

E-Blast # 2 November 2010

Thanksgiving Science

http://ohiorc.org/bookmark/view_a_folder.aspx?uid=7827&folderID=24785

From the pop-up thermometer to turkey genetics, Thanksgiving offers lots of topics that can be explored through science. We've put together six sets of ORC resources that are related to Thanksgiving topics. Along with these resources consider asking students to conduct Internet research to answer these questions,

- * What is it about a traditional thanksgiving meal that makes you sleepy, the tryptophan in turkey or something else?
- * What is the science behind those golden brown and delicious dinner rolls? Hint: Maillard reaction
- * Does cornstarch or flour make the best gravy?

For information on the following items please visit the LSTA website at: <http://lsta.info>
Select E-Blasts from the menu on the home page.

1. Gr 9-12: Real World Design Challenge for High School Students; Deadline 11/19
 2. Teacher at Sea Program Apply by November 20, 2010
 3. PK-16: Vernier Software and Technology Awards; Deadline: November 30, 2010
 4. General Mills Champions for Healthy Kids Grants; Deadline: December 15
 5. K-12 President's Environmental Youth Awards Deadline Dec. 31
 6. Disney Worldwide Conservation Fund Grants; Deadline: January 1, 2011
 7. Gr 9-12: Let's Get To Mars By 2030! Submissions are due by January 5, 2011
 8. Starbucks Shared Planet Youth Action Grants; Deadline: January 31, 2011
 9. Siemens We Can Change the World Challenge; Deadline: March 15, 2011
 10. The Presidential Awards for Excellence in Mathematics and Science Teaching
 11. Gr 9-12: 2011 Thacher Environmental Research Contest Entries by April 11, 2011
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 19. Science Activities for Home or Family Math and Science Nights
 20. Understanding Science continues to grow! <http://www.understandingscience.org>
- Calendar of deadlines for previously mentioned programs and grants

1. Gr 9-12: Real World Design Challenge for High School Students
Team registration deadline is November 19, 2010.
<http://www.realworlddesignchallenge.org/>

Registration is now open for the 2010-2011 Real World Design Challenge. The Challenge is totally free to participate in and open to teams of 3-7 high school students.

It is an aviation design competition that uses real engineering tools. They have added some new tools this year, and each teacher that participates gets more than \$1 million in professional engineering software.

Teams get access to mentors, and state winners get an all-expenses-paid trip to Washington, DC to compete in the National Finals.

2. Teacher at Sea Program Apply by November 20, 2010

The U.S. National Oceanographic and Atmospheric Administration (NOAA) is accepting applications for its Teacher at Sea program's 2011 field season. The program aims to give teachers clearer insight into the ocean, greater understanding of maritime work and studies, and increased environmental literacy by fostering interdisciplinary research. The program accepts applications from currently employed, full-time educators in several categories. All necessary travel costs associated with teacher participation in the program are covered, including transportation to and from the ship, lodging, and per diem allowance. Apply by November 20, 2010, at <http://teacheratsea.noaa.gov>.

3. PK-16: Vernier Software and Technology Awards; Deadline: November 30, 2010 <http://www.vernier.com/grants/nsta.html>

Vernier Software & Technology and the National Science Teachers Association (NSTA) invite educators to submit their creative projects using data collection to teach science topics for the Vernier Software & Technology/NSTA Technology Awards. The awards, valued at \$3,000 each, are given to up to seven educators who are judged to have created the best inquiry-based, hands-on learning activities using data-collection technology interfaced with computers, graphing calculators and other handheld devices.

Awards are given to one elementary teacher, two middle school teachers, three high school teachers and one college-level educator based on applications. Each award consists of \$1,000 in cash, \$1,000 in Vernier equipment and up to \$1,000 toward travel and expenses for attending NSTA's 2011 National Convention. Entries will be judged by a panel of experts, appointed by NSTA.

