



South Puget Sound
Expanding
Your
Horizons



[math + science conference for girls]

Sponsored by:

+IGNITE of Pierce County

+OSPI [Office of Superintendent of Public Instruction]

+DeVry University

Hosted by the University of Washington, Tacoma

Expanding Your Horizons

Expanding Your Horizons in Science and Mathematics™ conferences are designed to nurture girls' interest in science and math courses and to encourage them to consider science and math based career options such as engineering, computer science, and biometrics.

Today, EYH conferences are held in over 89 locales. Over 600,000 young women have participated in the these conferences so far.

The South Puget Sound EYH conference began in 2003, hosting 200 middle and junior high school girls.

South Puget Sound Expanding Your Horizons (SPS-EYH) presents a daylong conference for middle and junior high school girls. Participants have the opportunity to take part in a series of small, hands-on workshops with local women who are professionals in fields related to science, math, and technology. The program is designed to encourage girls to maintain an interest in math and science education, as well as introduce girls to women role models who are pursuing a variety of related careers.

This program is sponsored by IGNITE of Pierce County, a collaborative network of organizations and individuals dedicated to bridging the technology gap for girls. The conference is funded by a grant from the Office of Superintendent of Public Instruction.



Details >>The 2005 SPS-EYH will be held at the University of Washington, Tacoma on Friday, March 25th from 7:45 am - 1:30pm. Breakfast and lunch are included in the day.

Registration Deadline:
Thursday, March 10, 2005

Registration Fee:
\$20 per person

The conference is limited to 250 girls. Since the conference fills quickly, please register as early as possible.

For additional information, contact:
Courtney Randazzo, UW Tacoma
email [sps_eyh@u.washington.edu]
phone [253.692.4539]
fax [253.692.5862]
web [www.tacoma.washington.edu/tech/sps_eyh]

Agenda Overview	
7.45—8.15	Breakfast & Registration
8.15—9.00	Keynote Address
9.00—9.15	Walk to Workshop 1
9.15—10.05	Workshop 1
10.05—10.20	Walk to Lunch or WS2
10.20—11.15	Lunch or Workshop 2
11.15—11.30	Walk to WS2 or Lunch
11.30—12.25	Lunch or Workshop 2
12.25—12.40	Walk to Workshop 3
12.40—1.30	Workshop 3

Workshops >>

Technology

[1] Security at Your Fingertips

[Patty Thumann, Sagem Morpho]

Fingerprints are not just for catching criminals anymore. Learn how you can use modern technology to keep your siblings out of your room, control access to your computer or even your locker. See a live demonstration of a digital fingerprint reader. Sample fingerprints may be taken for demonstration purposes.



[2] Getting from Here to There on the Internet

[Trina Jarmon, Click! Network]

Have you ever wondered what happens when you click [Search] or [Send]? How does your request get sent to the Internet and how does the answer get back to you? How far does your request have to travel to get you the results you want to see? Explore how messages and websites are packaged into a language the Internet can understand then shipped across the Information Super Highway. There's a lot about the Internet that you don't see. Come and learn how it really works!

[3] Making Turtle Tracks with LOGO

[Laurie Murphy, Pacific Lutheran University]

Sure you know how to use a computer but do you know how to control one? LOGO, a simple computer programming language, uses turtle graphics to help you learn how to make the computer do what YOU want. Find out how to program your "turtle" to move around a computer screen and draw colorful shapes and designs.

Engineering & Physics

[4] Have You Ever Wanted to Go to the Moon?

[Margaret Langsted & Lisa Scheuer, Federal Aviation Administration (FAA)]

Rockets are the oldest form of self-contained vehicles in existence, dating back more than 2000 years ago. Few experiences can compare with the excitement and thrill of watching a rocket-powered vehicle thunder into space. Learn about the scientific principles and practical rocketry through Sir Isaac Newton's Three Laws of Motion. With some simple materials you can become a "rocket scientist" by designing a rocket, determining how high it will go, and launching it to prove your estimation.

[5] Cross Roads

[Monica Bielenberg & Nancy Boyd, WSDOT]

Ever wonder who decides where a new road goes or how they are built? Discover how civil engineers design, plan and build the roads you walk, bike and drive on. You'll never look at a road the same way again.

[6] Dream Houses

[Jennifer Weddermann-Hay & Christine Phillips, Architects BCRA]

How do houses and buildings become reality? From dream to finished product, discover how architects design, plan and build houses. Create your own 3-D house using a blueprint and your imagination.

[7] Aluminum Can

[Karyn Whitacre, Pacific Integrated Handling]

With welding steel becoming a thing of the past, other metals, like aluminum, are taking its place in the world of manufacturing. Learn how a variety of new technologies are used to aid in design, manufacturing and production of these high-tech aluminum structures. Design and build picture frames out of this special aluminum product. Have a chance to take home one of the picture frames that we have built during the workshop.

