Volume 3, No. 5
October 25, 2006 - Building a Presence for Science: Ohio eBlast

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1. K-12: Plan now with your IPDP committee, and come to Dayton in February
http://www.secoonline.org/conference.htm

Where: Dayton, Ohio
When: February 8 – 10. 2007

The 30th Annual SECO Conference will offer excellent professional development opportunities. Now's the time to explain to your local committee that you can earn up to 12 Professional Development Units or up to 5 qtr. hrs. from the U. of Cincinnati in one strand areas. (You may select from the Nature of Science, Earth, Space & Environment, Implementing the Standards, or Biodiversity. Tell them that you will be able to take advantage of many professional opportunities; check out the short course opportunities as well. Start now so you can register at the Early Bird reduced rate!

2. K-12: The Laboratory Safety Institutes' Two-Day Lab Safety Workshop
http://www.labsafety.org

Where: Cleveland, OH
When: November 29-30, 2006, 8:00 AM - 5:00 PM

At this workshop, you'll learn how to avoid accidents and injuries with simple, practical low-cost solutions. You'll discover how easy it is to avoid costly and time-consuming litigation associated with negligence suits. You'll receive the resources needed to understand the fundamentals of lab safety to develop or improve your lab safety program and to comply with the OSHA Lab Standard.

Topics Include: The 3 C's of Safety; Scope of the Problems; Accidents; Legal Aspects of Safety; OSHA Laboratory Standard; Fire Control; Labeling; Biological and Animal Hazards; Handling Glassware; Eye and Face Protection; Planning for Emergencies; Handling Chemical Reagents; Storage & Disposal of Chemicals; Ventilation; Electrical Safety; Your Most Serious

Problem; Safety Equipment Display; Needs Assessment; Employee/Student Involvement; and Safety Program Planning

REGISTRATION
$495.00* tuition includes all materials and certificates.
*Registration fee is $495.00 for the first participant from your institution. Two to four people is $425.00 each. Five to nine people is $375.00 each. Ten to fourteen people is $325.00 each. Fifteen or more people is $300.00 each. (Participants must all register at the same time to qualify for these discounts).

Each Participant Receives: a 270-page seminar notebook; numerous safety resources; 1.4 Continuing Education Units; a Certificate of Participation; and a complimentary LSI Membership including a subscription to our newsletter - Speaking of Safety, access to our lending library, toll-free safety consultation hotline, discounts on publications, videos, etc.

REGISTRATION METHODS
1) ONLINE, Visit our Web Store
http://www.labsafety.org/training/enter.html?lmd=39001.765116

2) By PHONE, Call (508) 647-1900

3) By EMAIL, Send an email with your name, organization, and basic contact information to register@labsafety.org

4) By FAX, Print the Registration Form
http://www.labsafety.org/forms/Registration%20form.htm, Complete and Fax to (508) 647-0062

FOR MORE INFORMATION about Laboratory Safety Institute services please visit www.labsafety.org, email info@labsafety.org, or call (508) 647-1900.

3. K-12: Track Spring's Journey North: Migrations, Mystery Schools, and More

http://www.learner.org/jnorth and http://www.learner.org/jnorth/orientation/Overview.html

Teachers and students in K-12 classrooms are invited to participate this February through May in Journey North's 14th global study of wildlife migration and seasonal change. One of the nation's premier Internet-based "citizen science" projects, Journey North enables students in 11,000 schools to track the seasons on a real-time basis. This spring, students will follow and map the migrations of monarch butterflies, bald eagles, hummingbirds, robins, whooping cranes, and other animals; the budding of plants in school tulip gardens; changing sunlight in global "mystery class" locations; and other natural events. They share their own field observations with classmates across North America and analyze data from other classroom and professional scientists.

Each Journey North study features resources that address standards across the curriculum: Journey North for Kids reading booklets and lessons, stunning photos and video clips, weekly migration news updates, interactive real-time maps, connections with field scientists, and compelling migration "stories." The studies help students fit local observations and inquiries into a global context.

Thanks to a grant from Annenberg Media, Journey North Web site access and participation is free. Plan now; spring projects begin February 2nd!

