



# 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](mailto: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](mailto: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.

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Detach Here

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# 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
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- 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](mailto: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](mailto:eyhbcc_middleschool@hotmail.com)