

## ***In the OPASsphere – January 16, 2008***

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

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### ***Events – Announcements***

- **Hot Water to Take OIT off the Grid** – drilling starts for OIT's geothermal plant on Saturday January 24, 2008 at OIT Klamath Falls: 9:30 am Well-drilling ceremony; 10:30 am Town Hall with US Senator Ron Wyden. Refreshments to follow in the College Union. For more info, call OIT's Office of the President 541.885.110
- You and your students are invited to the **Maseeh College of Engineering and Computer Science's Annual Design Competition on Friday, February 27, 2009 at Portland State University**. These competitions provide opportunities for **middle and senior high school** students to engage in hands-on engineering projects while having fun. Space is limited – registration deadline is February 20, 2009. More information including competition rules, registration information and photo release form: <http://www.pdx.edu/cecs/outreach.html> *Thanks to Kris Nieman.*
- **Registration is now open for Oregon Game Project Challenge (OGPC) 2.0** – TechStart Education Foundation, in affiliation with the Oregon University System, is proud to bring back the Oregon Game Project Challenge for its second year. This exciting competition gets students interested in computer science! The season runs from December to May.
  1. At least 1 coach per team
  2. 4 to 7 students per team
  3. \$50 registration fee for statewide tournament in Salem on Saturday, May 16, 2009
  4. Game Maker official platform for competition
  5. **This year we have added a middle school division**
  6. **Register:** [https://www.surveymonkey.com/s.aspx?sm=cyl\\_2bFFRRiP58zGvAzXRB\\_2fA\\_3d\\_3d](https://www.surveymonkey.com/s.aspx?sm=cyl_2bFFRRiP58zGvAzXRB_2fA_3d_3d)

### ***Volunteers Needed***

- **Mentors needed for high school FIRST Robotics Competition Teams:** Looking for some "Lunacy" and great fun with high school students? Over 30 FIRST teams in Oregon are seeking technical mentors to come share their expertise as they build, wire and program their human size robots for the FIRST Lunacy game challenge which will be played on March 6 & 7 at Memorial Coliseum in Portland. Please see [www.pnwfirst.org](http://www.pnwfirst.org) for details.

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### ***Weblinks***

- Making College and Career Readiness the Mission for High Schools, A Guide for State Policy Makers –
  - Executive Summary: <http://www.achieve.org/files/MeasurethatMatterExecutiveSummary.pdf>
    - Ensure all students enroll in a college- and career-ready course of study.
    - Provide high-quality curriculum and teacher support materials.
    - Build better assessments to measure student learning.
    - Establish information and accountability systems that value and incentivize college and career readiness.
  - In full: <http://www.achieve.org/measurethatmatter> or
- **Techbridge** of Chabot Space & Science Center, California, encourages girls in technology, engineering and science – <http://www.techbridgegirls.org/index.asp> -- and has a page of resources for classroom visitors and role models -- [http://www.techbridgegirls.org/role\\_models.asp](http://www.techbridgegirls.org/role_models.asp)
- National Association for Partners in Equity (**NAPE**) regularly runs webinars; the recordings and materials are here --<http://www.stemequitypipeline.org/ProfessionalDevelopment/ArchivedWebinars.aspx> -- Jo has reviewed a couple of webinar's PowerPoints, but not listened to the recordings; there is some meat here and authoritative validation, plus access to readily modifiable tools and instruments.
- **The Education Trust** works for the high academic achievement of all students at all levels -- <http://www2.edtrust.org/edtrust/default>

### ***Funding***

- **Intel Schools of Distinction** – **applications due February 17, 2009**, apply on-line -- <http://www.intel.com/education/schoolsofdistinction/index.htm?iid=sciencemath+soda>

