



Center for Science and the Schools

Center for Science and The Schools (CSATS)

STEM E-Newsletter December 2013

<http://csats.psu.edu/>

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MIDDLE AND HIGH SCHOOL

1. PENN STATE OUTREACH AND SCIENCE ENGAGEMENT OFFICE VIDEO COMPETITION

Audience: 5 – 11th Grade

Registration Deadline: December 15th, 2013

<http://science.psu.edu/outreach/video-competition/>

The Penn State Outreach and Science Engagement office is launching a science video competition for students in grades 5th-11th. We are challenging students to create a 1-3 minute video that defines an everyday problem and provides an innovative solution using STEM concepts. The contest is split into two age groups: Grades 5th-8th and 9th-11th. Prizes consist of Science-U camp scholarships. For details, please see the attached flyer and visit <http://science.psu.edu/outreach/video-competition/> to register.

2. OCEAN 180 VIDEO CHALLENGE

Audience: Middle School Students

Register to judge by December 15, 2013

<http://ocean180.org>

The Florida Center for Ocean Science Education Excellence (COSEE Florida) would like to invite schools throughout Pennsylvania to participate in the Ocean 180 Video Challenge. This video contest was designed to encourage ocean scientists to share their discoveries and excitement for research with students and the public. Middle school (ages 11-14) classrooms are welcome to register as judges for the 2014 Video Challenge until December 15.

Ocean scientists will submit 180 second videos highlighting the importance of their research and summarizing their findings. Middle school students, the target audience, will play a key role in determining the winners. The top 10 video abstracts will be viewed by 6th-8th grade students in registered middle school classrooms throughout the world and will select the top three videos. Judging by registered classrooms will take place from January 3- February 1st, 2014.

3. NORTHEAST PHYSICS CONFERENCE FOR GIRLS IN GRADE 9-12

Audience: High School Girls

Location: Penn State University: UP Campus

Registration Deadline: December 20th, 2013

Event: January 18th, 2014

Girls in grade 9-12 are invited to join the Penn State Physics and Women Student group for a day of hands-on physics and astronomy workshops, a panel discussion of what it's like to pursue a science degree and career, interaction with female college students and scientists at a luncheon and ice cream social, and a live, keynote address by Debra Fischer, Professor of Astronomy at Yale University. For details, please see the attached flyer and schedule and visit <https://sites.psu.edu/ncuwip/science-day/> to register.

Questions about the event can be directed to ncuwip@psu.edu.

4. PENNSYLVANIA SOCIETY FOR BIOMEDICAL RESEARCH 7-12 ANNUAL ESSAY CONTEST

Audience: 7-12th grade students

Deadline: March 14, 2014

<http://www.psbr.org/index.php/programs-18/essay-contest>

All 7th-12th grade students in Pennsylvania, Delaware, and West Virginia including: public and private schools, home and cyber schools, and youth organizations. PSBR's Annual Essay Contest is divided into two separate contests – one for 7th & 8th graders AND one for High School students (9th - 12th graders).

The essay contest is FREE to enter and consists of CASH prizes and an invitation to attend PSBR's annual awards dinner in May 2014. The contest recognizes students who demonstrate a superior understanding of bioscience research and the appropriate use of animals in biomedical research, and who can artfully communicate that understanding in writing. Visit the web site for more information.

K-12 CONTENT RESOURCES/OPPORTUNITIES

5. 2014 PENNSYLVANIA KIDWIND CHALLENGE OPEN FOR REGISTRATION

Event date: March 1, 2014

Location: State College, PA

Audience: 4 – 12th grade teams

<http://csats.psu.edu/projects/currentprojects/kidwindchallenge-archive.cfm>

The KidWind Challenge is a student-oriented wind turbine design contest. Over a period of a few months, students spend time designing and constructing their own wind turbines with the goal of creating a device that is efficient, elegant and highly functional. There are 2 divisions of the competition: 4th – 8th grade and 9th – 12th grade. Form a team and sign up!

New this year: various STEM activities for students to attend during the challenge. Any group of students who are of middle or high school age are eligible to enter a team in the KidWind Challenge. This includes students from public and private schools, home schoolers, after school clubs, boy and girl scout troops, 4-H clubs, etc. Each team must have a chaperone. Cash prizes for winning teams and a chance to attend the 2014 National Kidwind Challenge in DC?

The organizing committee is interested in encouraging more girls and women into Wind Energy Careers and we are encouraging teams to include girls. Last year, many female teams did very well and had a great time!

For more information, rules, and registration, visit the web site listed above. For additional information not found on the web site, contact Leah Bug at [leahbug at psu.edu](mailto:leahbug@psu.edu).

