

Science uses observation, measurement, modeling and experimenting to extend our knowledge of the real;

Engineering uses science, tools and materials and takes risks to make stuff that makes lives easier, faster, more productive;

Computer science uses mathematical thinking, science and engineering to organize, transform and display information and embed intelligence inside most modern inventions;

All use ingenuity, creativity, and problem-solving and each other to make the world a better place..

Ponder Big Ideas

- Greatest Engineering Achievements of the 20th Century — greatachievements.org/
- Grand Challenges for Engineering — engineeringchallenges.org/
- ted.com/
- Save the World — other90.cooperhewitt.org/ — solar-hope.org/main/ — fastcompany.com/1721741/wanted-more-women-inventors-to-save-the-world — washingtonpost.com/wp-dyn/content/article/2009/01/23/AR2009012302351.html

Check out Competitions, Exhibitions & Awards

- Oregon *FIRST*[™] Tech Challenge (FTC) State Tournament: **Sunday February 27**, South Meadows Middle School, Hillsboro — ortop.org/ftc/
- *FIRST* Robotics Competition, March 25-26, Memorial Coliseum — www.oregonfirst.org
- Oregon Game Project Challenge (OGPC): **Saturday April 30**, Chemeketa Community College, Salem — techstart.org/ogpc
- February: PSU's Engineering Discovery Showcase — pdx.edu/cecs/outreach
- May: OSU's Engineering Expo — enr.oregonstate.edu/expo2010/
- Lots more — engineeringedu.com/competitions.html
- Intel's Northwest Science Expo — <http://www.nwse.org/>
- Also check out Google's science fair event calendar — <http://www.google.com/events/sciencefair/>
- Look for Engineering & Design project presentations open to the public at science fairs, county and state fairs, and student project presentations at PSU, OSU, OIT, and George Fox University.
- Student Technologist of the Year — techstart.org/studenttechnologist
- NCWIT Awards for Aspirations in Computing — ncwit.org/work.awards.aspiration.html

Browse Local Bloggers & Newsletters

- Getreal blog – getreal.ous.edu/blog
- OSU's iCassie blog – enr.oregonstate.edu/students/icassie.html
- OSU Momentum -- enr.oregonstate.edu/momentum/

Visit a Museum

- Oregon Museum of Science & Industry — omsi.edu/
- Evergreen Aviation and Space Museum — evergreenmuseum.org/
- Science Factory, Eugene — sciencefactory.org/
- Science Works, Ashland — scienceworksmuseum.org/

Take A Class or Camp

- Saturday Academy — saturdayacademy.org/Classes/tabid/53/Default.aspx
- OMSI — omsi.edu/camps-classes
- Girl Scouts — girlscoutsosw.org/CMS/events/programguide.aspx
- Search technosciencesupersite.org or connectamillionminds.com/ or check out your local Parks & Recreation department, community center, community colleges, colleges and museums.

Surf the Web

- Google any of these terms: design, hack, invent, innovation, programming, prototype, sustainability, engineering failure, industrial design, technical books, X Prize
- Girls — nerdgirls.com/ -- dotdiva.org/ -- girlsgotech.org/games.html
- Design Squad — pbskids.org/designsquad/

Join or Start a Club or Team at School or in Your Community

- Robotics — ortop.org — oregonfirst.org -- usfirst.org — robotevents.com
- Gaming — techstart.org/ogpc
- Geographic Information Systems, Web, Robotics: 4-H Tech Wizards — extension.oregonstate.edu/metro4h/techwizards -- oregon.4h.oregonstate.edu/tech-wizards
- Math Engineering Science Achievement (MESA) — oregonmesa.org/
- Science and Math Investigative Learning Experiences (SMILE) — smile.oregonstate.edu/
- InvenTeams — web.mit.edu/inventeams/
- Design for the Other 90% — other90.cooperhewitt.org/
- Junior Engineering Technical Society — jets.org/