### ***Articles***

- **Growing a New Crop of Engineers** – 4-H SET (Science, Engineering, Technology) Initiative <http://fourhcouncil.edu/scienceengineeringtechnology.aspx> includes National Youth Science Day -- [http://fourhcouncil.edu/pv\\_obj\\_cache/pv\\_obj\\_id\\_697A3EAA0978B703C3F37E01F4F124DCD13D0E00](http://fourhcouncil.edu/pv_obj_cache/pv_obj_id_697A3EAA0978B703C3F37E01F4F124DCD13D0E00)
- From the For Inspiration and Recognition of Science and Technology (FIRST) newsletter -- <http://archives.subscribermail.com/msg/5c30036b37de45c59668e5ce4695fe78.htm> – California **Aerospace people pick Top 10 STEM programs** -- <http://www.usfirst.org/who/content.aspx?id=11806> – including FIRST Robotics (FRC), FIRST LEGO League (FLL), Project Lead The Way (Jo's grain of salt: the Aerospace Industry helped develop PLTW's Aeronautical engineering curriculum) and an **FRC Team makes Trail Blazers a Tshirt launcher**: <http://www.usfirst.org/who/content.aspx?id=11834>

### ***Policy***

- Education Experts Sound Alarm over America's ability to compete, National Governor's Association –
  - Press release: <http://www.nga.org/portal/site/nga/menuitem.6c9a8a9ebc6ae07eee28aca9501010a0/?vgnex>

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[toid=431809a4cbf4e110VgnVCM1000005e00100aRCRD&vgnnextchannel=759b8f2005361010VgnVCM1000001a01010aRCRD](http://www.usnews.com/articles/education/2008/12/19/influential-groups-lay-out-road-map-for-improving-us-education.html)

- US News and World Report Article:  
<http://www.usnews.com/articles/education/2008/12/19/influential-groups-lay-out-road-map-for-improving-us-education.html>

### Research

- **Measuring What Matters: The Effects of National Board Certification on Advancing 21<sup>st</sup> Century Teaching and Learning** -- [http://www.nbpts.org/userfiles/File/CTQ\\_Report\\_FINAL.pdf](http://www.nbpts.org/userfiles/File/CTQ_Report_FINAL.pdf) -- A TeacherSolutions report by 10 National Board Certified Teachers, Center for Teaching Quality – probable date Summer 2008. Researchers have inadequate tools for teacher quality assessment, resulting in suboptimal use of the opportunities provided by the National Board Certification Concept.
- **Features of Effective Programs** -- Eccles, J., & Gootman, J.A. (Eds.). (2002). *Community programs to promote youth development*. Washington, DC: National Academy Press. *Thanks to Roger Rennekamp.*
  - Physical and psychological safety
  - Appropriate structure
  - Supportive relationships
  - Opportunities to belong
  - Positive social norms
  - Support for efficacy and mattering
  - Opportunities for skill building
  - Integration of family, school, and community
- The (U.S.) National Research Council (NRC) released its highly-anticipated report [Learning Science in Informal Environments: Places, People, and Pursuits](#). According to the NRC, "tens of millions of Americans, young and old, choose to learn about science in informal ways - by visiting museums and aquariums, attending after-school programs, pursuing personal hobbies, and watching TV documentaries, for example. There is abundant evidence that these programs and settings, and even everyday experiences such as a walk in the park, contribute to people's knowledge and interest in science." *Thanks to Roger Rennekamp.*
  - Full article: <http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=12190>
  - Report in full: [http://www.nap.edu/catalog.php?record\\_id=12190](http://www.nap.edu/catalog.php?record_id=12190)

### Data

- Measuring Up 2008 National Report Card on Higher Education -- <http://measuringup2008.highereducation.org/>

### Classroom Resources

- **Math, Physics, and Finance Teachers:** <http://www.khanacademy.org/> has a comprehensive list of videos on math, physics, and finance topics
- **Junior Engineering Technical Society (JETS) Design Competition semifinals** on video -- Some really fun Stuff! <http://www.jets.org/programs/nedc/semifinals/index.cfm>

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