4. K-12: Name the International Space Station Node 2 Competition
http://esc.nasa.gov/html_files/NameNode2.html

The student competition to name the Node 2 module of the International Space Station has begun. NASA Education, which is responsible for the competition, is running the contest via an existing program called NASA Exploring Space Challenges (ESC).

The Name the International Space Station Node 2 competition is being conducted during the Fall 2006 semester. Deadline for classes/schools to register for the competition is November 17, with entries due December 1, 2006. The name will be selected from the submitted entries early In 2007. NASA Headquarters senior management will be involved in the final name selection.

Please help spread the word about the Node 2 Naming student competition so that we have lots of entries from which to choose the name for the ISS Node 2.

5. K-12: NASA Exploring Space Challenges Website
http://esc.nasa.gov/

NASA ESC is a national program providing a compilation of investigations and design challenges for all grade levels in the primary and secondary schools. NASA ESC supports many of the national education standards for science, mathematics, technology and the arts. The Exploring Space Challenges' mission is for all students to:

Develop "science as inquiry" skills
Work collaboratively as team members
Apply computer and Internet skills
Integrate science, mathematics and technology concepts
Learn to communicate more clearly and effectively

You have several missions to choose from, each of which challenges you to embrace imagination and knowledge.

6. K-12: Pluto/Planet Roundtable now on-line
http://aer.noao.edu

If, like many educators, you are not quite sure what to do in your own work about the recent planet definition by the International Astronomical Union, you may want to read what 14 experts on planetary science and education think.

A roundtable in the on-line journal "Astronomy Education Review" (AER) looks at the science, politics, and educational implications of the controversy. It also includes a historical time-line and a guide to educational resources concerning the definition of a planet.

7. K-12: Announcement: the T3 (T-Cubed) spring conference has been scheduled!
http://www.rhodesstate.edu

When: April 27-28, 2007
Where: Rhodes State College

The conference is seeking speakers in the areas of mathematics and science. The speakers' proposal form is scheduled to be released at both the Rhodes State Web site and the OhioMATYC Web site (http://www.terra.edu/ohiomatyc/).

In the mean time, you may contact Mary Ann Hovis (hovis.ma@rhodesstate.edu) if you have an interest in presenting at this conference.

8. K-12: New Report Describes "What Works" in Science and Math Education Reform
http://www.pcgpr.com
October 19, 2006
FOR IMMEDIATE RELEASE

Creating the next generation of scientists and engineers is an ongoing challenge, according to a new report on public school education entitled What Works Best in Science and Mathematics Education Reform. The report, prepared by Potomac Communications Group of Washington, DC under a National Science Foundation (NSF) grant, provides a candid glimpse into the NSF's Urban Systemic Program (USP), the first national effort to reform how a school district teaches and students perform in science and math throughout an entire school system.

Launched in 1994, the USP was the first time that the NSF gave funds directly to school districts rather than through universities. It offered districts the opportunity to address their own education challenges and control how funds were spent. The NSF approach was also unique because it treated funded districts as systems that needed to be completely overhauled. Final funding to the last of 30 districts ended in September of 2006.

What Works Best in Science and Mathematics Education Reform focuses on what worked, what did not and the lessons learned during the USP. It presents the stories of eight funded districts and includes interviews with teachers, students, principals and administrators. Profiled districts are Los Angeles (the second largest school district in the nation), Houston and Brownsville TX, Miami and Jacksonville FL, San Diego, Los Angeles, Cleveland and Chattanooga; TN. Districts were funded for up to $10 million over five years.

Here's a sampling of lessons learned:

* Elementary School Children Need To Take Science Regularly. In many of these districts elementary science was taught sporadically by teachers with little training in science. The USP provided teachers with new curricula, materials and training to improve how they taught science and excited and engaged students. Students learned to think like real scientists and love the subject.
* Principals Belong in the Classroom. Many funded districts transformed the job of principal from administrator to classroom leader. Principals attended workshops and worked with teachers receiving additional training so they could observe and comment constructively on teaching styles and methods. When the principal was involved the whole school focused on science.
* Teachers Need Ongoing, High Quality Training – Teachers interviewed for this report blossomed when they took university and school-based classes on science and math content and new teaching methods. Young teachers learned to teach inquiry-based science (a problem solving approach that is teacher facilitated not led), while teaching veterans learned new techniques that improved their performance. Most of the NSF funds were spent on training K-12 teachers in science and math content and teaching methods.

