



Expanding Your Horizons

Friday, March 24, 2017

Please Print

Student Name _____

FIRST LAST

Telephone _____ City _____

School _____

Grade _____ Special Needs* _____

E-mail _____

*Reasonable accommodations will be made

Registration closes March 10th or earlier if filled.

For more information, see your school counselor, or visit <http://lakewashington-wa.aauw.net>

Workshop Preferences

You will be assigned to three workshops. Place your workshop number choices in the blank spaces below. Please explore a variety of professions. By indicating nine workshops you improve your chances of getting workshops you have chosen.

- | | | |
|----------|----------|----------|
| 1. _____ | 4. _____ | 7. _____ |
| 2. _____ | 5. _____ | 8. _____ |
| 3. _____ | 6. _____ | 9. _____ |

Student Fee \$20 (non-refundable) covers lunch/materials. Your school must be notified of your plan to attend this conference before mailing in your registration. **No confirmation will be mailed; your counselor will be notified of your registration.** Students registering independently may check registration status at gogirlseyh@gmail.com

Registration forms must be postmarked by March 10, 2017.

Make checks payable to: AAUW / HS EYH

Mail to: **Expanding Your Horizons
16602 NE 18th Street
Bellevue, WA 98008**

**EDUCATORS AND PARENTS –
PLEASE USE SEPARATE
ADULT REGISTRATION FORMS**

Adult program & registration forms are available at <http://lakewashington-wa.aauw.net>.

Questions: gogirlseyh@gmail.com



Science, Technology, Engineering & Math Conference for Girls Grades 9 – 12

Friday, March 24, 2017
7:45 a.m. – 1:00 p.m.

Bellevue College
3000 Landerholm Circle SE
Bellevue, WA

**REGISTER NOW!
Space is limited!**

EYH Conference Goals:

- Increase the interest of young women in science, technology, engineering and math (STEM) through positive, hands-on experiences.
- Foster awareness of career opportunities in the STEM fields.
- Provide young women with opportunities to meet and interact with positive role models who are active in STEM-related careers.

Sponsored by:



Detach Here

Detach Here

Expanding Your Horizons

Friday, March 24, 2017 • 7:45 a.m. – 1:00 p.m.

Conference Schedule

7:45 – 8:15 Check in – Bellevue College cafeteria
8:30 Session 1 Workshop Begins
1:00 Conference Ends

Workshops

1. You've Got the Power!

Providing energy while minimizing the impact that we have on the climate is a major challenge facing us in the world today. Hands-on experience with electrical circuits gives you a chance to explore it. **Maureen Albi, Area Channel Manager; Marsela Jakub-Wood, Power Systems Engineer; Michele Bar, Drives Product Expert** SCHNEIDER ELECTRIC

2. Take the Challenge: Could You Be a UX Researcher?

Think you can spot the flaws on a website? Take the challenge and explore the field of user experience research and see if you can discover the failures and the winners. **Jessica Ashdown, Sr. UX Researcher** T-MOBILE

3. Researching People: The Things They Tell You

Learn how Facebook researchers study people to make products fun and easy to use. You will learn how to conduct a research session and use the findings to make meaningful product changes. **Nika Smith Auld, Mary LaLomia, User Researchers** FACEBOOK, INC.

4. Hand On Therapy – What is OT?

Join this interactive event to increase your awareness of a fast growing healthcare field – Occupational Therapy. Learn about the variety of settings OTs work in. Also have fun fabricating your very own sample splint! **Constance Ballou, MA, OTR/L, CHT** SELF-EMPLOYED

5. Construction Industry Career Paths

Learn about the many opportunities in the construction industry! From Design-Build projects to virtual reality mock-ups, project planning, cost and scheduling, marketing and business development. **Erin Boas, Construction Cost Estimator; Cera Martin, Project Engineer; Cori Palmer, Project Development** MORTENSON CONSTRUCTION

6. Come to Your Senses

Learn how your brain can interpret and respond to external signals (like pressure, temperature, and light). Hear from neuroscientists who study how the brain works. **Stephanie Bucks, PhD Scientist; Clare Gamlin, Kali Esancy, Graduate Students** UNIVERSITY OF WASHINGTON