4. General Mills Champions for Healthy Kids Grants; Deadline: December 15

The General Mills Champions for Healthy Kids Grant Program is a partnership of the General Mills Foundation, the American Dietetic Association Foundation, and the President's Council on Physical Fitness. The goal of the program is to encourage U.S. communities to improve the eating and physical activity patterns of young people, ages 2-18. In 2011, the program will award 50 grants of \$10,000 each to nonprofit organizations, schools, and government agencies throughout the country that offer

innovative programs to help youth adopt a balanced diet and physically active lifestyle. (All funded programs must have at least one nutrition objective and at least one physical activity objective.) Local organizations that work with children, including park districts, health departments, government agencies, Native American tribes, municipal organizations, schools, YMCAs, Boys & Girls clubs, etc., are encouraged to apply. Online applications must be submitted by December 15, 2010.

www.generalmills.com/en/responsibility/community_engagement/grants/champions_for_healthy_kids.aspx

5. K-12 President's Environmental Youth Awards Program

Do you know of a student's environmental project that's worthy of national recognition? Each year the U.S. Environmental Protection Agency's PEYA program honors environmental projects completed by students between kindergarten and 12th grade. Winning projects in the past have covered a wide range of subjects that promote environmental stewardship including:

- Environmental science projects
- Recycling programs in schools and communities
- Environmental awareness campaigns
- Videos, skits, and newsletters that focused on environmental issues

Each PEYA applicant receives a signed certificate from the President of the United States. One outstanding project from each EPA region will win a trip to Washington, D.C. The deadline for submitting an application is December 31st of each year. For more information and to apply visit: <http://www.epa.gov/peya>

6. Disney Worldwide Conservation Fund Grants (Deadline: January 1, 2011)

The Disney Worldwide Conservation Fund supports projects that contribute to the conservation of endangered or threatened species, their habitats, and the communities that surround them worldwide. The Fund seeks to support established conservation programs that contain a strong in site component (scientific field studies), promote education and community engagement, and demonstrate a significant benefit to in-country participants, habitats, and species by working with local communities, regional/national non-governmental organizations, or governments. The Fund supports programs around the world, including North America, Africa, Asia, Australia, South America, and marine environments. Applicant organizations must have U.S. nonprofit status; non-governmental organizations outside the U.S. can apply in partnership with a U.S. organization. Letters of inquiry must be submitted prior to receiving an invitation to apply. Beginning November 1, 2010 applicants whose letters of inquiry have been approved will be sent a request for proposals. The Fund recommends that all applicants submit their letters of inquiry by January 1, 2011 at the latest. Invited proposals are due by January 25, 2011. Visit the Fund's website for program priorities and application instructions: www.dwcf-rfp.com

7. Gr 9-12: Let's Get To Mars By 2030! Submissions are due by January 5, 2011.
<http://www.exploremars.org/>

Mars Education Challenge asks high school science educators to develop and submit ingenious ways to fit Mars science and exploration into their classroom lessons. Check out the URL above, and learn how you can apply to participate in the Mars Education Challenge, and through your participation help your students learn about a human space program that is going somewhere!

The Challenge will recognize six winning curricula entries with five regional awards and one national award. Regional winners will receive \$2,500 grants and the national winner will receive a \$5,000 grant. Additionally, all of the winners will have an opportunity to do field research with well-known planetary scientists. The national winner will receive an expense paid trip to NSTA's 2011 National Conference on Science Education in San Francisco where he or she will be recognized at a special awards ceremony. Winning lesson plans will be shared with classrooms nationwide.

8. Starbucks Shared Planet Youth Action Grants; Deadline: January 31, 2011

The Starbucks Foundation is accepting applications from organizations that provide young people a continuum of opportunities to develop creative approaches to address pressing concerns in their communities. Grants are 10,000 to \$30,000(USD) on average. Funding will be considered based on numbers of beneficiaries served, geographic reach, organizational capacity, and size of operating budget. Please complete a letter of inquiry for your organization. The Starbucks Foundation will contact you if we'd like to request a full grant proposal. Successful grant applicants will exhibit all of the following qualities: Deliver services to youth, ages 6 - 24; Preference will be given to organizations that focus on young people in the age range of 12 and older, when they are able to take independent action; Provides opportunity to combine learning with action that support communities and further global citizenship; Deliver services, disseminate information, provide training and/or build broad networks; Provide opportunities for Starbucks partners and multiple stores to be engaged in community service. The Starbucks Foundation reviews the submissions on an annual basis; letters of inquiry submitted between October 1, 2010 and January 31, 2011 will be reviewed and considered for the spring 2011 grant round. For more information, visit: www.starbucksfoundation.com To watch a video from last year's competition, visit <http://ndep.us/LabTV>. For additional information, contact Ohio RWDC Coordinator Dick Dieffenderfer at (614) 644-7356 or dick.dieffenderfer@ode.state.oh.us.

