

Energy Education

Supporting educators in our community and nurturing student interest in science, energy, and environmentalism

vol. 4, no. 2 • Summer/Back to School 2013



Solar Car Races

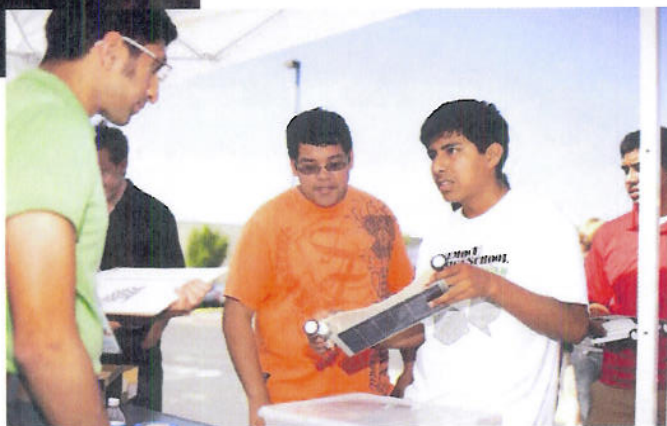


On May 7th one hundred and thirty high school students from various schools in Sacramento County raced their solar cars at American River College. The race was held in conjunction with the Art and Technical Festival which encourages high school students to visit classrooms and talk to sitting students. SacEV (with 12 vehicles), the Automotive and Solar Technology departments from ARC also contributed exhibits and staff. SMUD provided nine volunteers to judge and run the event.

The winning teams were as follows:

- Best Artistic Display – Franklin / Car #6
- Best Sustainable Design – Rosemont / Car #33
- Best Technical Design – Rancho Cordova / Car #28
- Best Stock Design – Rosemont / Car #40
- First Place Speed – El Camino / Car #44
- Second Place Speed – Franklin / Car #2

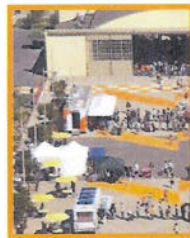
If you are interested in having your high school students participate in the 2014 Solar Car Race, please contact suzette.bienvenue@smud.org. Only high schools in SMUD territory may participate. •



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Youth Energy Summit Scholarship Awards

The fifth annual Youth Energy Summit (YES) met on the north steps of the State Capitol to exhibit their community service, learning projects. This year's theme was the Business of Being Green. Students had a choice to start a green business or partner with an existing business to improve its carbon footprint.

YES is a partnership between SMUD, Lodi Electric Utility District and the LegiSchool Project at CSUS. The purpose of the Youth Energy Summit is to foster an interest in energy in young people so that they may be prepared to make better choices as society shifts away from a carbon-based fuel supply to a more sustainable and cleaner source of energy.

Over 70 students exhibited their business plans under a big tent and were interviewed by a panel of judges. Assemblyman Roger Dickinson and SMUD board director, Nancy

Bui-Thompson handed out the winning checks.

6th place – GW Carver HS / Electric Car Conversion consultation - \$250/ea.

5th place – West Campus HS / non-profit community garden consultation - \$300/ea.

4th place – Cosumnes Oaks HS / non-profit bicycle recycling - \$400/ea.

3rd place – Mira Loma HS / nonprofit solar irrigation for farmers - \$500.00/ea.

2nd place – Antelope HS #1/ energy producing gutter inserts - \$800.00/ea.

1st place – Grant HS / vermiculture and fertilizer company - \$1,000/ea.

To apply for the 2014 Youth Energy Summit, please visit www.csus.edu/calst/legischool_project_YES.html for additional information and application process. •

Science Olympiad

The 2013 Sacramento Regional Science Olympiad was held on Saturday, March 16, 2013, at CSUS. Thirteen B Division (middle school) teams competed and twenty-four C Division (high school) teams competed.

