

MEEC

MOJAVE ENVIRONMENTAL EDUCATION CONSORTIUM



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2017
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Issue 2



MEEC Recognizes High Desert Students and Teachers

On May 4, 2017, more than 100 educators, students and business leaders convened for the annual Mojave Environmental Education Consortium's Teacher and Student of the Year Awards and Recognition Banquet, which took place at Spring Valley Lake Country Club in Victorville. Attending the evening's event to celebrate environmental and STEM (Science, Technology, Engineering, and Math) education achievements of High Desert students and teachers were San Bernardino County First District Supervisor Robert Lovingood and Field Representative to Assemblyman Obernolte, Isis Fuentes.

Five recipients of MEEC's 2017 High School Environmental/Science Scholarship Program were also recognized during the banquet. Each recipient will receive a \$2,500 scholarship towards their educational goals of pursuing a career in environmental science, engineering or a closely related field.



Above: 2017 Students of the Year: Front Row (L-R): Devin Bayless, Quail Valley Middle School, Phelan; Natalie Soto, Rancho Verde Elementary School, Apple Valley; Monica Sandoval, Fulton and Alsbury Academy of Arts & Engineering, Lancaster; Sophia Hawk, Village Elementary School, Victorville; Ashley Guzman, Yucca Loma Elementary School, Apple Valley. Back Row (L-R): Chevelle Clark, Quail Valley Middle School, Phelan; Morgan Brafford, Yucca Valley High School Yucca Valley; Ruben Gonzalez, Daisy Gibson School, Palmdale. (Not pictured: Lia Kim, Apple Valley High School, Apple Valley and Jocelyn Munoz, Brentwood Elementary School, Victorville)



Above: Teachers of Honor: L-R: Teacher of Excellence John Kell, Daisy Gibson School, Palmdale; Teacher of the Year, Aneek daGama, Fulton and Alsbury Academy of Arts & Engineering, Lancaster. (Not pictured: Venessa Smith, Excelsior Charter School, Victorville)

MEEC recognized Aneek daGama from Fulton and Alsbury Academy of Arts & Engineering in Lancaster as MEEC's 2017 Teacher of the Year. MEEC also recognized John Kell of Daisy Gibson School, Palmdale, along with Venessa Smith of Excelsior Charter School, Victorville as this year's runner-up Teachers of Excellence. In recognition of their dedication and hard work in fostering environmental awareness in the classroom, the teachers each received a cash prize, plaque and goodie bags bursting with office supplies donated by MEEC sponsor 3M, Oak Hills. Winners were nominated by their principals, colleagues or community members and selected by MEEC's Executive Board.

Ten High Desert students were also recognized as MEEC Students of the Year during the event in recognition of their commitment to promoting environmental awareness and positive change within their schools and communities. The students who were nominated by their teachers or principals each received a trophy, a \$60 check and a \$60 Staples gift card.



Above: Field Representative for Assemblyman Obernolte, Isis Fuentes (left) and San Bernardino County First District Supervisor Robert Lovingood (second from left) with MEEC's "Scholarly" Winners (from left): Jared Dinisi, Sultana High School, Hesperia; Lily Nauta, Highland High School, Palmdale; Melanie Rodrigues, University Preparatory, Victorville; Alondra Navarro, Silverado High School, Victorville; Alyssa Thielen, Apple Valley High School, Apple Valley.



The Mojave Environmental Education Consortium
Invites you to check us out & "Like" us on Facebook!





Students Celebrate STEM Service-Learning During YELC Showcase



Maple Lions, Maple Elementary, Hesperia



Sitting Bull #2, Sitting Bull Academy, Apple Valley



Solar Bears, Sitting Bull Academy, Apple Valley



Trona Roadrunners, Trona Elementary, Trona



George Goes Green, George VPA, Adelanto



Green Generation, Fulton & Alsbury Academy, Lancaster



Garden Gurus, Desert Knolls Elementary, Apple Valley



Eco Bots, Fulton & Alsbury Academy, Lancaster

Student teams and their advisors gathered at Granite Hills High School on Saturday, March 4th to showcase their environmental projects related to recycling, gardening and renewable energy.

The 2017 YELC STEM Service-Learning Showcase spotlighted attending teams' Service-Learning projects and provided a platform for problem-solving with students from throughout the High Desert. Each project had a strong focus on environmental STEM (Science, Technology, Engineering and Math).



Eco Kids, Fulton & Alsbury Academy, Lancaster



Power Savers, Fulton & Alsbury Academy, Lancaster



Spring Workshops Offer Hands-On Training for High Desert Educators

Spring 2017 provided educators with many exciting opportunities for hands-on learning with the support of many of MEEC's sponsors.

On February 23, 2017, 25 teachers attended Women In Mining's "Toothpaste with a Twist" Teacher Workshop in Victorville. The two hour workshop provided High Desert educators of grades K-12 with all the tools necessary to teach their students about products that use locally-mined minerals directly or products that are made from minerals, such as toothpaste! Teachers learned how to make "marketable" toothpaste and investigated minerals such as calcium carbonate and sodium bicarbonate, both common ingredients used in commercial toothpastes. Participants of this highly anticipated workshop all received a curriculum kit, mining information and supplies to take back to their classroom to share with their students.

Lockheed Martin hosted 30 teachers in Palmdale on March 1, 2017 for a hands-on workshop focusing on biomimicry. Teachers of grades 3rd-12th from throughout the High Desert region gathered to learn how the natural world is inspiring inventors and engineers to create life-changing innovations.