6. IMAGES OF CHANGE IPAD APP

<https://itunes.apple.com/us/app/images-of-change/id710564941?mt=8>

Natural disasters, a warming climate, and human activities are rapidly altering the face of our planet. NASA's Images of Change app lets you take a close-up view of many of these changes in an exciting and hands-on format. The app presents a curated collection of the best image pairs from NASA's Global Climate Change website. These image pairs show areas that have been subject to natural disasters or seen significant change over time. Compare Alaska's Muir Glacier in 1941 to the glacier as it looked in 2004. Take a before-and-after look at flooding in the Missouri River or at wildfires in Colorado. See the expansion of agriculture in Saudi Arabia as viewed from satellites. All photo pairs can be viewed individually, side by side, or overlaid with a slider bar for easy comparisons. Each image pair contains background information and a map showing its location. The images presented in Images of Change are meticulously selected and constantly updated to give you an informative, compelling, and up-to-date visual experience.

PROFESSIONAL DEVELOPMENT OPPORTUNITIES

7. NEED TEACHER WORKSHOP ON WIND ENERGY

Location: West Chester, PA

Event: January 7, 2014

Deadline to register: December 20, 2013

<https://www.regonline.com/builder/site/Default.aspx?EventID=1352684>

The National Renewable Energy Laboratory, The Wind for Schools Program and The National Energy Education Development (NEED) Project are proud to present the upcoming Pennsylvania Wind for Schools Educator Workshop. Attendees will learn about wind energy, wind generated electricity, and the use of data produced from wind installations in their classrooms. The workshop will be held January 7, 2014 at the Spellman Administration Building in West Chester, PA.

The workshop is free to all educators on a first come, first served basis. Breakfast and lunch will be provided. Substitute reimbursement will be provided for all attending teachers. Each participating school will receive a level specific NEED Wind Energy Kit for use in their classrooms. Materials are correlated to the Pennsylvania Learning Standards.

The NEED Project's mission is to promote an energy conscious and educated society. NEED is the nation's leading provider of energy education programs and materials to schools. The program will make teaching energy exciting and fun for your classroom. Our goal is to introduce students and teachers to energy through hands-on science activities. NEED works to create high quality materials and training to make learning and teaching about energy fun.

8. EDUCATOR ACADEMY IN THE AMAZON RAINFOREST

Event: July 1 – 11, 2014

Deadline: Registration open, space is limited

\$1,000 Scholarship Deadline: March 1, 2014

<http://www.amazonworkshops.com/educators--naturalists.html>

We are celebrating 21 years in the Amazon and offering PD for teachers, complete with syllabus and scholarships available. Are you ready for a **life changing adventure**? An experience that will feed your soul, expand your professional toolkit for **inquiry based science**, anchor your **global perspective**, and change your definition of professional development?

9. RENEWABLE ENERGY SUMMER WORKSHOP FOR TEACHERS: BIOENERGY AND BIOPRODUCTS

Workshop Date: July 21-25, 2014

Audience: 4-12th Teachers, 4-H Educators, Ag Teachers

Location: Penn State University: UP Campus

Application: <http://www.newbio.psu.edu/education/teachers.asp>

Are you looking for additional information about renewable energy resources and ways to integrate this topic into your classroom? Consider attending this Center for Science and the Schools and NEWBio supported National Bioenergy and Bioproducts Education Program (NBBEP) at Penn State this summer. Over \$350 worth of kits available for teachers as well as a stipend and limited housing support!

Topics include: Biofuels, Biopower, Bioproducts, Biomass, Bioheat, Sustainability, Systems Thinking, and Policy & Environment as well as collaboration with other educators while learning about cutting-edge research from Penn State scientists. Field trips to bio-based industries and consumers while gaining hands-on teaching tools and interactive lessons for classroom use. For more information, visit <http://www.bioenergyed.org/> or contact leahbug at psu.edu.

GENERAL INFORMATION

10. PENNSYLVANIA SOCIETY FOR BIOMEDICAL RESEARCH K-12 POSTER CONTEST

Deadline: March 14, 2014

<http://www.psbr.org/index.php/programs-18/poster-contest>

All students in grades K-12th in Pennsylvania, Delaware and West Virginia public and private schools and youth organizations including: public and private schools, home and cyber schools, and youth organizations.. The poster contest provides the opportunity for students to illustrate different aspects of biomedical research and science through art.

11. LET'S MOVE! SALAD BARS TO SCHOOLS

Rolling deadline

<http://saladbars2schools.org/>

Let's Move Salad Bars to Schools is a comprehensive grassroots public health effort to mobilize and engage stakeholders at the local, state and national level to support salad bars in schools. Any K-12 school district participating in the National School Lunch Program is eligible to apply to receive a salad bar for their school. Applications accepted on a rolling basis.

GRANTS

12. ASSOCIATION OF AMERICAN EDUCATORS FOUNDATION CLASSROOM GRANT APPLICATION

Deadlines: March 1 and October 1

<http://www.aeteachers.org/index.php/classroom-grant-application>

Classroom grants can be used for a variety of projects and materials, including but not limited to books, software, calculators, math manipulatives, art supplies, audio-visual equipment, and lab materials. Funds must be used within one year of the application deadline.

Eligibility

Classroom grants are available to all full-time educators who have not received a scholarship or grant from AAE in the previous three grant cycles (or 18 months). Awards are competitive. AAE members receive additional weight in the scoring rubric. Join AAE today.