

2014 AGU GIFT Workshop

Created by [You](#) Last updated 12/16/2014

Web-based resources shared during the 2014 AGU GIFT workshop.

In addition to the NASA peer reviewed collection of resources, NASA Wavelength provides a way to bundle collections, like a very powerful bookmark, that can include notes, directions, goals or objectives, or instructions. Resources can be added to this list from almost any where and could be a .pdf, photo, picture, movie, ... as long as there is a url, you can add it to your list.

Every list you create can be private (only for your eyes) or public; you decide. Lists are assigned a static URL that means consistency. Lists can be printed out and further customized in Acrobat.

The possibilities are left up to you!

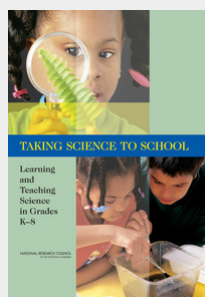


Achieve | Next Generation Science Standards

Notes: Select resources from "Teaching Earth and Space Science using the Next Generation Science Standards" by Dr. Michael Wysession

External Resource URL:

<http://www.nextgenscience.org/next-generation-science-standards>

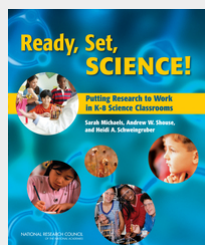


Taking Science to School: Learning and Teaching Science in Grades K-8 | The National Academies Press

Notes: Select resources from "Teaching Earth and Space Science using the Next Generation Science Standards" by Dr. Michael Wysession Download a PDF of "Taking Science to School" by the National Research Council for free. Description: What is science for a child? How do children learn about science and how to do science? Drawing on a vast array of work from neuroscience to classroom observation, Taking Science to School provides a comprehensive picture of what we know about teaching and learning science from kindergarten through eighth grade.

External Resource URL:

<http://www.nap.edu/catalog/11625/taking-science-to-school-learning-and-teaching-science-in-grades>



Ready, Set, SCIENCE!: Putting Research to Work in K-8 Science Classrooms | The National Academies Press

Notes: Select resources from "Teaching Earth and Space Science using the Next Generation Science Standards" by Dr. Michael Wysession Download a PDF of "Ready, Set, SCIENCE!" by the National Research Council for free. Description: What types of



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instructional experiences help K-8 students learn science with understanding? What do science educators, teachers, teacher leaders, science specialists, professional development staff, curriculum designers, and school administrators need to know to create and support such experiences? Ready, Set, Science! guides the way with an account of the groundbreaking and comprehensive synthesis of research into teaching and learning science in kindergarten through eighth grade. Based on the recently released National Research Council report Taking Science to School: Learning and Teaching Science in Grades K-8, this book summarizes a rich body of findings from the learning sciences and builds detailed cases of science educators at work to make the implications of research clear, accessible, and stimulating for a broad range of science educators.

External Resource URL:

<http://www.nap.edu/catalog/11882/ready-set-science-putting-research-to-work-in-k-8>

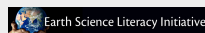


 **Learning Progressions in Science: An Evidence-based Approach to Reform | CPRE : Consortium for Policy Research in Education**

Notes: Select resources from "Teaching Earth and Space Science using the Next Generation Science Standards" by Dr. Michael Wysession

External Resource URL:

<http://www.cpre.org/learning-progressions-science-evidence-based-approach-reform>



 **Earth Science Literacy Initiative - ESLI**

Notes: Select resources from "Teaching Earth and Space Science using the Next Generation Science Standards" by Dr. Michael Wysession

External Resource URL: <http://www.earthscieliteracy.org/>



 **IRIS - Incorporated Research Institutions for Seismology**

Notes: Select resources from "Teaching Earth and Space Science using the Next Generation Science Standards" by Dr. Michael Wysession IRIS is a consortium of universities dedicated to the operation of science facilities for the acquisition, management, and distribution of seismological data.