7. Math in Everyday Life

Join us as we look at graph theory, which is used in laying fiber optic networks and planning efficient routes for travel, and also explore cryptography, which people turn to when they need to secretly store or communicate messages. **Rini Chakrabarti, Usha Raman, Instructors** BELLEVUE COLLEGE

8. Medicine Woman

Explore the different opportunities in the exciting field of pharmacy. Experience what it is like to compound your own product and customize it to fit your needs or preference. **Kara Chao, Renee Johnston, Pharmacy Dept.** SWEDISH MEDICAL CENTER

9. Designing Technology with Psychology

The field of Human-Computer Interaction is about how people interact with technology. You'll learn how strategies from psychology can be used to encourage people to make smart choices about technology. **Sunny Consolvo, Joe Tullio, User Experience Researchers** GOOGLE

10. A Great Technology Needs Great Marketing

You may have created an amazing technology product, but how do you drive customers to adopt your product? Learn how to create a marketing strategy using a real problem faced by Microsoft Cloud. **Teresa Conte, Senior Product Marketing Manager** MICROSOFT

11. Engineering Behind Your "Morning Java"

Millions of cups of coffee are consumed every day. Learn how science and engineering combine to create a delicious drink while brewing up your own cup! **Grace Czajkiewicz, Industrial Engineer; Mickey Downey, Controls Engineer, Anthony Colosimo, Chemical Engineer** KEURIG GREEN MOUNTAIN

12. CSI: Solving Crime with Fingerprints

Develop fingerprints like a real CSI! You will apply the chemicals, develop and lift the prints. You will also get to see fingerprints "glow" with an alternate light source! **Rachel Forbes, Amanda Poast, Tammy Chaney; Latent Print Examiners; Amanda Corrigeux, Identification Technician** SEATTLE POLICE DEPT.

13. Ace Your Immune System

Examine 3-D acupuncture models and work with actual herbal samples. Learn about actual clinical cases where Acupuncture and Herbal Medicine brought patients to balance and better health. **Mayme Fu, Acupuncturist and Herbalist** PEOPLE'S ACUPUNCTURE

14. The World of Microfluidics

We will explore fluid and colloids on the micro scale and discuss applications on the nano scale! We will create ferrofluid and "elephant toothpaste." While based in chemistry, this workshop is multidisciplinary. **Belinda Garana, Angela Kimber, Students** UW, SOCIETY OF WOMEN ENGINEERS

15. Bridging the Gap

Working as a team, use popsicle sticks and glue to build a simple bridge that will hold the greatest weight. The bridge that supports the most weight wins a prize. **Stephanie Gardner, Engineering Manager** ALASKA AIRLINES

16. Epidemics!

Discover how diseases like Ebola, flu and malaria spread in a population, and learn what we can do to control epidemics. **Jaline Gerardin, Caitlin Bever, Research Scientists; Jillian Gauld, Postgraduate Research Scientist; Liana Mercer, Research Statistician** PHYSIO CONTROL, CAMP INTERVENTION

17. Building Virtually to Build in Reality or Moving Beyond Mindcraft

Construction is more than a tool belt. Come and learn about other job opportunities in construction; specifically learn about virtual design and construction – prototyping the building inside software. **Lana Gochenauer, VDC Manager; Christina Anderson, VDC Coordinator** LEASE CRUTCHER LEWIS

18. Atmospheric Chemistry and Physics

Learn about the power of the atmosphere and the scientific processes that are happening all the time around you! **Lexie Goldberger, Megan McKeown, Graduate Students** UNIVERSITY OF WASHINGTON

19. Are You Ready for the 21st Century Admissions Landscape?

Hear about the latest updates on the world of college admissions and learn how to put your best foot forward. You'll leave with your digital portfolio highlighting your strengths and talents that will increase your acceptance rate. **Reetu Gupta, CEO** CIRKLED IN

20. **Wanted: Guardians of Nature**

Explore the way that park rangers work with the environment! We'll identify native plants, learn how to teach others about the natural world, and discuss different ways to protect nature.