The results were:

B Division:

- 1st place: Winston Churchill MS-A
- 2nd place: Winston Churchill MS-B
- 3rd place: Rolling Hills MS-A
- 4th place: Barrett MS
- 5th place: Butte Vista MS-B



C Division:

- 1st place: Mira Loma HS-A
- 2nd place: Sheldon HS
- 3rd place: Mira Loma HS-B
- 4th place: Pleasant Grove HS-A
- 5th place: Bella Vista-A •



Northern California Solar Regatta

More than 120 students representing teams from 10 high and middle schools competed for prizes and bragging rights in the 2nd annual Northern California Solar Regatta. Ten schools launched 13 solar-powered boats that were designed, built and raced by the teams at Rancho Seco Lake. For the students it was a day of teamwork, competition and learning. This event provides a chance for students to learn about solar power and renewable energy while showcasing their engineering and design skills. Winners were judged on speed, slalom, endurance and design of the solar-powered, student-piloted boats.



Laguna Creek High School won the overall competition, placing first in the speed and slalom segments. The team was rewarded with life jackets from the California Department of Boating and Waterways.

Here is a list of all the winners:

- Best Design-Mechanical: School of Engineering and Science (SCUSD)
- Best Boat Design: Laguna Creek HS
- Best Sustainable: Foothill HS
- Best Design-Artistic: Folsom HS
- Best Drive Train: Ceres HS
- Spirit Award: Evergreen MS (Paradise, CA)
- Best Video: Ceres HS
- Judges' Award: Ceres HS
- Best Middle School: Evergreen
- Speed: Laguna Creek HS
- Slalom: Laguna Creek HS
- Endurance: Ceres HS
- Presentation: San Joaquin Office of Education
- Cup: Laguna Creek HS

(Cup winner decided by most points in the 4 race categories above)

Next year the competition will expand to a two-day event on May 16 and 17 which will include collegiate-level solar boaters. If you know of any middle, high school or college students interested in participating, please have them call 916-732-5175. Additional information, photos, a video and the 2014 application can be found on-line at www.smud.org/en/about-smud/environment/renewable-energy/solar-regatta.htm •





Rahus Institute — Solar Schoolhouse Camp

The Energy and Technology Center at SMUD sponsored three teachers to attend a week-long seminar of workshops, hands-on activities and field trips. From making their very own solar modules to visiting an organic farm the teachers took away a lot of great ideas to incorporate sustainability into their classrooms.

Michael Hamilton – Fairbanks Elementary

Sharon Tiner and Sue Anne Foster of the Learning Tree School

If you are a teacher in SMUD territory and would like to apply for scholarships for the 2014 Solar Summer Camp or would like more information on how your school can participate, please email the director, Tor Allen, Tor@rahus.org.



Kids Day at the Sacramento County Fair

Thousands of area elementary school students attended Kid's Day at the Sacramento County Fair. Science, agriculture and animal exhibits were part of the field trip. SMUD sponsored "Be Energy Wise" Radio Disney shows in the big tent area. Students had lots of fun playing energy efficiency games and learned how to help their families make better energy choices.



Energy and Technology Center Sponsors Energy Education

The Energy and Technology Center is training the next generation of the energy industry's workforce. SMUD's new High School Energy Efficiency and Auditing Training (HS EE) project is training junior and senior high school



students with the skills and experience to begin energy efficiency-related and energy-auditing careers. The program also provides opportunities for participating students to help their

own school districts save money through energy efficiency.

Students were selected from several school districts across the region to learn together in one class about the green energy industry, energy efficiency, electrical load auditing, and to develop workforce skills during a weeklong course. The course included theoretical classroom lessons and practical field work. Students used their new skills to audit a building in their own school district, then prepared reports and presented their findings to their peers, administrators, and other local officials.

SMUD provided the funding to develop and carry out the curriculum and to support the school districts in completing student recommended energy efficiency measures. By combining HS energy education with established SMUD rebate programs, it may be possible for school districts to receive a total of 80 percent to 100 percent rebates on upgrade costs, depending on the energy efficiency measures selected by the schools.

