

## **BaP April Updates. 4.8.09**

### **General**

This is a website developed by our district science specialist. Each standard and objective has a core tracker with it that is to be used with the test. It seems to work well.

[http://t4.jordan.k12.ut.us/teacher\\_resources/Science/modelclassroomroot/linktomodelclassroom.htm](http://t4.jordan.k12.ut.us/teacher_resources/Science/modelclassroomroot/linktomodelclassroom.htm)

### **Calendar: Upcoming Events/Opportunities/Deadlines**

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January 1 – December 31, 2009: The Year of Science.

For more information, please visit:

<http://www.yearofscience2009.org>

K-12: The Deadline for proposals at the NSTA conference in Philadelphia looms

[http://science.nsta.org/sessions/proposal\\_submission.asp](http://science.nsta.org/sessions/proposal_submission.asp)

Don't forget that April 15 is not just tax day. It is also the deadline for proposals to present at the NSTA national conference next year in Philadelphia. Share a great instructional activity or describe a project that you did with your students.

Share the findings from an action-research investigation or ways to use technology to help students learn. Maybe you have a great idea to share that would fit into one of the strands: 1) Meeting the Unique Needs of Urban and Rural Science Learners; 2) Connecting Content: Between, Within, and Among Subjects; 3) Closing the Digital Generation Gap Between Teachers and Students, or 4) Rekindling the Fires of Science Teaching and Learning.

Proposals are relatively easy to write, and NSTA has even provided a link to a short article on writing a good proposal.

Access it from this site:

<http://www.nsta.org/conferences/sessions.aspx?lid=tnavhp>

K-12: Galileo and the International Year of Astronomy  
[www.learner.org](http://www.learner.org)

Online Astronomy PD is provided by Annenberg Media. Access these programs online to expand your understanding of the discoveries of Galileo.

“Galileo Galilei is called the Father of Astronomy for his observations of heavenly bodies in the Solar System, which reordered humans' concept of the universe in 1609, and for his discoveries that contributed to the demise of the Earth-centered cosmology of Aristotle and Ptolemy. Star gazers can see what a radical change this was and how it was received 400 years ago in several science resources:

Watch The Mechanical Universe...and Beyond: Program 1, "Introduction"; Program 2, "The Law of Falling Bodies"; and Program 4, "Inertia."

<http://www.learner.org/resources/series42.html>

Earth Revealed: Program 2, "The Restless Planet," traces the development of astronomical theory.

<http://www.learner.org/resources/series78.html>

Essential Science for Teachers: Earth and Space Science, Program 8, "The Solar System: Order out of Chaos" probes young students' ideas about Earth's origins and their concept of the Solar System.

<http://www.learner.org/courses/essential/earthspace/session8/>

K-12: Did you know that April 26 is the Richter Scale Day?

The Annenberg Foundation provides more resources on this for teachers, students, and the curious. Go online for the specifics.

“The Richter magnitude scale is used worldwide to measure the amount of energy released during earthquakes, particularly smaller, local quakes. Charles Richter and Beno Gutenberg at the California Institute of Technology developed the logarithmic scale in 1935 to study seismic activity in California.

Get a solid overview of earth science and topics such as plate tectonics, volcanism, and erosion with "Earth Revealed" .

Programs also address environmental issues including the use of fossil fuels, groundwater contamination, and potential consequences of global warming.

<http://www.learner.org/resources/series78.html>

Our Dynamic Earth interactive offers an introduction to plate tectonics, boundaries, faults, and earthquakes.

<http://www.learner.org/interactives/dynamicearth/>

Look at the relationship between earthquakes and volcanic activity with our Volcanoes interactive

<http://www.learner.org/interactives/volcanoes/>

Algebra: In Simplest Terms: Program 19, "Logarithmic Functions," explains how the Richter scale measures quake magnitude; Program 11, "Circle and Parabola," demonstrates how P and S waves are used to locate an earthquake's epicenter.

<http://www.learner.org/resources/series66.html>

K-12: Climate Change: EPA

<http://www.epa.gov/climatechange/>

The Environmental Protection Agency (EPA) provides comprehensive, in depth information about climate change.

Learn about the science behind it, greenhouse gas emissions, health and environmental effects, regulatory initiatives, U.S. climate policy, economic analyses, and what you can do to reduce it at home, school, and elsewhere.

Interesting Fact:

Changes in the shape of the Earth's orbit (or eccentricity) as well as the Earth's tilt and precession affect the amount of sunlight received on the Earth's surface. These orbital processes—which function in cycles of 100,000 (eccentricity), 41,000 (tilt), and 19,000 to 23,000 (precession) years—are thought to be the most significant drivers of ice ages.

Gr K-5: Climate Change Kids Site

<http://epa.gov/climatechange/kids/>

At this site, the Environmental Protection Agency (EPA) presents a view of climate change for the younger student -- what it is, why it matters, and what kids can do about it. Games, animations and quizzes, and a climate change calculator are provided.