Heather Hansen, Park Ranger

WASHINGTON STATE PARKS & RECREATION COMMISSION

21. **Stitch a Chicken and Splint a Friend**

Come learn and practice surgical suturing on chicken skins, splinting your neighbor's not-so-broken limbs and learning about the day-to-day activities of an orthopedic surgeon and PA-C.

Katie Henderson, Physician Assistant-C; Kathleen Moen, M.D.
SWEDISH MEDICAL GROUP

22. **Building Blocks of the Milky Way**

Use real data to show that our own galaxy was assembled by accreting dwarf galaxies and the process is still happening!

Joanne Hughes, Ph.D., Physics

SEATTLE UNIVERSITY

23. **The Heart of Nursing**

Do you know that nurses work in IT, on cruise ships, and as CEOs? We'll talk nursing careers, look at the inner working of a real cow heart and lung, and how dysfunction can affect patients.

Melissa Hutchinson, MN, RN, CCNS, CCRN; Natina Dudley, RN, MSN; Collyn West, RN; Tarrah Calender, MN, RN
VAPSHCS

24. **Design Studio**

Like art and science? Open up your imagination to product development! Learn creative problem solving techniques and how they apply to today's design industry

Sena Janky, Principal Interaction Designer

PHYSIO CONTROL

Kristin Wells, Industrial Designer/Consultant

CAMP INTERVENTION

25. **Virtual Reality: Make & View Your Own 360 Video**

Learn about the new world of immersive technologies including augmented reality, virtual reality and mixed reality. Make your own VR headset; shoot your own 360 video and then view it on your headset.

Mary Jesse, Board Member

BSQUARE

26. **Unlock the Mysteries of the Human Brain**

Come dissect fresh sheep brains and analyze preserved human brains as we explore how this simple organ helps us to see, feel, move and learn.

Naomi Jones, Biology Instructor

BELLEVUE COLLEGE

27. **Can You Save A Duck?**

Oil spills can impact a duck's habitat. Test out a few methods to clean up an oil spill and find out what works best to save a duck.

Sylvia Kawabata, Manager (retired); Sharon Nickels,

Contract Project Officer (retired)

US ENVIRONMENTAL PROTECTION AGENCY

28. **Design of Everyday Things**

Want to know why some ideas succeed while others fail? Learn about Design Thinking, which will help you design better products, services and experiences through a human-focused, prototype-driven problem solving design process.

Melissa Kerr, Design Program Manager; Nicole Calace,

Product Designer

FACEBOOK, INC.

29. **Landscape Masterpiece**

#Dreaming, #LoveFlowers, #ArtAndScience = City or country.

Desk work or outside time. Learn more about Landscape Design by putting 'plants' to paper and see if your career dreams can come true.

Kirsten Lints, C.P.H., Landscape Designer

Gardens ALIVE Design

30. **Save the Oceans (and the Fish and Birds too!)**

Do our energy sources present risks to our environment? Explore different materials and attempt to contain and cleanup an oil spill.

Then we'll investigate the effects of an oil spill on marine wildlife

Lynette Lopez, Kristen Marquez, Manufacturing Engineers

BOEING

31. **Let The Games Begin!**

Would you like to create your own games? Explore electrical circuits while you construct your own game using the Electronic Matching Game Agilent Kit, and challenge your family and friends.

Stephanie Lorber, Production Engineer; Lynette Lopez,
Manufacturing Engineer

BOEING

32. **Ocean Observing Systems**

Learn how scientists use an instrumented undersea cabled array off the Oregon Coast to study hydrothermal vents and subsea volcanoes. Use a CTD to take measurements of seawater.

Dana Manalang, Systems Engineer; Trina Litchendorf,
Oceanographer

UNIVERSITY OF WASHINGTON

33. **You're an Ichthy-What?**

Ichthyologist = a person who studies fishes. Learn about the UW's 11 million preserved fish specimens, hear what it's like to do field work on fishing boats in Alaska, and try to identify some of our local fish species.

Katherine Maslenikov, Ichthyology Collection Manager

UNIVERSITY OF WASHINGTON

34. **Landscape Architecture – Design, Ecology and Architecture**

Landscape architecture is a creative and technical field with projects ranging from urban parks to habitat restoration. In this session, students will explore park design and this dynamic profession.

