2014 AAUW Brighter Horizons Math, Science and Technology Conference

Student Workshops

1: Biomaterials: What is that?
Biomaterials are materials that are put into the body for medical reasons. Come learn how to make a biomaterial and think about how to use them.
Abigail Parks, Biomedical Engineer; Jackie Whitehead, Graduate Student, UCR

2: Flying Fruit and Sailing Seeds
Learn how plants travel to new places with their fruits and seeds. Build a flying fruit and see how far it can fly. *Katherine Courtney, Professor of Biology, Moorpark*

3: Kitchen Chemistry
Use everyday kitchen items to make spy invisible ink, homemade volcanoes, and shiny pennies. Learn about exothermic reactions and acid/base chemistry.
Jill Robertson, Ph.D., Director, Baxter Healthcare

4: Come Explore the Universe
Do you ever wonder what exists in the night-time sky? Learn about space exploration missions being performed at JPL and find out about the wide range of careers needed to support these missions.
Sherry Stukes, Software Systems Engineer, Jet Propulsion Lab

5: Raspberry Pi: Take a Byte
A Raspberry Pi computer is small enough to hold in your hand. You will write your first computer code and use your creativity to think of new ways to use this technology.
Derek Hibar, Asst. Professor of Neurology, USC; Priya Bhatt, Graduate Student

6: Water: Every Drop Counts
Explore the dynamics of topography, snow and rainfall, urban influences such as storm drain runoff and their effects on the watershed.
Deborah Low, Jacqy Gamble, Jan Dougal, Las Virgenes MWD

7: Design Your Own Room
Make your own interior design project. Learn how to measure a room, figure out square footage and use your favorite items to enhance the design.
Marissa Skinner Frisbee, Asst. Project Manager, Staples Construction

8: Keeping Your Pets Healthy
Learn about a career in small animal veterinary medicine. Participants will be introduced to doing a physical exam and learn bandage techniques.
Kathy Jonokuchi, Veterinarian

9: Understanding Forensics
Learn how to perform a technique in forensics and then use it to help solve a mystery.
Renee Artman, Ventura County Forensic Services Bureau Manager, Lucinda Sullivan, Maria Perez, Forensic Scientists

10: Unlock the Sun
Students will be able to safely view the sun using professional grade telescopes, Learn about different layers of the sun and their importance.
Kevin LeGore, Focus on Astronomy

11: Environmental Sleuth
Use science to solve environmental problems dealing with soil and water contamination.
Lori Clark, Professor of Environmental Science, Moorpark

12: Travelling Pathogens and Miraculous Microbes.
Students will examine marine microbes and their critical importance, learn how infectious agents spread and how to prevent outbreaks.
Nitika Parmar, Professor, CSUCI

13: Discover Engineering
Explore what engineers do? Make (chocolate) asphalt cookies, discover the tools engineers use and do a design project with solar power (peanuts and walnuts used in demonstration).
Jeannette Baker, Quality System Engineer; Kylara Hermansen, Studen;, Marta Alvarez, President, YCE Inc, Civil Eng. and Land Surveying; Ryan Hermansen, Student

14: Separating Solutions
Learn how chemists and biochemists figure out what things are made of using paper chromatography to separate pigments.
Linda Narhi, Biochemist, Amgen

15: Project Brainstorm: Your Brain and You
See and touch (using gloves) real animal and human brains. Explore the function, structure, and importance of the brain.
Sarah Madsen, Neuroscience Researcher

16: Robots Mimicking Spiders !
What in nature can jump, move, or carry heavy loads but make it look easy? Students will explore biomimicry using spider robots with hydraulic legs.
Laura Erlig, Educator; Steve Rodgers, Stephanie Diamond, Katie Martin, and Shannon Bailey, Engineers, Agilent

17: Beautiful Smiles
Learn how a dentist keeps your teeth healthy and beautiful and why they love their profession.
Sona Georgian, DDS

18: Cosmetic Chemistry
Explore how the chemistry of cosmetics can improve your skin and appearance. You will make perfume, bath fizzers and lip balm.
Aurora Ginzburg, CSUCI Student

19: Everyday Chemistry: Super-soakers
Examine super soaker materials by studying different parts of diapers.
Victoria Choi, Chemistry Professor, Moorpark College

20: Eyes in the Sky
Students will be introduced to live birds of prey and see and touch raptor scientific study skins, wings and talons.
Kim Stroud, Exec. Dir., Rio Vogt, Handler, Wildlife Rehabilitation & Environmental Education Center

21: Saving Lives
What does it take to be a doctor? Learn how doctors rely on their knowledge and skills to save lives.
Tracey Young, MD

22: Sharks of the Ocean
Sharks are greatly misunderstood and are not mindless killers. Learn about how sharks are being threatened and what is being done to help them survive.
Luz Felix, Researcher, Cedars Sinai Medical Center

