yet one only part of a “NASA Heliophysics Big Year” including multiple observatories, events and citizen science opportunities. So far one of the most amusingly intriguing eclipse cultural tech projects to me is the Harvard eclipse sonification project. Electronic keychain squealers and squeakers have long been a tool for the blind, smartphone apps are revolutionizing life for low vision folk (consider volunteering for “Be My Eyes”), and now sonification for eclipses to go along with the natural sound changes, temperature changes, and breezes experienced during an eclipse.

Several websites with lesson plans and materials from past eclipses are also available, such as the Rogers Public Schools Eclipse Day Resources and WGBH sites. The Science Friday materials include eclipse modeling lesson plans and activities developed by Temple Univ and the AAPT.

Safety is paramount, and there are many sites dedicated to eye safety during eclipses. Do not look directly at the sun, or through unspecialized, improvised or homemade filters like balloons, space blankets, layers of green plastic garbage bags and so forth. Order your eclipse viewing glasses or in advance and/or make a pin hole projector. Go to a viewing event where safe glasses and viewers are provided and shared.

*Partially lifted from a set of resources by the Western NY Master Teacher STEM Leadership PLT, and from buffaloeclipse.org*

**Technology Connections**

[**https://www.youtube.com/@TechnologyConnections**](https://www.youtube.com/@TechnologyConnections)

[**http://tinyurl.com/WS-TC-contactor**](http://tinyurl.com/WS-TC-contactor)

[**http://tinyurl.com/WS-TC-120V**](http://tinyurl.com/WS-TC-120V)

[**http://tinyurl.com/WS-TC-extensioncords**](http://tinyurl.com/WS-TC-extensioncords)

[**http://tinyurl.com/WS-CT-heatpumps**](http://tinyurl.com/WS-CT-heatpumps)

I have been recently enjoying Chicago area YouTuber Alec Watson’s often humorous and sometimes satirical channel on the history and evolution of technology such as telephony, TV, video recorders, dishwashers and my personal favorite (because I touch upon it when teaching intro E&M), household wiring. Some of this stuff is new to me, but it’s all new and informative to my students, who are currently trying to start an electronics club. For instance, his video “The US electrical system is not 120V” discussing split phase household electrical supply, presentations on contactors, GFCI, US household receptacle and plug designs (why those holes in the prongs, and why are Euro and British plugs and outlets so much safer) and orientations, and (probably our most unnecessarily dangerous household electrical items) -- extension cords. He also has a nice set of presentations discussing real world refrigerators, AC and heat pumps. The Technology Connections channel is worth checking out.

**More motor winding**

[**http://tinyurl.com/WS-125hpmotor**](http://tinyurl.com/WS-125hpmotor)

[**https://www.youtube.com/@Herold\_Mielenz**](https://www.youtube.com/@Herold_Mielenz)

[**http://tinyurl.com/WS-windingdesignRMF**](http://tinyurl.com/WS-windingdesignRMF)

[**https://www.youtube.com/@Lesics**](https://www.youtube.com/@Lesics)

This may be a personal mental illness at this point, but I can’t look away. Maybe I should wind motors after retirement. Herold and Mielenz have some more nice videos showing how it’s done. The Lesics video does a great job of showing rotating magnetic fields using animation and computer generated artwork. I’m gonna lay off the motors, at least until end of this semester when I’ll build them with my students :^).