Interesting Fact:

Oceans cover about 70 percent of Earth's surface. Their large mass and thermal properties, enable them to store vast quantities of heat. Oceans buffer and regulate temperature – energy absorbed or lost by the oceans results in a smaller surface temperature change than would occur over land. The atmosphere and ocean constantly exchange energy and matter.

Gr K-5: Energy Star Kids

[http://www.energystar.gov/index.cfm?c=kids.kids\\_index](http://www.energystar.gov/index.cfm?c=kids.kids_index)

helps students see where energy comes from, how it is used, and what they can do in their own room to conserve it. Become an Energy Star School, and work to conserve energy and reduce our carbon footprint.

Interesting Fact:

Geothermal energy is the heat energy that is produced by natural processes inside the earth. It can be taken from hot springs, reservoirs of hot water deep below the ground, or by breaking open the rock itself.

Gr K-8: EPA's SunWise Program

<http://www.epa.gov/sunwise/>

The EPA site provides activities to teach children (K-8th grade) about the ozone layer, UV radiation, and how to be safe in the sun. Sign up to receive a free activity kit and access to other educational resources.

Interesting Fact:

A UV Index reading of 8 to 10 means very high risk of harm from unprotected sun exposure. Minimize sun exposure during midday hours, from 10 a.m. to 4 p.m. Protect yourself by liberally applying a sunscreen with an SPF of at least 15. Wear protective clothing and sunglasses to protect the eyes.

Gr K-9: Dare to Compare

<http://nces.ed.gov/nceskids/eyk/index.asp?flash=true>

So, how do you compare with students nationally and from around the world? This interactive site invites you to test your knowledge against students nationally and around the world.

Pick a grade and subject: civics, economics, geography, history, math, or science. There are 4th and 8th grade level questions in

science, pulled from the TIMSS study. All are multiple choice, and answers can be checked immediately.

K-12: Genetics: Tour the Basics

<http://learn.genetics.utah.edu/content/begin/tour/>

The University of Utah created this site with funding from the National Institute of Health (NIH). The site uses animations to answer six questions: What is DNA? What are genes? What are chromosomes? What is a protein? What is heredity? What is a trait? Each question is answered through a virtual tour; the tours can be downloaded to run on your computer later without an Internet connection.

K-12: Why Files Interactives

<http://whyfiles.org/interactives/>

This site was created by the University of Wisconsin-Madison with support from the National Science Foundation. It features the latest news in science, math and technology. Make rainbows, control a tornado, play with lightning, make a snowflake, and hit a home run.

K-12: Register today for National Environmental Education Week April 12-18, 2009

<http://www.EEWeek.org>

National Environmental Education Week (EE Week) is the nation's largest organized environmental education event. Held each April, EE Week promotes understanding and protection of the natural world by actively engaging K-12th grade students and educators of all subjects in an inspired week of environmental learning and service before Earth Day. Join the thousands of schools, nature centers, zoos, museums, and aquariums nationwide who have made a commitment to engage students in environmental learning through participation in EE Week!

This year's EE Week theme is Be Water Wise! Registered partners will have access to a wide variety of FREE environmental education resources, including:

- \* Standards-based environmental education lessons and activities, including water conservation, watershed, and water quality curricula,

- \* Access to EE Week's school water audit tool in which

students "find the leaks" in water usage at school,

- \* Opportunities for online communication and knowledge-sharing with educators from across the country, including participation in the EE Week Photo Blog contest and Ask an Expert feature,

- \* Monthly electronic newsletters highlighting the latest EE curricula, professional development, and funding opportunities,

- \* Certificates of participation for themselves and their students, and

- \* A coupon for \$10 off your purchase at Acorn Naturalists, offering over 8,000 science and nature resources for the trail and classroom.

You can join a national network of educators dedicated to increasing environmental literacy, promote environmental learning, and gain national exposure for your school or organization by registering today at [www.EEWeek.org](http://www.EEWeek.org).

Questions? Contact Jessica Culverhouse at [eeweek@neefusa.org](mailto:eeweek@neefusa.org) or call 202-261-6484.

16. Gr 5-10: 21st National Symposium: Prevention Science and Adolescent Problem Behavior: Advances and Opportunities << A keynote Address by Dr. Jeffrey Jenson

Gr 6-12: A Fantastic Summer Opportunity for Teachers  
[http://webserver1.grad.usda.gov/conferences/fda\\_nsta/fdafaq.php](http://webserver1.grad.usda.gov/conferences/fda_nsta/fdafaq.php)

Thinking about what to do this summer? For professional development? For vacation? Why not take advantage of a week-long free professional development program for middle and high school science teachers offered jointly by FDA and USDA in our nation's capital? Consider the following:

While no illnesses have been reported, on March 31, 2009 a California company recalled about 2 million pounds of pistachios over concerns of possible salmonella contamination.