This initiative was funded by carbon sales under the AB32 cap and trade bill. Participating school districts were Center Unified, Natomas Unified, Elk Grove Unified, Sacramento City Unified, Twin Rivers Unified, Folsom Cordova Unified, and San Juan Unified. •

Save These Dates

SMUD-sponsored events and workshops are no-cost for teachers, student teachers and outreach educators. Curriculum, classroom materials and meals are provided.

**Electricity Fair at the Folsom Powerhouse Museum
Saturday, September 7, 2013, 10 a.m. – 3 p.m.**

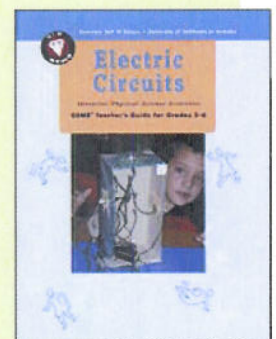
Hit fourth grade standards and connect with families...Come and visit the historic powerhouse – which opened in 1885 – and spend a day with the family in a beautiful setting by the American River. Learn about power generation, electricity,



and renewable resources with tours, workshops, and hands-on activities. This is a great opportunity to have 4th grade students and their families participate in an independent study in electromagnetism, electricity generation, and energy efficiency. Email suzette.bienvenue@smud.org for a digital copy of the event flyer to send home with your students.

**GEMS® Electric Circuits (Grades 4-8)
Saturday, Sept. 14, 2013, 8:30 a.m. – 3:00 p.m.
Folsom Powerhouse Museum**

From the Lawrence Hall of Science, Electric Circuits curriculum is highly recommended for Grade 4 teachers as a novel way to introduce students to electricity and electric circuits. Davin Bowker of the San Juan Schools District will lead educators through activities in which they will learn presentation strategies to effectively teach electromagnetism. Teachers will leave with curriculum, a GEMS teacher guide and classroom materials. A tour of the museum will also be provided.



Save These Dates continued on page 6

Save These Dates — *continued*

Project WET (Grades K-12)
Wed. & Thurs., September 25-26, 2013
4:30 p.m. – 7:30 p.m.

SMUD Energy & Technology Center, Rubicon Room

Project WET is a high quality program providing water education for teachers. Teachers will learn how to engage students in learning about water resources, water conservation, and key related science concepts with this award winning, interdisciplinary water education program. Curriculum and materials will be provided.



Steve Spangler's Storytime Slime (PreK – Grade 3)
Saturday, October 5, 2013, 8:30 a.m. – 3:30 p.m.
 SMUD Energy & Technology Center, Rubicon Room

Early childhood teachers know that getting kids excited about science is only part of the challenge. Kids also need to do more science on a daily basis. In this hands-on workshop, teachers learn by doing a collection of activities teaching science through children's literature discovering why science is the great melting pot of each teaching discipline. Teachers will conduct more than twenty hands-on STEM activities focused on air, water, energy, and color. Join Steve Spangler's Science Julie Ginzler for this one-day training which will help you build literature connections and have you teaching more science and have more fun in this unforgettable learning experience. Teachers will leave with a Steve Spangler science kit and other goodies.

Please email suzette.bienvenue@smud.org for more information or copies of the Steve Spangler digital flyer to post in your teacher lounge.

Project WET | Common Core and EEI (Grades K-12)
Saturday, October 19, 2013, 9:00 a.m. – 4:00 p.m.
 Effie Yeaw Nature Center



Teachers, come and celebrate Earth Science Week as you experience interdisciplinary activities to engage students

in learning about water resources, water conservation, and related science concepts. In this outdoor classroom you will be able to engage in fun, hands-on, standards based outdoor activities including an introduction to water quality monitoring with U.S. Geological Survey staff.