Health Sciences

[8] Dining Room Detectives

[Cindan Gizzi, Tacoma-Pierce County Health Department]

Become a disease detective and track down the source of a food borne illness outbreak and stop it from happening again. Learn how epidemiologists investigate illness outbreaks and how they help keep people and food safe from aggressive bacteria and vicious viruses.

[9] Jump Start the Human Heart – Zap It to Me

[Jennifer Gleason, St. Claire Hospital]

Discover how electricity is conducted through the human heart and how various changes, like low potassium or calcium levels, can affect your heart rhythm. Learn how an electrocardiogram (EKG) is used to trace normal, life threatening, and "flatline" rhythms. Record your own rhythm strip.

[10] A Spoon Full of Sugar

[Jennifer Lucero, Merck & Co.]

In ancient times people treated illnesses with a variety of home remedies, magic, and herbs. The current remedies and medicine you take today have come a long way since those times. Discover how drugs are developed and delivered in the body to treat specific diseases. Research and develop your own medicine.

[11] CS-EYE: Solving the Mystery of Vision

[Lara Leach, Optometrist]

Ever wonder why some people need glasses to see and others don't? Discover how your eyes work together to help you see things. Learn about common eye diseases and how to keep your eyes healthy. Dissect a cow or sheep eyeball to "see" how vision happens.



More workshops >>

[12] All Fired Up!

[Rachel Benz & Jo Kinney,
Lakewood Fire District 2]

Do you have what it takes to keep your cool when the heat is on? Find out about the opportunities, challenges and rewards of being a female in the fire service. Learn about the different careers in the fire service: Firefighter, Emergency Medical Technician, Paramedic, Fire investigator, Public Education Officer and Public Information Officer, and what it takes to be successful. Have some fun putting on some fire gear.

Environmental & Earth Sciences

[13] Electric Wildlife

[Cindy Swanberg & Kyrra Wilson,
Tacoma Power]

Find out how turning on the lights affect wild animals and how your electricity company protects wildlife habitat. Use cool stickers to develop a wildlife habitat plan for your own yard and make a nature journal to record your observations. Everyone gets to take home a photo of themselves with a real stuffed cougar.

[14] Forest Survivor!

[Kelly Stanley & Teresa Loo,
Port Blakely Tree Farms]

Do you have what it takes to be a Forest Survivor? In this workshop, your tribe will compete against other tribes in ultimate challenges that test your forest knowledge and technical skill! Come learn what real foresters and wildlife biologists do every day to survive the forests of the Pacific Northwest!

[15] Connecting with Nature

[Margie Shea, Tacoma Nature Center]

Do you love nature, animals or the outdoors? Do you enjoy sharing discoveries with others? Are you observant about the world around you? Spend some time as a naturalist and practice your nature detective skills with some tools of the trade, including a night vision scope, and create your own phonological calendar.

[16] Don't You Know That You're Toxic

[Paula Fedirchuk,
Herrera Environmental Consultants]

There's been an oil spill! Help two environmental engineers track the spill, identify the leaking boat, and design a clean-up before oil washes up on our beaches. Find out how different kinds of science and math are used to solve real environmental problems. Become a toxic avenger!

[17] Dirty Dirt

[Melany Vorass, WSDOT]

Get the low-down dirt! Explore how environmental scientists investigate contaminated sites and how they clean up environmental contamination. Learn why soil characteristics are important in determining the movement of contamination in the environment. Put on personal protective gear and collect and characterize soil samples.

[18] Don't Drink the Water

[Janet Blaisdell, Chris Matter-Rinehart,
& Lindsay Spencer, Tacoma-Pierce County
Health Department]

Do you know what happens when our drinking water supply becomes contaminated? Become an environmental health specialist and test groundwater samples to determine the potential sources of contamination. Discover the threats to keeping groundwater clean and brainstorm ways to protect the community from drinking tainted water.

Mathematics

[19] Grab Your Hammer

[Marilyn Oviatt, The Carpenters-Employers
Apprenticeship & Training Trust Fund of
Western WA]

What does it take to be a carpenter? Do the math and find out. Learn how tricks of the trade are passed on through apprenticeships. Build and take a home a planter box.

[20] Making Money Multiply

[Leola Ross, Russell Investment Group]

Do you know that you can grow your money by investing it? Explore the different types of investments and how they work. Play a game and see if the investments you select make you more money over time.

[21] Start Your Own Business

[Emily Reiter, Business Examiner]

Do you have a great idea for a summer business or school fundraiser? Not sure where to begin? Learn how to take that great idea and turn it in to a real money maker!



Chemistry

[22] The Makeup of Chemistry

[Leatta Dahlhoff,
Washington State Department of Ecology]

Ever wonder how your favorite nail polish or lip gloss is made? As a chemist you could help develop new products for everyday life. Have some fun making your own beauty products and learn how chemistry is all around you.

For the most recent information and announcements, please visit our website at:

www.
tacoma.
washington.
edu/
tech/
sps_eyh