9. K-12 Siemens We Can Change the World Challenge (Deadline: March 15, 2011 - Activities Take 3-12 Weeks to Complete)

As citizens and future stewards of our planet, today's students are in a unique position to become active agents of environmental change. Siemens We Can Change the World Challenge - Encourages students from grades K-12 to team up with their classmates to create replicable solutions to environmental issues in their schools (grades K to five), community (grades six to eight) and world (grades nine to 12). The goal of the Siemens

We Can Change the World Challenge is to do more than just give kids a chance to formulate an experiment and carry it out. Contestants explore an environmental problem that affects their community. As part of the challenge, students must also put together guidelines for how other communities could repeat the project, and they share those guidelines as part of the contest. Prizes include scholarships, savings bonds, teacher awards, school grants, adventure trips, green prize packs, and more!

www.wecanchange.com

10 . The **Presidential Awards for Excellence in Mathematics and Science Teaching** are the Nation's highest honors for teachers of mathematics and science. The Awards recognize outstanding K-12 teachers for their contributions in the classroom and to their profession. The cycle this is year is for secondary (7-12). You may now nominate online for the 2011 Secondary Mathematics and Science Teachers (7-12) cycle.

In order to be eligible for the program, the applicant must:

- Teach mathematics or science at the 7-12th grade level in a public or private school.
- Hold at least a Bachelor's degree from an accredited institution.
- Be a full-time employee of the school or school district as determined by state and district policies, and teach K-12 students at least 50% of the time.
- Have at least 5 years of full-time, K-12 mathematics or science teaching experience prior to 2010-2011 academic school year.
- Teach in one of the 50 states or the four U.S. jurisdictions. The jurisdictions are Washington, DC; Puerto Rico; Department of Defense Schools; and the U.S. territories (American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the U.S. Virgin Islands).
- Be a U.S. Citizen or Permanent Resident.
- Not have received the PAEMST award at the national level in any prior competition or category.

If you would like to nominate a teacher for this prestigious award, go to:

<https://www.paemst.org/controllers/nomination.cfc?method=nominate> .

11. Gr 9-12: 2011 Thacher Environmental Research Contest Entries by April 11, 2011
<http://www.strategies.org/ThacherContest>

The 2011 Thacher Environmental Research Contest, sponsored by the Institute for Global Environmental Strategies, challenges high school students to conduct innovative research on our changing planet using the latest geospatial tools and data, which in recent years have become increasingly accessible to the public.

The best projects will receive cash awards in the amount of \$2,000 for first place, \$1,000 for second place and \$500 for third place. Entries may be submitted by

individuals or teams. In the case of team entries, the cash award will be split equally among the winning team members.

Winners also will be featured in an Encyclopedia of Earth article. In addition to the student prizes, teachers of the first-, second- and third-place students or teams will receive a \$200 amazon.com gift card. If participation is part of an after-school club or other activity independent of school, the student or team can identify an adult "coach" who would be eligible for this award (e.g., a parent, club leader, etc.).

12. Smithsonian Education Digs Into Earth's Soil

Smithsonian Education offers a fascinating exploration of Earth's soil with its "Dig It! The Secrets of Soil" exhibition. For information, videos, expert instruction, and activity sheets, visit <http://forces.si.edu/soils>.

For example, a "Root Words" word-search sheet combines science and language arts with insights into the origins of related scientific terms. Download a PDF at http://www.smithsonianeducation.org/families/point_click/activitysheets.html.

13. AGI Releases Glossary of Geology APP for the IPHONE and IPAD

The American Geological Institute's (AGI) Glossary of Geology, 5th Edition is now available for the iPhone, iPod Touch, and iPad in Apple's App Store. The Glossary of Geology app brings all 40,000 authoritative definitions of the vocabulary of the geosciences to an easy-to use, searchable, fast, and portable format. Beyond just definitions, users can learn the difference between look-alike pairs, such as sylvanite (a mineral) and sylvinitite (a rock); the origin of terms; the meaning of abbreviations and acronyms common in the geosciences; the dates many terms were first used; the meaning of certain prefixes; and the preferred term of two or more synonyms. The Glossary app enables users to both browse and search the entire glossary. In addition, the complete app is self-contained, so there is no need to be online to use this product - ensuring ready access to key information when you need it, whether in classroom, lab, library, office, or field. More details are [online](#). The Glossary of Geology App is also eligible for Apple's educational volume discounts.