* Students Can Meet Tougher Science and Math Requirements – Many districts increased the number and difficulty of science and math classes needed to graduate high school. Almost every funded district increased the number of students taking and passing AP courses.

What Works Best in Science and Mathematics Education Reform was written by former journalist Aimee L. Stern, and former teacher Elizabeth McCrocklin. It was funded by NSF under grant number 0427352 awarded to Potomac Communications Group of Washington, DC. For more information or a copy of the report please contact astern@pcgpr.com .

9. Gr 3–8: 3M Foundation Awards 3M Ingenuity Grants to Teachers
http://solutions.3m.com/ (Click on "United States", then search for "Ingenuity Grants")

In 2006, the 3M Foundation awarded 84 Ingenuity Grants totaling nearly $225,000 to teachers in 13 states. The Ingenuity Grant recognizes public school teachers in grades three through eight and helps them bring new resources into classrooms to raise student interest and achievement in math, science, and economics. Individual grants of up to $3,500 help purchase materials, such as microscopes, calculators, and books, or develop creative teaching methods. The program is targeted to schools in communities where 3M has facilities. In Ohio, there is a sales office in Middleburg Heights, and manufacturing locations in Cincinnati, Elyria, and Medina.

Among this year's recipients is junior high school mathematics teacher Jennifer Pirrera's new class project, called "A Design-Build Presentation," covering mathematical reasoning, algebra, measurement, and budgeting. At Humboldt Junior High, an inner-city school in St. Paul, MN, the students in her class design a home and "sell it" to an audience of student owners and contractors. The intent is for students to understand how mathematics and business are applied in real-world situations.

With the goal of helping to develop productive, educated, and involved citizens, 3M targets programs that address related education, family, and community issues. Science and math education and youth development are top priorities. In addition to education, 3M also supports health and human services, the arts, and environmental efforts.

10. Gr 4-9: FREE Teacher's Kit and Opportunity to Win $250-$5,000 for Your School
http://www.nocfcs.org

The Consumer Aerosol Products Council (CAPCO) has created a FREE resource for science teachers. The CAPCO Science Class Challenge Kit contains all of the materials necessary to teach your students about the earth's protective ozone layer, CFCs and aerosol products. The Kit includes a teacher's guide, classroom activities, experiments, homework assignments and the DVD, "Another Awesome Aerosol Adventure."

In addition, the kit is a perfect companion to CAPCO's Science Class Challenge, an opportunity to design your own creative method of teaching important environmental issues. Through the Science Class Challenge, teachers can earn $250-$5,000 for their schools as well as a pizza party for their class. To order a kit and learn more about the Science Class Challenge visit: www.nocfcs.org.

11. Gr 6-12: Climate Discovery Courses for Educators from NCAR Online Education
http://ecourses.ncar.ucar.edu

Are you seeking a K-12 professional development opportunity that will enhance your qualifications, competency, and self-confidence in integrating Earth system science, climate, and global change into your science classroom? The National Center for Atmospheric Research (NCAR) is offering a series of online courses designed for middle and high school science educators called Climate Discovery.

Apply now to participate in the first part the series, Introduction to Earth's Climate http://ecourses.ncar.ucar.edu/climate_change_101.html

* *Course dates:* 30 October to 15 December 2006
* *Cost:* $200

12. Gr 9-12: New Game Unveiled at the 2006 FIRST Vex Challenge Kickoff
http://www.usfirst.org

FIRST (For Inspiration and Recognition of Science and Technology), an organization founded by inventor Dean Kamen to inspire young people's interest and participation in science and technology, has launched its 2006 FIRST Vex Challenge (FVC) season. Six thousand high-school-aged young people are expected to participate in this year's competition. This year's challenge, "Hangin'-A-Round," require students' robots to collect softballs and score points by placing them in high or low corner goals. Extra points are scored by possessing an atlas ball, which doubles the point value in the goals. Additionally, robots may attempt to park on a rotating platform or hang from a bar. All of this takes place in fast-paced 2 minute and 20 second matches.