Do It Yourself

- Portland Area Robotics Society (PARTS) – portlandrobotics.org/
- DorkbotPDX “people doing strange things with electricity” – dorkbotpdx.org/
- Make Magazine – makezine.com/
- Virtual DIY -- www.alice.org/ -- <http://scratch.mit.edu/>
- Game engines – gpwiki.org/index.php/Game_Engines
- Hack N Mod – hacknmod.com/
- QuicklyCode – quicklycode.com/
- Arduino – arduino.cc/ – practicalarduino.com/projects – dorkbotpdx.org/wiki/benito – dorkbotpdx.org/wiki/dorkboard
- TekBots – eecs.oregonstate.edu/education/resources/
- Brush up on math & science topics – khanacademy.org/ -- ocw.mit.edu/index.htm

Work It — Internships

- Saturday Academy Apprenticeships in Science & Engineering – saturdayacademy.org/ase/default.aspx
- Business Education Compact (BEC)— businesseducationlinks.org/pls/pdxlinksp/stusvcs.html
- Oregon Health Sciences University (OHSU) – ohsu.edu/xd/education/student-services/science-education-opportunities/education-programs/summer-internships.cfm

Research Getting to College

- Overview – getreal.ous.edu/hsc.php – on facebook look for “GetReal Engineering”
- Oregon Student Assistance Commission (OSAC) – osac.state.or.us/
- Portland State University Maseeh College of Engineering & Computer Science – pdx.edu/cecs/
- Oregon Institute of Technology (Clackamas, Hillsboro, Klamath Falls) – oit.edu/
- Portland Community College – pcc.edu/programs/engineering-transfer/ – pcc.edu/programs/computer-science/
- Lewis & Clark College – lclark.edu/college/departments/mathematical_sciences/
- Mt. Hood Community College – mhcc.edu/programs/
- University of Portland – engineering.up.edu/
- George Fox University, Newberg – enr.georgefox.edu/home/
- Columbia Gorge Community College, The Dalles – renewableenergycareers.org/
- Linfield College, McMinnville – linfield.edu/computer-science.html
- Oregon State University College of Engineering – enr.oregonstate.edu/
- University of Oregon (Computer Science) – cs.uoregon.edu/
- Washington State University, Vancouver – encs.vancouver.wsu.edu/

Check Out When Gadgetry becomes Technology

- Popular Science — popsci.com/
- Popular Mechanics — popularmechanics.com/
- Scientific American — scientificamerican.com/technology
- Technology Review — technologyreview.com/

What the Pros Have to Say (besides “We like initials!”)

- ACEC Oregon (American Council of Engineering Companies) Engineering Excellence Awards -- www.acecoregon.org/engineeringExcellence.php
- ACM (Association for Computing Machinery) & friends — computingcareers.acm.org/ — dotdiva.org/index.html
- AISES (American Indian Science and Engineering Society) — aises.org/
- ASEE (American Society for Engineering Education) — egfi-k12.org/
- ASCE (American Society of Civil Engineers) — content.asce.org/asceville/index.html — asce.org/LandingPage.aspx?id=68
- ASME (American Society of Mechanical Engineers) — asme.org/Communities/Students/K12/AtoZ.cfm
- EWB (Engineers Without Borders) — ewb-usa.org/ — ewbportland.org/
- IEEE (Institute of Electrical & Electronic Engineers) — tryengineering.org — trynano.org -- iee-beeep.org/
- NAE (National Academy of Engineering) — engineeryourlife.org/ -- www.engineergirl.org/
- NASA (National Aeronautics and Space Administration) — missionscience.nasa.gov/
- NSBE (National Society of Black Engineers) — nsbe.org/
- SAE (Society of Automotive Engineers) — students.sae.org/
- SHPE (Society of Hispanic Professional Engineers) — oneshpe.shpe.org/wps/portal/national
- SWE (Society of Women Engineers) — aspire.swe.org/

More Local Places to Look

- Saturday Academy links — saturdayacademy.org/ASE/StudentInfo/StudentResourcesandForms/tabid/129/Default.aspx
- Oregon Health Sciences University (OHSU) — ohsu.edu/xd/education/student-services/science-education-opportunities/
- dorkbotpdx.org/wiki/portland_resources_for_dorks
- Connect a Million Minds, national site with geographic search -- connectamillionminds.com/
- Libraries, book stores, electronics stores (including surplus & parts stores)

Find the most up-to-date, virtual copy of this flyer at:

<http://opas.ous.edu/Work2009-2011/Marketing/E-Week-explore-2011.pdf>