

In the OPASsphere –November 5, 2008

1

A service of the Oregon Pre-Engineering & Applied Sciences Initiative (OPAS) funded by ETIC

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In this issue:

- ***Events: EOU Science days***
- ***Competitions: JETS; Toshiba/NSTA ExploraVision***
- ***Weblinks: ITEA; Girls Are I.T.***
- ***Funding: DonorsChoose***
- ***Equity: Aspirations in Computing, Girls apply now; Postsecondary Ed rate stalls***
- ***Who's Who: InvenTeams; TSS at BEC***
- ***Field Reports: OSU SMED ongoing grants***
- ***Professional Development: Project 2061 Atlas of Scientific Literacy***
- ***Fun Stuff: Be an Engineer to Solve Those Everyday Annoyances***

Events – Wrap-Up

- From Anna Cavinato, **Eastern Oregon University**: “The **Girls in Science day** was terrific -- we had 108 girls from 27 different towns!” This was the seventh Girls in Science Day; the program has received several national American Chemical Society ChemLuminary Awards. EOU is planning a **similar event at Treasure Valley CC** in November. -- http://chinook.eou.edu/ua_story/index.cfm?ID_num=720

Competitions

- **Junior Engineering Technical Society (JETS) Launches 30th TEAMS competition for 2009** – “Behind the Scenes: Theme Parks”. Open 9th-12th graders working in groups of 4 to 8 students solving actual engineering scenarios. “In addition, American science, technology, engineering, and mathematics, or STEM companies have the opportunity to get involved by sponsoring local groups of between four and eight students for the TEAMS competitions which will be held at more than 70 colleges and universities nationwide. More than 14,000 students participate in TEAMS each year. **TEAMS competitions will take place nationally over a six-week period around National Engineers Week in February and March, 2009.** JETS, is a leading non-profit educational organization dedicated to promoting engineering and technology careers to America's youth. For more information, visit www.JETS.org “
- **2009 Toshiba/NSTA ExploraVision Award** Seeks Applicants -- one of the world's largest K-12 science and technology competition, for the past 16 years, the ExploraVision program has provided an opportunity for students to envision a better future and has given educators a valuable tool for helping motivate their students to excel in science. The **deadline for the 2009 competition is January 28, 2009.** Up to \$240,000 in savings bonds will be awarded this year to student winners whose innovative ideas combine imagination with the tools of science. Toshiba laptop computers for schools and other prizes for students, teachers, and mentors will also be presented. For more information or an application for 2009, visit www.exploravision.org

Weblinks

- From ITEA **Technology Education 2.0** includes an online classroom, teacher resources and a pretty succinct discussion of what technology education is and is not: <http://www.technology-education.org/>

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- From Girl Scouts Hornet's Nest Council, UNC – **Girls are I.T.** – really fun site—Go Ada! Go Grace! With a timeline, some good definitions, and career information and profiles. Definitely aimed at late elementary and middle school, not too off-putting for highschoolers in Jo's no longer very informed judgement: <http://www.girlsareit.org/default.asp>

Funding

- Here's an interesting **Internet Funding** vehicle for small to medium classroom-based needs, **Donors Choose**: <http://www.donorschoose.org/donors/viewChallenge.html?id=19006>

Equity

- **Aspirations in Computing Award** seeking self-nominations for high school women, **due December 1** -- <http://www.ncwit.org/work.awards.aspiration.html>
- **Generational Gains in Postsecondary Education Appear to Have Stalled** -- The tradition of young adults in the United States attaining higher levels of education than previous generations appears to have stalled, and for far too many people of color, the percentage of young adults with some type of postsecondary degree compared with older adults has actually fallen, according to the "Minorities in Higher Education 2008 Twenty-third Status Report," a new report by the American Council on Education (ACE) The full report is available at www.acenet.edu.