The FIRST Vex Challenge is an accessible, affordable mid-level robotics competition principally for high-school-aged students. Students work alongside mentors, applying real-world math and science concepts to solve the annual challenge. They contend in high-energy regional competitions that measure the effectiveness of each robot, the power of collaboration, and the determination of students.

13. Gr 9-12: Consider participating in the USA Biology Olympiad (USABO) this year
http://www.cee.org

As the name implies, the USABO is a national and eventually international competition. The hope is that the fun aspects of competition as well as the tremendous resources offered in our website's "Teacher Resource Center" once schools are enrolled, will create excitement and enthusiasm for biology.

Level 1 - Open Exam - 5-14 February 2007 (We encourage all interested high school students to participate)

Level 2 - Semi-Final Exam - 12-23 March 2007 (Top 10% from Open Exam advance)

Level 3 - National Finals - 29 May - 10 June 2007 (Top 20 students in the nation are flown to DC for a 2-week "boot camp" in biology)

Level 4 - International Biology Olympiad - 15-22 July 2007 - (The 4 students selected as the U.S. team compete in the international competition to be held in Canada this year)

Anticipating questions typically asked by teachers:

1) I cannot "teach" to the USABO exam due to other requirements - we do not expect a teacher to do teach to the USABO exam or do anything beyond what they are already doing. The concepts tested in the Open Exam are general and will likely be covered by any general biology class. The rule is that if a topic is introduced in Campbell and Reece's Biology, then it is in bounds for the exam. More than any other factor, independent motivation by the students has been the predominant predictor of success in the advanced rounds of the USABO competition.

2) By the Open Exam in February, I have not covered a lot of material: this is okay; unfortunately, all teachers and students are in a similar position. The strict time demands of the international competition will not allow us to move back the Open Exam to a later date. Not to worry, students with an unusual interest and aptitude in biology will do very well with the general concepts tests.

14. Gr 9–20: Call for Papers for 2007 Annual Meeting of The Ohio Academy of Science
http://www.ohiosci.org/CFP2007.pdf
Theme: Ohio Institutes as Research Centers for Emerging Energy Technologies

This is a reminder that the deadline for abstracts for our April 21, 2007, Annual Meeting, hosted by the Eastern Campus of Cuyahoga Community College, is November 6, 2006.

About the Annual Meeting

The Ohio Academy of Science's Annual Meeting is for academic, governmental, and industrial scientists and engineers, university and pre-college educators, and pre-college, undergraduate, and graduate students, and interested lay citizens in the Ohio region. Annually workshops, symposia, an All-Academy Lecture, and field trips on local geology and plant sciences compliment the several hundred scientific presentations. Approximately 600 people attend the meeting.

Call for Papers

Whatever your scientific interests this Call for Papers is your invitation to participate in the 116th Annual Meeting of The Ohio Academy of Science to be hosted by Cuyahoga Community College Eastern campus on April 20-22, 2007. Poster and podium sessions will be on Saturday, April 21. Two basic options are available to present papers:

* Professionals, college students of all levels, and pre-college students who have completed research may submit an abstract;
* College undergraduates only, may submit an Undergraduate Research-in-Progress

Summary.

Undergraduates also may submit an abstract if research results are included. All abstracts and summaries will be peer-reviewed. Acceptable abstracts and summaries will be published in the Program Abstracts issue of The Ohio Journal of Science to assure that researchers across Ohio, elsewhere in the United States, and in dozens of foreign countries will have access to your work. The Journal also will publish Undergraduate Research-in-Progress Summaries.

Symposia, workshops and field trips may be arranged by special permission. Research papers are welcome in ALL FIELDS of science, engineering, technology, education and their applications.

15. Gr 16-20: Teacher Education programs: Notice of a "Call for Proposals"

The Ohio Board of Regents is inviting the development and implementation of up to 10 regional and statewide Regents STEM and Foreign Language Academies in response to House Bill 115. The H.B. 115 requirements for the academies focus on providing students entering 11th and 12th grade the opportunity to earn college credit while also meeting high school requirements for mathematics, science and foreign language. Contact the BaP State Coordinator for more information if you are interested: Lightbody.1@osu.edu.