

In the OPASsphere – October 24, 2008

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

To subscribe or get more info, please contact Jo Oshiro - jo_oshiro@ous.edu or 503.821.1139

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Job Search

- **PSU's STEM Mentor Project** is an NSF funded experimental field-test of the impact of STEM mentoring on high school students with disabilities. Students are in grades 9 and 10, have expressed an interest in STEM careers and attend Portland Public Schools. Mentors will either be working in or studying STEM fields (scientists, engineers, college students, etc). Mentors and students do 2 activities a month for 6 months (March 2009 - August 2009). Any costs incurred for mentors are paid as well as a **\$250 stipend** of appreciation. Right now, we are trying to recruit as many mentors as we can from STEM fields: college students, professionals, engineers, teachers, professors. For more information, please contact John Ossowski at 503-725-9637 or jdo@pdx.edu
http://opas.ous.edu/Committees/Resources/NonOPAS_Working_Papers/STEM_Mentor_Flyer%20_v1_2%20_jdo.pdf

Events – Announcements

- **OUS Fall Tour** underway -- The seven OUS campuses and the OSU Cascades branch campus collaborate in the OUS Fall Visitation Program, also called the "Fall Tour," a statewide high school visitation program that brings admissions professionals to high school students. The runs from September 29 through November 6, and leaders expect it will provide college outreach to a total of 228 high schools and approximately 13,000 students. -- http://www.ous.edu/news_and_information/news/102108.php
- **2009 Engineering Discovery Showcase** – want to learn more about PSU's engineering programs in a fun interactive way? Come Friday, January 23, 2009 - Engineering Building, Intel / Gordon & Betty Moore Atrium - 11:00 a.m. - 2:00 p.m. (lunch served from 12-1:00 p.m.) For more information please visit: <http://www.pdx.edu/cecs/outreach.html>

Competitions

- **What If Competition** – for 6th, 7th or 8th graders (ages 10-14) in the U.S. in teams or working alone, this essay competition is about living on an orbiting space station as the first step to building colonies on the moon or Mars. Essay and any supporting information are due February 13, 2009.

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An Adult Sponsor is needed. To register or learn more: <http://www.whatifprize.org/competition/>

Thanks to Brad Naas & Gary Wynn

- **Energy Department has High School Competition** – currently available in 10 states, not including Oregon. If you are interested for next year, please let Jo know. If there is adequate interest, we may be able to ask the Governor's office to help Oregon become a State Partner.
http://www.upi.com/Science_News/2008/10/20/Energy_Department_has_high_school_contest/UPI-96291224528792/

- **Why study Computer Science? Why study Computer Science in Oregon?** Student individuals, teams and classes from high schools and colleges in Oregon are invited to submit videos that answer these questions for an Oregon Engineering Technology & Industry Council (OregonETIC.org)-sponsored video contest to promote interest in computer science among high school students. For rules, prizes, and other details please see <http://getreal.ous.edu/video.php>.

Volunteers Needed

- The Oregon Robotics Tournament and Outreach Program (**ORTOP**) is currently recruiting volunteers for our 20 FIRST LEGO League Qualifying Tournaments. The events will take place in the Portland Metro area, Salem, Corvallis, Roseburg, Bend and La Grande on December 6, 7, 13 and 14. We're looking for OPAS community members to be **judges, referees** and **day-of-the-event volunteers** at one or more tournaments. Thank you in advance for your service to Oregon's FLL kids! Volunteer information and online sign-up is at <http://volunteer.ortop.org/>

Weblinks

- Oregon State has a YouTube channel: <http://www.youtube.com/oregonstate>
- NAPE has redone their website -- <http://www.napequity.org/>
- Intel:
 - **Inspired by Education** site – “a community of people sharing their stories with the hope of becoming a catalyst for action and a voice for change in global education” -- <http://www.inspiredbyeducation.com/>
 - **“Free tools and resources** for educators support collaborative student-centered learning. Online thinking tools are active learning places where students engage in robust discussions, pursue investigations, analyze complex information, and solve problems.” – see the link “K-12 Teaching Tools” on the left sidebar at <http://www.intel.com/education/>