Who's Who

- **16 High Schools across the country were recently awarded InvenTeam grants.** Lemelson-MIT InvenTeams is a national initiative to foster inventiveness among high school students. InvenTeams composed of high school students, teachers and mentors are asked to collaboratively identify a problem that they want to solve, research the problem, and then develop a prototype invention as an in-class or extracurricular project. Grants of up to \$10,000 support each team's efforts. InvenTeams are encouraged to work with community partners, specifically the potential beneficiaries of their invention. Oregon InvenTeams have worked on a watermelon thumper and cafeteria-cleaning robots. A full list and information about applications for the 2009-2010 school year are now available at <http://web.mit.edu/inventeams>.
- From **Susan Parsons at the BEC**: "Every day the **Techno Science Supersite** is working to promote your valuable programs. This free website is sponsored by Intel and filled with STEM-related camps, classes, clubs, competitions, conferences and scholarships for K-12 students in Oregon. We want to make sure your programs are listed and the information we have is accurate. Please take just a moment to do two things:
 1. **ARE YOU LISTED?** Make sure your programs are listed on the site: <http://technosciencesupersite.org/title.html>
 2. **NEED TO BE ADDED? NEED UPDATING?** If your program needs to be added or updated, fill out this form: <http://technosciencesupersite.org/submit.php>

Thank you for your time! For questions, please contact Chris Winikka, the awesome BEC Educator Intern that is the Techno webmaster: winikka@verizon.net"

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Field Reports

- From **Larry Flick, Chair of OSU's Department of Math and Science Education**: "These [current grant] projects relate to collegiate engineering instruction (NSF Collaborative), integration of mathematics and science in career technical education (MSP Algebra in Context), and professional development that relates the teaching of science through construction engineering (NSF/SELS). The latter two address the delivery of science and mathematics with an emphasis on engineering-related contexts. These two project also offer an avenue for offering a third year of science (and maybe mathematics) as required by the state."
 - OSU/WSU NSF/IEEC1: In-Class Peer Tutoring: A Model for Engineering Instruction – Project Summary - http://opas.ous.edu/Committees/Resources/NonOPAS_Working_Papers/Flick-WSU_NSF-IEEC1_ICPT_summary_Fall08.pdf
 - WSU's Engineering Education Research Center - <http://eerc.wsu.edu/>
 - OSU/ School of IDEAS (Eugene) Oregon Title IIB MSP: Algebra in Context – Abstract - http://opas.ous.edu/Committees/Resources/NonOPAS_Working_Papers/Flick_MSPII_Algebra_in_Context_abstract_Fall08.pdf
 - OSU NSF: Science and Engineering in the Lives of Students (SELS) - http://opas.ous.edu/Committees/Resources/NonOPAS_Working_Papers/Flick_SELS_Summary_2007.pdf

Professional Development

- **Project 2061 is pleased to offer science educators a special online opportunity** to explore its tools and strategies for improving K12 science teaching and learning. Project 2061 and Triangle Coalition member, the National Science Teachers' Association (NSTA), have teamed up to present a free "Intro to the Atlas of Science Literacy" **web seminar on November 18, 2008, from 6:30-8:00 p.m. EST**. NSTA Web Seminars are 90-minute, live professional development experiences that allow participants to interact with nationally recognized experts. The "Intro to Atlas for Science Literacy" will be led by Project 2061's Ted Willard, who played a key role in the development of maps for Atlas 2.

The "Atlas of Science Literacy, Volumes 1 and 2" is co-published by AAAS Project 2061 and NSTA and includes nearly 100 strand maps on topics such as Science and Society, Mathematical Models, Designed Systems, Weather and Climate, Biological Evolution, Manufacturing, The Copernican Revolution, Systems, and Values in Science. Strand maps display all of the learning goals (for students from kindergarten through high school) on a particular topic and put them together on one page, showing how they relate to and build upon each other. Maps provide an easy way to envision how students' understanding will progress over the course of their education. More details about Project 2061 are at <http://www.project2061.org/>. For more about the web seminar, see http://learningcenter.nsta.org/products/symposia_seminars/AAAS/Webseminar.aspx

Fun Stuff

- Why study engineering? So you can help everyday people solve everyday problems – like the counter-climbing, houseplant stalking cat: <http://www.plasma2002.com/blenderdefender/>

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