Chelsea McMann, Principal; Kirsten Dahl, Landscape Designer; April Maly, Landscape Architect

WALKER MACY

35. **Street Smarts – Credit Cards, Scams and Business Ethics**

This terrible trio can really mess you up, sometimes for the rest of your life. Learn how to avoid common pitfalls and outsmart THEM before they outsmart YOU!

Martha McCready, CPA SELF-EMPLOYED

36. **Creativity and Biodiversity**

Design a new type of corn! We will explore the importance of agricultural biodiversity and the science of plant breeding by learning how a new variety is created.

Caitlin Moore, Instructor and Seed Grower,

URBAN FOOD WARRIOR

Kurt Sahl, Director of Operations, 21 ACRES

37. **Wine – The Science Behind “Poetry in a Glass”**

“The Whole is Greater than the Sum of its Parts.” Grape juice + yeast = delicious beverage; simple, right? Explore the complexity within the simple equation that a world-wide industry is based on.

Donna Moyer, Wine Consultant, Sommelier

SELF-EMPLOYED

38. **Building Your Business: Social Media and Technology**

Women entrepreneurs leading the future! Build your business and leadership in technology.

Diane Najm, CEO/Founder, PHOTOPAD FOR BUSINESS

Bob Crimmins, Co-Founder, WISE WALKER/TECH STARS

39. **Stormwater Engineering to Save Our Environment**

What does it take to clean rainwater that runs over the streets into a stormwater pipe which discharges to a salmon-bearing stream?

Explore the world of stormwater engineering with women engineers.

Tarelle Osborn, President & Senior Civil Engineer; Ann

Bryant, Deepa Mungasavilli, Project Managers & Senior

Civil Engineers

OSBORN CONSULTING

40. **The Poetics of Construction Design & Remodeling**

Learn what is involved in a residential renovation project from start to finish – assessing client's needs, selecting materials, design applications and more.

Natalie Pritchett, Project Manager; Ginny Chan, Design Associate

NEIL KELLY

41. Fish Get Sick Too!

Fish get sick from diseases just like people. Fisheries biologists study these diseases to keep our salmon populations healthy. Use microbiology and molecular biology to diagnose a mysterious salmon disease.

Maureen Purcell, Research Microbiologist; Carla Conway, Histologist;
US GEOLOGICAL SURVEY – WESTERN FISHERIES RESEARCH CENTER
Krista Nichol, Research Geneticist
NOAA FISHERIES – NORTHWEST FISHERIES SCIENCE CENTER

42. Architectural 3D Modeling Using Sketchup

Learn how to take a two dimensional house plan and create a 3D architectural model without using cardboard, Exacto knives and lots of hot glue.

Leila Ramac-Pasco, Project Manager
ECCO DESIGN INC

43. A Vast Ocean of Opportunity

Come see what life at sea is really like as marine biologists. Learn how to keep the oceans healthy and sustainable.

Melanie Rickett, Fisheries Biologist; Kayla Ualesi, Data Management Specialist
NOAA

44. Chemical Engineering in Color

Come explore the main ideas of chemical engineering with ice, candy and glow sticks.

Emily Ruskowitz, Elena Pandres, Research Assistants
UNIVERSITY OF WASHINGTON

45. Catching Babies

Discover the modern science and ancient art of midwifery. “Birth” a ping pong ball baby; learn what it takes to become a midwife and handle the tools of the trade.

Valerie Sasson, LM CPM, Midwife; Liz Chalmers
CO-OWNERS PUGET SOUND MIDWIVES & BIRTH CENTER

46. Made by Cells: From Concept to Commercial Chemical

Many chemicals we use today are manufactured using different types of cells (microbial and mammalian). Come learn about how we go from choosing what to make to large-scale production.

Amanda Smith, Upstream Process Development Scientist
BRISTOL-MYERS SQUIBB
Yanfen Fu, Janet Matsen UNIVERSITY OF WASHINGTON

47. Going Green in the Evergreen State

Come learn about the causes of climate change, expected impacts and solutions. In the workshop we'll discuss clean energy and will build spinning dishes that run on solar power.