2013 California Science Education Conference
October 25-27, 2013 • Palm Springs, CA



CALIFORNIA SCIENCE EDUCATION CONFERENCE

Get your science groove back for the school year! Registration for the 2013 California Science Education Conference is now available. You can register on-line, by fax, or by mail. Conference registration includes access to over 175 workshops, field trips, exhibit hall, evening events, focus speaker sessions, and general sessions. Many school districts have grants available for travel and admission. The Energy and Technology Center will be sponsoring the PreK through Grade 3, Energy and Society workshop.

Save These Dates *continued on page 7*

Save These Dates — *continued*

Department of Energy – Solar Decathlon Oct. 3 - 13, 2013, Great Park, MD

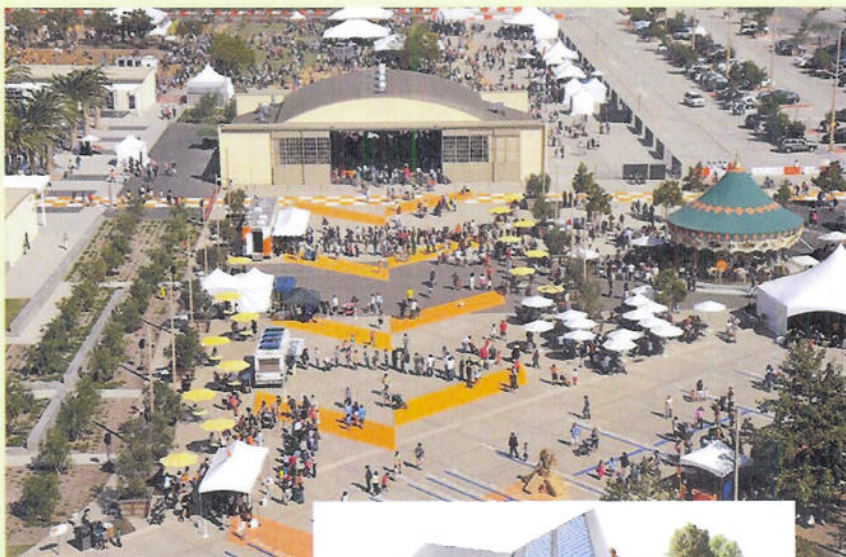
For those of you integrating green building technology into your curriculum, this is an excellent opportunity for a field trip to see students using cutting edge technologies for more sustainable living. This is the first time that the Solar Decathlon has been outside of Washington D.C.

The U.S. Department of Energy Solar Decathlon challenges collegiate teams to design, build and operate solar-powered houses that are cost-effective, energy-efficient and attractive. The winner of the competition is the team that best blends affordability, consumer appeal and design excellence with optimal energy production and maximum efficiency.

The competition houses will be open to visitors on eight days over two weekends. Public hours will be from 11 a.m. to 7 p.m. daily: Thursday, October 3 – Sunday, October 6, 2013 and Thursday, October 10 – Sunday, October 13, 2013.

This free event will showcase 20 highly efficient, solar-powered houses in a specially constructed solar village at the Orange County Great Park. Visitors can gather ideas to use in their own homes and learn about energy-saving features and products that can help them save energy and money.

“We look forward to the arrival of the Energy Department’s Solar Decathlon to the Great Park in October 2013,” said Mike Ellzey, Chief Executive Officer, Orange County Great Park Board Corporation.



“This event will showcase the Park’s commitment to sustainability, education and public engagement and will bring economic benefits to the Southern California region.”

Twenty university teams have been selected to participate in the Solar Decathlon 2013, including several west coast universities, including the University of Southern California, Stanford, California Institute of Technology, Santa Clara University, University of Nevada Las Vegas, Arizona State University and the University of New Mexico.

For information on how to have your students participate via live streaming in your classroom please contact Suzette.Bienvenue@smud.org. •

Story Time Slime

with
Julie Gintzler

HERE'S WHY YOU SHOULD ATTEND...

- Participate in more than 20 ready-to-use science activities that are inquiry-based, standards-related and kid-tested.
- Teach science with greater impact and conviction.
- Develop inquiry-based activities that strengthen critical thinking skills and challenge students to ask the important "Why?" questions.
- Use elements of the story line in popular pieces of children's literature to reinforce fundamental building blocks of your science curriculum.
- Become a more effective teacher without having to spend more money.
- Turn ordinary science activities into unforgettable learning experiences.