Articles

- *Solarworld Opening Attracts Luminaries*, Hillsboro Argus, October 20 - http://blog.oregonlive.com/hillsboroargus/2008/10/solarworld_opening_attracts_lu.htm, Thanks to Lita Colligan
- *Developing Advanced Electronics*, KOHD News, 10.20.2008 - Oregon State University and the University of Oregon have received a three-year, \$1.5 million grant from the National Science Foundation to form
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a new Center for Green Materials Chemistry, a reflection of nationally recognized programs in Oregon. This center should lead to the development of advanced electronics with a reduced environmental footprint, higher performance and lower cost. If research programs are successful, the new center will then be in line for continued federal funding of up to \$25 million over five years, officials say. More - <http://kohd.com/news/local/56151> - *Congratulations to OSU, UO, and ONAMI!*

Research

- “GSUSA [Girl Scouts] and NCWIT [National Center for Women in Technology] recently collaborated with the Puget Sound Center for Teaching, Learning and Technology (PSCTLT) and National Girls Collaborative Project (NGCP) to conduct a study on **what engages girls to study and work in IT**. [emphasis mine]” More: http://www.ncwit.org/pdf/NCWIT-GSUSAPhaseIIIReport_FINAL.pdf

Field Reports

- **From Lynn Dierking at OSU: Explore new education methods with a M.S. degree in Free-Choice Science or Mathematic Education** -- Designed for professionals working in science centers, museums, nature centers and community-based organizations, the online master's in Free-Choice Science or Mathematics Education prepares non-traditional educators to facilitate and support learning across locations and ages. The new and innovative field of Free-Choice Learning gives lifelong learners a chance to take an active role in their own science, mathematics and technology-focused educational experiences -- <http://ecampus.oregonstate.edu/online-degrees/graduate/science-math-ed>

Data

- **Worksource Oregon** says Oregon is one of the few states where manufacturing is growing, due somewhat to the growth of small (fewer than 50 employees) manufacturers. See Chapter 2, page 8 of *Working in Oregon*, June, 2008: http://www.qualityinfo.org/pubs/working/working_in_oregon.pdf

Classroom Resources

- **INSPIRE** is a new **NASA education project** recruiting students interested in careers in science, math and technology to join an online community, where their interests can be nurtured and directed. From this online community, students will be offered opportunities to take trips to NASA, have a resident experience at a technology university, or even a summer internship at a NASA center.
 - *“I would happy to provide whatever you may need to make this possible. Please contact me at your convenience by email or telephone. Thanks for your consideration.”*
Jim Gerard, NASA/INSPIRE Education Specialist
james.h.gerard@nasa.gov Tel. 321-867-4411 Fax 321-867-1898
http://www.nasa.gov/audience/forstudents/postsecondary/programs/INSPIRE_Project.html
- **DragonflyTV's SciGirls**, science for girls, by girls! These DVDs feature a group of hip, racially diverse girls from around the country having fun with science and getting down and dirty while explaining and demonstrating science concepts and serving as role models for your female students. Over **four hours** of videos, a 15-minute teacher-training case study, 18 profiles of female scientists, and corresponding full color activity guides are available -- <http://www.womentechstore.com/scigirls.html>.

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- **WonderWise: 9 Women in Science Kits** featuring exciting careers, via a DVD, CD-ROM and print guide. These real women scientists are role models who will make science come alive for your female (and male!) students, seeing that scientists are people who are curious about the wonders of the world...just like them! Preview video clips for 9 kits at <http://womentechstore.com/wonderwise.html>.

Fun Stuff

- An index of former Lemelson-MIT **InvenTeams** with short descriptions of their projects: <http://web.mit.edu/inventeams/formerinventeams.html> -- look for the watermelon thumper and the Stirling engine!

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