23: Bottle Rockets and Going to Space.
Get inspired to explore other planets and experience space travel by starting small with your very own bottle rocket.
Isabel Cole, Fibersim and Laser Projection Specialist; Cassandra Ojeda, Materials and Process Engineer, SpaceX

24: Bite me
Learn how to use teeth and jaws to predict the diet of animals and to figure out who is related to whom.
Betsy Connolly, Professor, Zoology and Equine Science

25: That's not what I expected!
See a demonstration of the "accidental" discovery of penicillin. Learn how computer modeling is used for "intentional" drug discovery.
Tracy Blois. PhD, Amgen; Kit Shaw, PhD, UCLA

26: Out in the Field
We will discuss veterinary medicine with a large animal perspective and talk more specifically about working with horses.
Marta Granstedt, Veterinarian

27: For the Birds!
Learn how engineering and biology are combined through the science of biomimicry to make a new type of window glass that protects birds from collisions.
Lisa Schon, Ornilux

28: Navigating the Earth
GPS uses the concept of trilineation. Participate in an exercise that shows how GPS technology is used to navigate. Build a spherical map from a flat one.
Sharon Spielman, Eng. Consultant; Spielman Engineering

29: Discovering the Sea Range
Discover the Point Mugu Sea Range, focusing on the capabilities of weapons testing, data collection and supporting our US military.
Ilia Ford, Kenna Williams, Engineers, Navy, Pt. Mugu

30: Can Bugs Starve Humans?
Solve the mystery of what is eating your garden plants. Learn about different bugs and how they impact your food & flowers.
Anna Howell, Entomologist

31: The Science of the CHP
Learn how math and science can help with collision investigation, evidence collection and law enforcement.
April Baxter, Commander, CHP

32: Dive Into Marine Biology
Take an underwater journey through the kelp forests at the Channel Islands and learn about careers in Marine Biology.
Kelly Moore, Marine Biologist, National Park Service

2014 AAUW Brighter Horizons Registration Form

Student Registration fee: $10.00

This completed form and your fee MUST be received by Monday, March 3rd.

❖ **Two ways to register:**

1) online at **http://www.aauw-brighterhorizons.org** -Submit your registration then print out the confirmation form, have your parent sign it and mail it with your $10 fee to the address listed below. Your choices will be reserved but you **will not be registered until the confirmation form and the $10 fee are received.**

OR 2) fill out this form, have your parent sign and mail it with your $10 fee to the address listed below.

The non-refundable $10.00 fee covers workshop materials and refreshments

Name: _____

Address: _____

City: _____ State:_____ Zip code:_____

School: _____ Grade: _____

Phone: _____ E-mail: _____

Workshop Number: Choose your top six (6) workshops and enter the workshop number (1 to 32) on the lines below.:

1._____ 2._____ 3. _____

4._____ 5._____ 6. _____

Workshops are filled on a first-come, first-served basis. Use one Registration Form per student.

Registrations will NOT be taken at the door. You MUST register in advance

Make check payable to: **AAUW / Brighter Horizons**

Send this Registration Form to: **AAUW / Brighter Horizons, 2960 Keel Way, Oxnard, CA 93035**

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Program directors will seek emergency medical treatment for students in the event that a parent cannot be reached. Emergency Phone: _____

Photographs and videos may be taken for use in newsletters and on website.

❖**Parent/Guardian Signature Required:**_____

(students with field trip permission do not need parent signature)

Parent Workshops

Informative workshops for parents will be held at the Preus-Brandt Forum located at the CLU Library. NO registration is required but space is limited to the first 200 parents.

❖Information tables and coffee will be available in the lobby prior to 9 AM. No beverages are permitted in the Forum.

❖Parents are NOT permitted to attend student workshops !

9:00 – 9:50 AM ❖ How to Guide Your Child to Find a College That Fits.
Session will cover the student/parent teamwork in the college search and decision process covering what colleges want from students and what students want from college.
Pat Croner, College Consultant, College Match and counselor at Agoura HS for 17 years

10:00 – 10:50 AM ❖ Jobs of the Future
How can we adequately plan our education for the future? This talk will give an overview of what is coming up in the job market in the next 20 years, discuss the jobs that do not exist yet but will be available within five years and beyond, discuss the skills required to succeed in these new jobs and the types of courses that will help prepare for this new wave of jobs.
Nathalie Gosset, Senior Director of Marketing and Technical Innovation/Evaluation, Mann Institute for Biomedical Engineering, USC

11:00 – 11:50 AM ❖ A Science, Technology, Engineering or Math (STEM) Career for Your Child?
As parents, your role is to help your children get on the right path for future success. In middle school, these choices can become overwhelming. In this session you will discover a tool called the **Path Compass**. You will realize the **True North** or bottom line goals for your child. Once your **True North** is set, you will be able to help your child make future decisions with a clear focus.
Rona Satov, MSW, Owner of the Chameleon, Innovative People Solutions.