External Resource URL: <http://www.iris.edu/hq/>



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MAVEN | Mars Atmosphere and Volatile Evolution mission

Notes: MAVEN Mission website. ||| MAVEN launched on November 18, 2013, and entered orbit around Mars on September 21, 2014. The mission's goal is to explore the planet's upper atmosphere, ionosphere, and interactions with the Sun and solar wind

External Resorce URL: <http://lasp.colorado.edu/home/maven/>



NASA MAVEN Mission to Mars - YouTube

Notes: The MAVEN Mission: What We Hope to Learn About the Ancient Atmosphere of Mars ||| Lee Pruett, Erin Wood and Dr. Claire Raftery ||| ||| The Mars Atmosphere and Volatile Evolution (MAVEN) mission. YouTube videos and animations from the mission

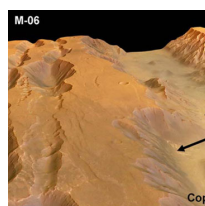
External Resorce URL: <https://www.youtube.com/user/MAVEN2Mars>



MAVEN » Videos

Notes: Select resources from the MAVEN presentation. ||| The MAVEN Mission: What We Hope to Learn About the Ancient Atmosphere of Mars ||| Lee Pruett, Erin Wood and Dr. Claire Raftery ||| On this page, you will find a collection of MAVEN videos. Click on the thumbnail image to watch each video on the MAVEN YouTube channel. ||| If you would prefer to download a copy of available videos (in a variety of formats), access the NASA Goddard Space Flight Center Scientific Visualization Studio MAVEN gallery or the NASA Jet Propulsion Laboratory Mars Exploration Program Video Archive.

External Resorce URL: <http://lasp.colorado.edu/home/maven/multimedia/videos/>



Mars Match Game

Notes: Select resources from the MAVEN presentation. ||| The MAVEN Mission: What We Hope to Learn About the Ancient Atmosphere of Mars ||| Lee Pruett, Erin Wood and Dr. Claire Raftery ||| This activity is about Mars and the similarities and differences between Mars and Earth. Learners will compare physical properties of Earth to those of Mars and investigate images of features on Mars to try to find similar features in images of the Earth. - See more at:

<http://nasawavelength.org/resource/nw-000-000-002-110#sthash.azn4NMUj.dpuf>

AAAS Benchmarks: [12D/P3](#), [4A/M3](#)

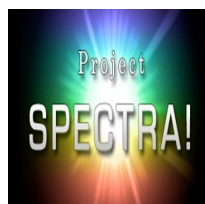
More info: <http://nasawavelength.org/resource/nw-000-000-002-110>

Resource URL:

http://was.cdlib.org/wayback/was/20150202064946/http://phoenix.lpl.arizona.edu/pdf/esson_6.pdf



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Planet Designer: Retro Planet Red

Notes: Select resources from the MAVEN presentation. ||| The MAVEN Mission: What We Hope to Learn About the Ancient Atmosphere of Mars ||| Lee Pruett, Erin Wood and Dr. Claire Raftery. ||| This is an activity about how much atmospheric pressure is needed on Mars to maintain surface water and why it does not have surface water today. Learners will use a computer interactive to learn about Mars past and present before exploring the pressure and greenhouse strength needed for Mars to have a watery surface as it had in the past. - See more at:

<http://nasawavelength.org/resource/nw-000-000-003-736/#sthash.zeJ2BvRK.dpuf>

AAAS Benchmarks: [4A/M3](#), [4B/H1](#), [12D/M9](#)

More info: <http://nasawavelength.org/resource/nw-000-000-003-736>

Resource URL:

http://asp.colorado.edu/home/wp-content/uploads/2013/06/Retro_Planet_Red_teacher_20130617.pdf