14. SCIENCE WORX and VIRTUAL SCIENCE PRO RESOURCES for science teachers

Earlier this year Astellas launched [Science WoRx](#), a mentoring program and online resource network designed to help science teachers inspire the next generation of scientists. The program features a hands-on education and mentoring program, an online resource portal and online networking communities. In addition, Science WoRx is hosting a competition, "Make My LabWoRx," inviting science teachers to submit their favorite original lesson plans for a chance to win lab equipment for their school. Astellas has also expanded its mentoring efforts to science teachers and students across the U.S. through a program called the [Virtual Science Pro](#). Through video lessons and online resources like Skype, teachers can bring a real-world scientist into their

classroom to work with their students and conduct grade-level appropriate experiments that demonstrate the impact of science. Parents can use the video lessons as well to help their child get excited about science at home.

15. EE Week 2011 theme: Ocean Connections

Recognizing the importance of protecting the health of our ocean and understanding our dependence upon it regardless of its proximity, EE Week's 2011 theme is **Ocean Connections**. [Learn more](#) Join us April 10-16, 2011 to explore our vital connection to the ocean with teachers and students nationwide

The ocean covers nearly three quarters of our planet's surface, provides 70 percent of the oxygen in the atmosphere and houses about 20 percent of the known species on Earth. It regulates climate and weather and provides food and energy resources for humans worldwide. No matter how far from the coast, water in every stream or river eventually ends up in the ocean, and all life on Earth is dependent upon its health. More than half of all Americans live within 50 miles of the coast, but whether near or far our lives are inextricably linked to the ocean.

[Register today](#) to join thousands of educators and students across the country in exploring our vital connection to the ocean during National Environmental Education Week, **April 10-16, 2011**.

Register your school/program for National EE Week

As a registered EE Week participant, you will join a national network of educators dedicated to increasing the environmental literacy of K-12 students. You will also receive:

- Certificates of Participation for both you and your students;
- Monthly e-mail newsletters with classroom activities, funding resources and professional development opportunities;
- Access to an online library of environmental curricula, resources and classroom tools;
- Opportunities to promote your school or organization's programs and projects to a national audience of environmental educators;
- Access to the National Environmental Education Foundation's series of webinars designed especially for K-12 educators to facilitate teaching and learning about the environment; and
- Opportunities for discounts and special offers for educational materials from our partners.

Already registered last year? Please remember that we ask you to register again each year you wish to participate in EE Week, because it helps us document the growing interest in environmental education around the country. We also want to learn your plans for the coming year so that we can help share your story on a national stage.

16. Check out this nation-wide crayon recycling program:

http://www.crazycrayons.com/recycle_program.html

More than 12 million crayons are made in the US each day. Crazy Crayons collects used crayons from across the country and recycles them into new crayons, helping to keep this type of waste out of landfills.

- This "recycling" education, community service program has made it possible to **stop** more than **56,000 pounds** of unwanted crayons from going into **landfills** with the help from schools, organization educators and kids across this country. Thank you for your efforts to help the Earth.
- The CRAYON RECYCLE PROGRAM takes unwanted, rejected, broken crayons to a better place, where they'll be recycled into fresh, new crayons!
- The program has drop-off bins nationally.
- The CRAYON RECYCLE PROGRAM and Crazy Crayons, LLC work together, but neither one could exist without KIDS THAT CARE ABOUT THE EARTH.
- We employ people with developmental disabilities, working on a positive impact through community service, environmental education and art.
- **All CRAZY CRAYON, Eco Stars and Earthling Crayon purchases support the CRAYON RECYCLE PROGRAM and "Recycling" education.**

We accept all crayons, but please know that we will sort out and discard crayons made in China and other foreign countries that may contain lead and plastics. We ask the restaurants and schools to purchase only American made crayons, although they may cost a little more, you are assured good quality and not just filling US landfills with foreign waste. We think of crayons very seriously!

17. YEAR OF THE SOLAR SYSTEM WEBSITE

The Year of the Solar System celebrates a Martian year (Oct. 2010-August 2012) of NASA space exploration within our Solar System. These 23 months will reveal the familiar objects of our solar system as new worlds through the use of activities highlighting a new topic each month. The website features multiple resources, activities and a calendar highlighting events during the Year of the Solar System.