MORE THAN CUTE IDEAS... WE NEED SOLUTIONS!

Early childhood teachers know that getting kids excited about science is only part of the challenge. Today's young learners need more than excitement and motivation -- they need opportunities to actually DO more science on a daily basis. This hands-on science training is for early childhood teachers who need creative science integration strategies and who want to learn how to make science more fun and meaningful for their students.

Story Time Slime is more than just a collection of great hands-on activities; it's a whole new way to teach science through the medium of children's literature. Discover why SCIENCE is the great melting pot of each and every discipline you teach, especially reading. Because of Julie Gintzler's unique approach and classroom-tested methods, you'll teach more science this year than you've ever taught before... guaranteed!

Join Julie Gintzler for a one-day training that will help you build more literature connections, teach more science and have a lot more fun as you create unforgettable learning experiences.



*"In all my years of teaching,
this is the best workshop I've
ever attended."
—Veteran teacher of 27 years*

FOR MORE INFORMATION ABOUT STORY TIME SLIME
Visit StoryTimeSlime.com



PERFECT FOR EARLY CHILDHOOD TEACHERS (PRE-K TO 3RD GRADE)...

This seminar is designed with one guiding principle in mind... teachers learn best by doing! Julie's approach to teaching children and teachers is the same - make it hands-on and get involved (no boring PowerPoint at this presentation). You'll personally conduct more than twenty hands-on activities that are focused around the themes of air, water, color, weather, the senses, force and motion, and the environment. Each activity is easily related to the common core standards and helps you teach the basic skills of science inquiry - to count, compare, classify, observe and measure (the C.C.C.O.M. approach). Julie deconstructs every experience to give you the strategies for presenting the literature in a way that provokes questions in the minds of the children, and then she teaches you how to build the science connection that invites children to ask even more questions! Multiply that times twenty and you're in for an amazing day of learning.



BUILDING THE SCIENCE & LITERATURE CONNECTIONS...

- Uncover the secrets to developing an integrated curriculum that teaches science through the medium of children's literature.
- Learn how to present hands-on science activities that boost creativity and help to develop critical thinking skills.
- Take home more than twenty kid-tested, teacher approved activities that are guaranteed to get young learners doing more science the very next day.
- Discover ways to use attention-grabbing science as daily writing prompts.

TAKE-HOME MATERIALS & LEARNING RESOURCES...

You'll receive a take-home kit filled with the learning tools you'll need to implement Julie's strategies for teaching hands-on science. Remember... this is not your ordinary sit-and-watch lecture. Be prepared to perform more than 20 hands-on science activities.



Julie Gintzler

Good teachers do hands-on activities, but great teachers use hands-on science to teach critical thinking skills. Julie Gintzler is an early childhood science specialist who combines her passion for teaching science with her love of great literature to create incredible learning opportunities for children. A 22-year veteran Kindergarten teacher with a Master's Degree in Teaching and Leadership, her real-world experiences serve as the backdrop for her teacher workshops.

Steve Spangler invited Julie to join his teacher training team after seeing her in action and experiencing her unique approach to getting her students to think like scientists.

"Not only is Julie an amazing Kindergarten teacher, her strategies for connecting science with children's literature really work," says Steve Spangler. "I attended her first workshop in 2003 and I was hooked. Her library of children's books and collection of hands-on science activities is amazing - she could do a week's worth of teacher training. Julie is a fantastic trainer and the perfect addition to our selection of teacher training programs."

Julie consistently receives rave reviews from participants who attend her conference seminars and teacher training workshops on integrating science and children's literature.

BOOKING INFORMATION

For information on booking Julie for your group, please contact Carly Reed toll free at (800) 223-9080 or carly@stevespangler.com



SteveSpanglerScience.com

(800) 223-9080