Graphing the Rainbow

Notes: Select resources from the MAVEN presentation. ||| The MAVEN Mission: What We Hope to Learn About the Ancient Atmosphere of Mars ||| Lee Pruett, Erin Wood and Dr. Claire Raftery. ||| This is a lesson about visual spectra. Learners will explore different ways of displaying visual spectra, including colored "barcode" spectra, like those produced by a diffraction grating, and line plots displaying intensity versus color, or wavelength - See more at:

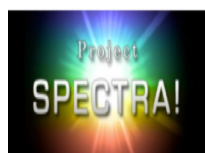
<http://nasawavelength.org/resource/nw-000-000-002-972#sthash.hLHLzRdq.dpuf>

AAAS Benchmarks: [4F/M8](#), [4F/M5](#), [9C/M4](#)

More info: <http://nasawavelength.org/resource/nw-000-000-002-972>

Resource URL:

http://asp.colorado.edu/home/wp-content/uploads/2011/08/Graphing_the_Rainbow.pdf



Goldilocks and the Three Planets

Notes: Select resources from the MAVEN presentation. ||| The MAVEN Mission: What We Hope to Learn About the Ancient Atmosphere of Mars ||| Lee Pruett, Erin Wood and Dr. Claire Raftery. ||| This is a lesson about planetary atmospheres. Learners will interpret real spectral graphs from missions to determine what some of Earth, Venus, and Mars' atmosphere is composed of and then mathematically compare the amount of the greenhouse gas, CO₂, on the planets Venus, Earth, and Mars in order to determine which has the most. - See more at:

<http://nasawavelength.org/resource/nw-000-000-002-974#sthash.QzBtrHPI.dpuf>

AAAS Benchmarks: [4F/M8](#), [4B/H4](#), [4A/H3](#), [12B/H2](#), [12B/H1](#), [12D/M2](#)



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More info: <http://nasawavelength.org/resource/nw-000-000-002-974>

Resource URL:

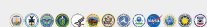
<http://lasp.colorado.edu/home/wp-content/uploads/2011/08/Goldilocks.pdf>



GlobalChange.gov

Notes: Climate Change Impacts: Third National Climate Assessment -and- Related Resources. Robert Taylor

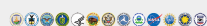
External Resource URL: <http://www.globalchange.gov/>



National Climate Assessment

Notes: The National Climate Assessment summarizes the impacts of climate change on the United States, now and in the future. Robert Taylor

External Resource URL: <http://nca2014.globalchange.gov/>



Adaptation | National Climate Assessment

Notes: Adaptation Activity: Interact with the graphic Robert Taylor

External Resource URL:

<http://nca2014.globalchange.gov/report/response-strategies/adaptation#graphic-17067>



Downloads | National Climate Assessment

Notes: Jump to the resources available for download from the National Climate Assessment.

External Resource URL: <http://nca2014.globalchange.gov/downloads>



Teaching Climate | NOAA Climate.gov

Notes: Teaching resources to follow Climate Report

External Resource URL: <http://climate.gov/teaching>



Earth2Class | Bringing Earth Science to the Classroom

Notes: Resources from Michael Passow's presentation

External Resource URL: <http://earth2class.org/site/>



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Welcome to NESTA | NESTA

Notes: Resources from Michael Passow's presentation

External Resource URL: <http://www.nestanet.org/cms/content/welcome>



Welcome to Earth Science Week | Earth Science Week

Notes: Resources from Michael Passow's presentation

External Resource URL: <http://www.earthsciweek.org/>



Education Resources | Center for Geoscience Education & Public Understanding

Notes: Resources from Michael Passow's presentation

External Resource URL: <http://geocntr.org/education-resources/>



Geophysical Information For Teachers (GIFT) Workshops | Education

Notes: The host for your two day session, AGU The specific link from Michael Passow's presentation

External Resource URL: <http://education.agu.org/education-activities-at-agu-meetings/gift/>



Geological Society of America - Educational Programs, Products, and Resources

Notes: GSA offers a variety of programs, products, and resources for K-12 and higher education as well as outreach to the public.