<http://solarsystem.nasa.gov/yss/>

18. New Problems Posted on SPACE MATH@NASA

This semester's problems have been posted to Space Math@NASA (<http://spacemath.gsfc.nasa.gov>). The website also features new eClips programs to introduce mathematics into the classroom through videos. Find the eClips here:

<http://spacemath.gsfc.nasa.gov/media.html>

19. Science Activities for Home or Family Math and Science Nights

<http://www.nsta.org/sciencematters/websites.aspx>

Would you like to do some fun activities that took place at the USA Science and Engineering Fair in Washington, DC?

Activities include: Bernoulli's Cans (grades 4-8); Counting Your Heartbeat (grades K-5); Density Determination (grade 3); Electromagnetism (grades 4-6); Exploration of Static Electricity (grades 6-8); Flight (k-adult); Getting Familiar with Fingerprints (grades k-4); Habitat Box (grade 4); Hanging by a Thread (grades 2-7) and many more.

20. Understanding Science continues to grow!

<http://www.understandingscience.org>

Visit the website to access tools for teaching and learning about how science works, for example:

* Engineering and technology development: We often link science, technology, and engineering together, but are they really all the same thing? Find out how the fields of engineering and technology development measure up against the science checklist.

http://www.understandingscience.org/article/technology_checklist

Understanding Science posters are now available for order. Spice up your classroom walls with important reminders about the nature and process of science -- and support the Understanding Science website at the same time.

http://www.aibs.org/publicprograms/science_posters_your_classroom_cant_live_without.html

Calendar

Nov. 19: Deadline for the Real World Design Challenge for High School Students

<http://www.realworlddesignchallenge.org/>

Nov 30: Deadline to apply for the NOAA Teacher at Sea Program

<http://teacheratsea.noaa.gov/>

Nov. 30: Deadline to register for the 2011 Team America Rocketry Challenge

<http://www.rocketcontest.org>

Nov. 30: Deadline for submission of applications for Vernier Awards

<http://www.vernier.com/grants/nsta.html>

Dec 1: Deadline to apply for the GreenWorks! Grant for pollinator gardens

http://www.plt.org/cms/pages/21_22_274.html

Dec. 1: Deadline: SeaWorld/Busch Gardens Environmental Excellence Awards

<http://seaworld.org/conservation-matters/eea/index.htm>

Dec 3: Deadline for K-6 teachers to apply for the Find Your Footprint Grant

<http://www.nationalgeographic.com/findyourfootprint/enter/>

Dec. 15: Deadline for the Real World-InWorld NASA Engineering Design Challenge
<http://www.nasarealworldinworld.org>

Dec. 17: Deadline to enter Disney's Planet Challenge
<http://www.Disney.com/planetchallenge>

Dec. 31: Deadline for President's Environmental Youth Awards Program
<http://www.epa.gov/peya>

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2011

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January 4: Deadline to apply for the Einstein Fellowship
<http://www.trianglecoalition.org/ein.htm>

January 5: Deadline apply to participate in the Mars Education Challenge
<http://www.exploremars.org/>

January 14: Deadline to apply for the Sustainable Agriculture Grants
<http://www.sare.org/NCRSARE/cfp.htm>

January 15: Deadline to apply for Alan Shepard Technology in Education Award
http://www.amfcse.org/Alan%20Shepard%20Award/alan_shepard_award.htm

February 1: Deadline for entries in the National Spaced Out Sports Design Challenge
<http://education.ssc.nasa.gov/spacedoutsports>

February 1: Deadline to apply for Toshiba America Math and Science Grants
http://www.toshiba.com/taf/612_apply.jsp

February 2: Deadline for entries in the NSTA Exploravision competition
<http://www.exploravision.org/>

February 4: Deadline for entries for the USA Biology Olympiad for High School Students
<http://www.usabo-trc.org/registration.php?s=tr>

February 16: deadline for entries in the Rubber Band Contest for Young Inventors
<http://www.rubberbandcontest.com>

February 23: Deadline for Toyota Tapestry Program entries
<http://www.nsta.org/pd/tapestry/>

February 28: Deadline for the 3rd Kids Science Challenge, sponsored by NSF
<http://kidsciencechallenge.com>

