



THE INTEL ISEF TRIP

The Intel International Science and Engineering Fair (ISEF) was held from May 8th to May 13th in Phoenix, AZ this year. The 2016 Intel ISEF saw over 1,700 finalists and countless other student observers from 70 countries, all competing to grab some glory for their part of the globe. This year, the NorCal STEM Education Foundation brought 7 students to ISEF, 4 finalists and 3 student observers.

The week-long trip was a whirlwind of activity. From the Intel Quad, where students were able to tinker with Intel's newest technology, to dancing at Club Intel ISEF or attending multiple educational symposia, there was never a dull moment. The

students got to rub elbows with Nobel laureates, tech moguls, and intelligent innovative students just like them from all over the world. It was an experience that none of them will ever forget.

One student in particular will be able to recount his experience at the 2016 Intel ISEF as "the time he won third place in an international competition." NorCal's own Henry Low (the Synopsys Sacramento Regional STEM Fair grand award winner for his project in Behavioral and Social Sciences) took home third place in Behavior and Social Sciences! Congratulations to Henry and to all of our finalists for making it to the international stage!



Some photos of our Intel attendees!

STATE SCIENTIST DAY 2016

May 18th was an exciting, science-filled day at the State Capitol, bringing together approximately 2,500 3rd-6th grade students from all around Northern California together with many scientists who work for the state of California. The event, hosted by the California Association of Professional Scientists (a long-time Foundation sponsor), taught students about the important work that our State Scientists perform every day to protect

California's natural resources and maintain California's public health. Activities abounded from the "Make-a-Quake" machine, where students jumped as high and as hard as they could to register their own "earthquake" on the Richter scale, to making their own toothpaste using minerals found naturally in California. California State Senator Mike McGuire ever participated in a show put on by Mad Science of Sacramento Valley and became 2016's "Honorary State Scientist." This year's State Scientist Day marked a memorable and fun 28th Anniversary for all attendees, big and small.

CALENDAR OF EVENTS

- June 16** - Online Deadline for Broadcom MASTERS
- June 20** - Tree Center Quarterly Scholarship due
- June 30** - Coupons.com Scholarship, Delete Cyberbullying Scholarship, and Digital Privacy Scholarships due
- June 30** - Last day to save 25% on select titles with National Academies Press - use code STEM25!

IMPORTANT NEWS: The Beaker will be coming out bi-monthly for the summer!

Summer is approaching and because of this, the Beaker will only come out every other month. Remember this is a great time to come up with ideas for your projects and get them pre-approved! If you have any questions about your idea or pre-approval, contact our coordinator, Nadia, anytime at ncompton@sacSTEMfair.org!

DONATE TO THE FOUNDATION WHILE SIMPLY SHOPPING FOR GROCERIES!

Do you shop at Raley's, Bel-Air, or Nob Hill? If so, please join the Extra Credit program for the Sacramento Regional Science and Engineering Fair Foundation. [See instructions on how to sign up here.](#) It's all online and just takes a few simple clicks to support the Foundation!

ARE YOU A STATE WORKER LOOKING TO DONATE THROUGH "OUR PROMISE" (formerly CSECC)?

The donation website for "Our Promise" has been taken offline, but state employees can still make their donations the old-fashioned way! The Sacramento Regional Science & Engineering Fair Foundation (dba NorCal STEM Education Foundation) hopes you will elect to donate to our organization. We've even prepared the form for you with our information to make it simple. Use the Our Promise form with our information.



Fun photos from the 28th Annual State Scientist Day!

SUMMER SCHOLARSHIP OPPORTUNITIES

We've found a few more scholarships than normal available for the month of June so we've included them here, instead of in the sidebar! Please be sure to apply to any and all scholarships you qualify for - extra funds for your education are always useful! Be sure to notify your parents of what scholarships you are applying to so that if these organizations make any attempt to contact you through them, they know to answer!

VFW Patriot's Pen Scholarship

Veterans of Foreign Wars is offering scholarships to students in grades 6-8. To apply, students must submit a 300-400 word essay expressing their patriotic views. This year's theme is "The America I Believe In." Students can ask a teacher or youth group leader to supervise them throughout the application process. First place winners from each state will be awarded a minimum of \$500. The national first place winner wins \$5,000 and an all-expense-paid trip to Washington, DC. **The deadline for submission is November 1, 2016.** For more information about the scholarship, please visit their website [here](#).

Digital Privacy Scholarship

To be digitally responsible means to be aware of the role and effects of technology on health, environment, and society. Digital Responsibility is offering a scholarship of \$1,000 to help students understand the consequences of posting online. To be eligible, you must be a student in high school, college or in a graduate program. To apply, visit the website and complete the application along with a 140 character message about digital privacy. The top 10 finalists will be asked to write a full-length (500-1,000 word) essay about digital privacy. Judging will be based on content, and creativity. The deadline for submission is June 30, 2016. Visit their website.