External Resource URL: <http://www.geosociety.org/educate/>

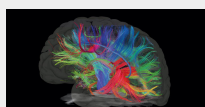


Deep Earth Academy - Educator Resources | JOIDES Resolution - Ocean Drilling Research Vessel

Notes: Teaching for Science - Learning for Life

External Resource URL: <http://joidesresolution.org/node/3002>

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Seminars On Science - Online Graduate Courses for Teachers

Notes: Resources from Michael Passow's presentation. ||| Seminars on Science offers a series of fully online professional development courses.

External Resource URL:

<http://www.amnh.org/learn-teach/educators/seminars-on-science-online-graduate-courses-for-teachers>



AMS Education

Notes: American Meteorological Society ||| From Michael Passow's presentation.

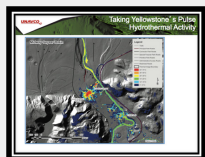
External Resource URL: <http://www.ametsoc.org/amsedu/>



Learning Opportunities :: Burns Technology Center

Notes: From Michael Passow's presentation ||| Resources for PD from Montana State.

External Resource URL: <http://btc.montana.edu/courses/>



Taking the Pulse of Yellowstone's "Breathing" Volcano: Problem-Based Learning in America's First National Park

Notes: From Shelley Olds' presentation (UNAVCO)

External Resource URL:

<http://www.unavco.org/education/resources/educational-resources/lesson/gps-yellowstone/gps-yellowstone.html>



Science Bulletins: Yellowstone—Monitoring the Fire Below - YouTube

Notes: YouTube video Three of the most catastrophic volcanic eruptions in geologic history occurred at a place now visited by nearly four million people a year: Yellowstone National Park...

External Resource URL: <https://www.youtube.com/watch?v=rFe-VSf-TQ8>



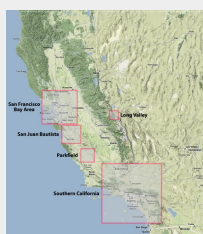
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Yellowstone National Park's Maps & Orientation Page

Notes: Yellowstone National Park is located in the western United States. It spans 3,472 square miles (8,987 square km). Ninety-six percent of the park is located in the state of Wyoming, another three percent is in Montana, and one percent is in Idaho. Shelley Olds, UNAVCO

External Resource URL: <http://www.nps.gov/features/yell/interactivemap/index.htm>



Data Plots

Notes: USGS Earthquake Hazards Program, responsible for monitoring, reporting, and researching earthquakes and earthquake hazards

External Resource URL: <http://earthquake.usgs.gov/monitoring/deformation/data/plots/?region=SF>

Education | UNAVCO

Notes: UNAVCO Education & Community Engagement, Data for Educators, Education Resources

External Resource URL: <http://www.unavco.org/education/education.html>



Jules Verne Voyager | UNAVCO

Notes: Jules Verne Voyager ||| Resources from UNAVCO presentation

External Resource URL: <http://jules.unavco.org/>



EarthScope Resources for Educators | Earthscope

Notes: Resources from UNAVCO presentation

External Resource URL: <http://www.earthscope.org/resources/educators>



The Day the Mesozoic Died | HHMI's BioInteractive

Notes: The disappearance of the dinosaurs at the end of the Cretaceous period posed one of the greatest, long-standing scientific mysteries. This three-act film tells the story of the extraordinary detective work that solved it. Dr. Mark Neilsen, HHMI

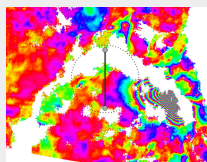
External Resource URL: <http://www.hhmi.org/biointeractive/day-mesozoic-died>



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InSAR investigations to better understand earthquake faulting | Education | UNAVCO

Notes: Resources from UNAVCO presentation

External Resorce URL:

<http://www.unavco.org/education/resources/educational-resources/lesson/visible-earthquake-insar/visible-earthquake-insar.html>