Ashley Spevacek, Stephanie Rushley, Scientists
UW DEPT OF ATMOSPHERIC SCIENCE
Gaby Tosado, Scientist, UW CLEAN ENERGY INSTITUTE

48. Design a Product

Learn the process designers and engineers use to make the products you use every day from someone who has helped design products for companies, from Nike to Panasonic. We'll choose a topic and design a product together!

Martine Stillman, Lead Mechanical Engineer
SYNAPSE PRODUCT DEVELOPMENT

49. Virus Hunting

Explore how researchers identify bacteria and viruses through gel electrophoresis using colored candy as an example “pathogen”. We will also see how bacteria and viruses spread.

Amy Stone, Program Leader of the Center for Innate Immunity and Immune Diseases Education Core
UNIVERSITY OF WASHINGTON

50. Women and Apprenticeship Opportunities

Learn about the opportunities for women who are interested in the construction trades. Practice team work and problem solving.

Morgan Stonefield, Program Manager
ANEW

51. Find the Drug, Kill the Bacteria

How do scientists find new drugs to kill bacteria? Let us use their steps to investigate what kills bacteria and how we test it.

Vasudha Sundaravaradan, Doctor
CENTER FOR INFECTIOUS DISEASE RESEARCH

52. Building What Matters

Learn how to build for a better society. The important buildings we build help heal, transport, teach, and energize communities. See how the places you live and work in are brought to life from conception to occupancy.

Tristie Tajima, Senior Project Engineer; Lacey Ahif, Senior Project Manager
SKANSKA USA BUILDING

53. Women in Charge: Be a Leader in the Engineering World

What do Civil Engineers do? Meet three women who will discuss leadership, career options in Civil Engineering, and what it's like to be a woman working in the Public Works arena.

Tricia Thomson, Bridge and Pavement Program Mgr; Hillary Stibbard, Principal Office Engineer; Glynda Steiner, Senior Mgr of Asset Management PMO & Standards
CITIES OF REDMOND, BELLEVUE, SEATTLE

54. Earth Experiments in a Virtual World

Run your very own global climate simulation in Python, and learn how Earth Scientists use physics, mathematics and computational science to understand climates of the past and predict climates of the future.

Judy Twedt, Doctoral Student UNIVERSITY OF WASHINGTON
Hansi Singh, Ph.D., PACIFIC NORTHWEST NATIONAL LAB

55. Physical Therapy: Do You Feel Crooked?

Physical Therapy optimizes movement. Learn how to recognize poor movement patterns and improve those patterns through hands-on techniques.

Kelly Vogl, Andrea Schafer, Physical Therapists
RET PHYSICAL THERAPY

56. Lotions = Labels and Labs

What makes your favorite lotion so special? Come investigate ingredients and the claims on labels. Learn lotion chemistry and make a lotion with the fragrance of your choice.

Reitha Weeks, PhD, Scientist, Program Coordinator
SHORELINE COMMUNITY COLLEGE

57. WINGS!

How do airplanes stay up in the air? Build and launch your own gliders. Explore the aerodynamics of airplane design and some of the things aeronautical engineers do.

Tracey Westry, Caroline Downey, Airplane Performance Engineers
THE BOEING COMPANY

58. Egg Drop Swoop!

Good engineering design, sound mathematics, and creative thinking are needed to design a vehicle to transport precious cargo safely to earth. Can your design protect an egg when dropped?

Cathy A. Wolfram, Industrial Engineering/Lean Manager (retired); Lyndsey Proctor, Industrial Engineer; Erin Petersen, Mathematician
THE BOEING COMPANY

ATTENDANCE: You will receive proof of attendance at the conference. Your school will be notified if you are registered but do not attend the conference.

We wish to thank *Bellevue College; AAUW (American Association of University Women) Lake Washington Branch* and our other sponsors for their support.

**Questions? E-mail: gogirlseyh@gmail.com
Need another brochure?**

Go to <http://lakewashington-wa.aauw.net>

Are you interested in the **Middle School Expanding Your Horizons** for 6th, 7th and 8th grade girls to be held at Bellevue College Saturday, March 25, 2017? If so, e-mail eyhbcc_middleschool@hotmail.com