Delete Cyberbullying Scholarship

Delete Cyberbullying is a project dedicated to getting students committed to making cyberbullying a thing of the past. They are offering one \$1,000 scholarship for high school, college and graduate students. To apply, fill out their application and write a short essay (500 words or less) answering one of their two questions. **The deadline for submission is June 30, 2016.** Winners will be notified by July 31, 2016. For more information, and to apply, [visit their website here](#).

Coupons.com Scholarship

Love to shop and save money? Coupons.com is offering a scholarship of \$5,000 for students 13 and older registered in a tuition-based secondary program, or any accredited college or university for the current (2015-2016) or the upcoming (2016-2017) school year. To apply, [visit their website here](#) and take a short survey consisting of 5 short-answer essay questions. The surveys will be judged upon quality, uniqueness, helpfulness, completeness and relevance. **The deadline for submission is June 30, 2016.**

The Tree Center (Quarterly Scholarship)

The Tree Center is looking for high school or college/university students that go beyond. They are looking for creative students that are innovative, and help improve the lives of those around them. Applicants are to submit a project (a series of blog posts, a fundraising event, etc) that makes a difference in the lives of others. The applicant must also include an essay that describes the goal of the project with supporting evidence. **The deadline for submission is June 20, 2016.** Please visit their website for more information on requirements and examples of past winning projects.

SCIENCE SPOTLIGHT

MEASURING YOUR LUNG FUNCTION THROUGH YOUR PHONE

Individuals with lung diseases like asthma and cystic fibrosis may soon be able to curb the number of doctor visits they make in a year. Researchers at the University of Washington have developed a tool to measure lung function via a smart phone. The tool, SpiroCall, uses the phone's microphone to measure sound and pressure from a user's deep breath, and converts the information via specific algorithms to usable data for healthcare providers about the users' lung function. Smart phones are getting smarter every day! [Learn more about SpiroCall here.](#)

A CRISPR ALTERNATIVE TO GMO

Scientists at Pennsylvania State University have created a mushroom with an improved shelf-life. While technically the mushrooms are GMOs (Genetically Modified Organisms), they are not your standard franken-fruit. The scientists used a technique known as CRISPR (Clustered Regularly InterSpaced Palindromic Repeats) to amplify a trait that the mushrooms already had to a lesser degree. The process is closer to traditional farming techniques of breeding plants for favorable traits, but can be done more rapidly. The USDA stated that the mushrooms passed the current regulations placed on GMOs. The mushrooms will likely be on store shelves very soon. [Click here for more information!](#)

OTHER COMPETITIONS

Broadcom MASTERS Competition

Registration is open for the 2016 competition, with the deadline fast approaching on June 16! To be eligible, you must be nominated through participation in an SSP-affiliated science and engineering fair. For more information concerning registration, the schedule, and project specifics, [please visit their website here.](#)

Siemens Competition for Math, Science and Tech

Registration is open for the 2016 Siemens Competition for Math, Science, and Technology! The competition is open to all high school students (grades 9-12) of US citizenship. Students in grades 9-11 may compete in teams, while students in grade 12 can only compete individually. The California competition takes place at the California Institute of Technology in Pasadena, CA this year on November 12 and 14. For more information about registration, the schedule or project specifics, [please visit their website here.](#)



The Regional STEM Mentoring Program

Great minds follow great mentors! The Regional STEM Mentoring (RSM) program provides a foundation for students to build hands-on skills, receive advice, and grow into independent individuals ready to jump-start their careers. The RSM program dedicates itself to opening the minds of students to pursue greater STEM careers with a passion for what they want to do. Students who go through the program emerge better equipped for the STEM workforce and their future careers! Please visit our website for more information and to sign up for this amazing experience:

www.sacstemfair.org/regional-stem-mentoring-program

GENDER EQUITY IN STEM CONFERENCE

UC Davis's WomXn in STEM held a conference on May 6 that brought together UCD students with STEM professionals to discuss the role of gender in STEM and to receive advice on overcoming gender-based obstacles. Questions were presented to two individuals: Susan Brennan, Executive Vice President and Chief Operations Officer of Bloom Energy, and Dr. Heather Whitley, Design Physicist in the Design Physics Division at Lawrence Livermore National Laboratory.

Both women presented strategies to improve working relationships between peers of different genders in the workplace. They encouraged the students present to always have confidence in themselves and their ideas - to take criticism positively, and use it constructively to improve upon their work. Dr. Whitley believes that one should work in the area they are passionate in, while Brennan believes that it can take more than one pathway to get to the career you were meant to be in. However, both agreed that one's instincts should always be trusted. Overall, the aim of the presentation was to motivate and inspire students to begin working towards their careers, regardless if the area is stereotypically a "male dominated" one.