In January, 2009, the CDC stated that more than 500 people had been found to be sick with the outbreak strain Salmonella Typhimurium. Investigations conducted by the CDC and others showed that peanut butter and peanut butter containing products were responsible for the outbreak.

Foodborne disease outbreaks and food recalls such as these frequent the news. How do these organisms cause disease? What can an individual do to protect themselves from these diseases? What measures are being taken by the federal government to prevent transmission of these organisms?

The science and technology of food safety from the farm to the table continues to change to meet our need for safe food products. New and emerging technologies have enabled scientists to broaden their understandings of these and similar organisms.

But you might be thinking – what do these outbreaks and recalls have to do with my teaching science? What better way of engaging your students in learning science than to do it through food? But, how can this be done?

Science educators do have an opportunity to provide inquiry-based lessons related to these outbreaks and recalls. These lessons can be found in the curriculum Science and Our Food Supply developed jointly by NSTA and FDA.

To order a free copy of the curriculum:

[http://webserver1.grad.usda.gov/conferences/fda\\_nsta/request\\_form.php](http://webserver1.grad.usda.gov/conferences/fda_nsta/request_form.php)

But wait! There's more! In order to prepare teachers to use these lessons, FDA and USDA have joined as partners to provide a free multidimensional professional development program that will take place July 19 – 26. Included in the program are transportation to and from Washington, DC and all housing and meal expenses.

During the program, selected teachers will receive a copy of the curriculum and will participate in activities such as the following - meet with FDA and USDA scientists to learn about their current research on foodborne diseases; work with teachers at the microbiology lab at the University of Maryland to learn proper techniques to use in doing microbiology labs with their own students; tour the Phillips Seafood Company's processing plant in Baltimore; tour USDA's farm in Beltsville, MD.

Selected science teachers are asked to implement the curriculum

in their classrooms during the 2009 – 2010 school year and to do a workshop on the curriculum for other teachers. All of the teachers will attend an Enhancement Conference in Phoenix, Arizona on December 5, 2009 - again, all expenses paid. Each teacher will also receive a \$1000.00 grant to conduct the workshop.

To download a copy of the application – deadline April 23, 2009:  
[http://webserver1.grad.usda.gov/images/stories/docs/10229\\_1\\_0\\_FDA\\_Workshop\\_Application\\_Summer\\_2009.pdf](http://webserver1.grad.usda.gov/images/stories/docs/10229_1_0_FDA_Workshop_Application_Summer_2009.pdf)

Contributed by Mimi Cooper, FDA Middle Level Workshop Facilitator; [mimicooper@verizon.net](mailto:mimicooper@verizon.net)

Gr 9-12: Adopt-a-Physicist  
<http://www.adoptaphysicist.org/>

Attention high school physics teachers: Registration is now open for the Spring 2009 session of Adopt-a-Physicist! The program is open to all high school physics classes, but registration is limited to the first 150 classes, so sign up today!

This unique (and free) program pairs high school physics classes with physics degree holders in online discussion forums, for a three-week period (April 13–May 1). Through these forums, your students will get the chance to connect to "real" physicists working in fields ranging from radiation therapy to computer programming.

You can read more about the program, download a Program Packet, and register your classes on the Adopt-a-Physicist website.

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2009

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2009: The Year of Science

<http://www.yearofscience2009.org>

April 10: Deadline to apply for the Explore Lake Erie workshop

<http://coseegreatlakes.net/events/leew>

April 12-18: National Environmental Education Week

<http://www.EEWeek.org>

April 15: Deadline to submit proposal to present at NSTA Philadelphia in 2010

<http://www.nsta.org/conferences/sessions.aspx?lid=tnav>

April 21: NSDL/NSTA Webinar: Beyond Penguins and Polar Bears

<http://learningcenter.nsta.org/products/SeminarRegistration.aspx>

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April 24: Deadline to apply for the AAAS Leadership in Science Education Prize

[http://www.aaas.org/aboutaaas/awards/hs\\_scied\\_leadership/hs\\_scied\\_leadership.shtml](http://www.aaas.org/aboutaaas/awards/hs_scied_leadership/hs_scied_leadership.shtml)

April 30: Deadline to apply for the America's Greenest School

<http://www.americasgreenestschool.com>

May 1: Deadline to apply for Dominion Foundation grant

<http://www.dom.com/about/education/grants/grants.jsp>

May 15: Deadline to apply for GEMS Space Science Sequence Workshop at CMU

<http://gems.cmich.edu/cohort-application.html>

May 20: Deadline for entries in the Discovery Education 3M Young Scientist Challenge

<http://www.youngscientistchallenge.com>

June 15-19: Math Machines workshop for high school teachers in Gahanna

<http://www.mathmachines.net>

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