Facilitating the evening's workshop was Sam Stier, the Founding Director of the Center for Learning with Nature, a renowned nonprofit providing curricula and professional development designed to enrich STEM engagement in the classroom. Sam shared with attendees some of the latest examples of engineering and design inspired by nature also known as bio-inspiration, or biomimicry, and how to use this approach to encourage students to use their critical thinking skills with the NGSS across grade levels and help students connect to the genius around and within them.

Educators learned the difference between cement and concrete during CalPortland Company's March 9th workshop. Hosted at their facility in Oro Grande, the teachers also took a guided tour of the cement plant which included a visit to the quarry and the control room. Teachers learned the important role that mining plays in our society, a history of Portland cement and were able to mix raw ingredients together to make concrete. CalPortland provided the attendees with samples of the raw materials that are used in cement production to take back and share with their students.

On March 16, the Mojave Desert AQMD hosted 20 teachers at their Victorville Offices for an "Air Quality and YOU" teacher workshop. The teachers of grades 3-12 learned how to breathe new life into their lesson plans using the science of air quality.

MDAQMD Air Quality Specialist Orlando Salinas, talked to the group about the properties of air, air pollutants and their sources, how air pollution is monitored, forecasted, and reported, the health effects of air pollution, and how each of us can be part of the "pollution solution." Teachers were able to view real time air-quality measurements during a behind-the-scenes tour of the Victorville Monitoring station, in addition to receiving a combination of fun and hands-on activities, presentation materials and videos that were ready for use by them in their classrooms.

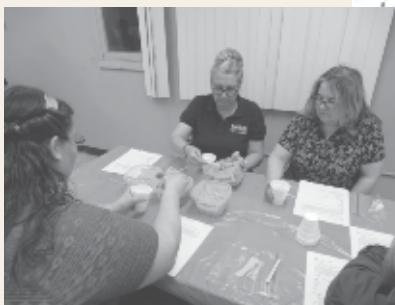
Teachers were introduced to LinkBot and robotics during workshops held in Palmdale, Victorville and Twentynine Palms in March. Each 3-hour workshop provided educators of grades 5-12 with an overview of robotics, coding, and how they can use both of those skills to engage students in math and engineering. In addition to receiving hands-on training with actual robots, attending teachers now have the chance to check out the LinkBot kits for use in their classrooms from MEEC's Teacher Resource Library.

20 educators were treated to a private tour of High Desert Power Project during the April 20th Clean Energy Teacher Workshop and BBQ. Teachers learned about the production of energy and the many ways the High Desert Power Project is utilizing efficient ways to produce energy while protecting the environment. The tour of the award winning power plant included the opportunity for teachers to get up close to one of the generators used in the plant's energy production.



Left : West Creek Elementary School (Adelanto) teachers combine raw ingredients to make toothpaste.

Right: Tange Barlow, center, participates in an activity that explores what can be learned from trees about structural engineering during the biomimicry workshop. The hands-on activity allowed students to compare the performance of different geometric structures used by engineers and trees to manage physical stress.



Left: Teachers follow CalPortland's cement recipe as they create concrete in a cup.

Right: Orlando Salinas (right) reviews real-time air quality measurements with teachers at MDAQMD's air quality workshop on March 16.



Left: Scott Glysher (left), assists Terri Eddy with coding her LinkBot for a math activity during the Victorville Robotics workshop.

Right: Teachers get a close up view of how energy is produced at High Desert Power Project.





FEATURE:

Meet Bonnie Bolton

TEACHER

Everything old is new again as was the case with Ms. Bolton's school district. She attended Kindergarten through eighth grade at the Keppel Union School District and that is where she works today. Her path to teaching wasn't a straight one. In her quest to find out "what



Above: Bonnie Bolton at Keystone Science School

she wanted to be when she grew up," Ms. Bolton earned three graduate degrees and a teaching credential. She has worked and volunteered on most of the world's continents.

In 1994, Ms. Bolton came back to the Antelope Valley for good. She has taught special education for six years, plus many more years in K-8th grade general education. With a graduate degree in health, Ms. Bolton implemented a variety of classroom and extracurricular activities in biology. Then a fellow teacher introduced her to MEEC which resulted in a significant change of course in her teaching.

Ms. Bolton has attended many MEEC workshops and last summer was selected to attend Keystone Science School in Colorado which gave her the tools, interest and confidence to bring environmental science front and center in her classroom. According to Ms. Bolton, with each educational opportunity offered by MEEC, something new was brought back to students. A new school year started just a few weeks after Keystone Science School and Ms. Bolton had her students in the science lab performing dilution demonstrations with her newly acquired equipment.

"The Youth Environmental Leadership Conference was a dream come true for us" said Ms. Bolton. "My first year, I took two teams of motivated students who came back so fired up that they helped to draft some of the MEEC grant applications." The two areas the students went after were composting and small battery recycling. "There is not a scrap of food either from the food preparation or from the salad bar that goes to waste."

You can't speak to Ms. Bolton for any length of time before she starts talking about the support she receives from her administration, staff, students and the community at Lake Los Angeles School. She started a Farmer's Market at her school to reach out to the community and teach students about environmental management. According to Ms. Bolton, "The interest in the new school garden is endless! In addition to the garden grant from MEEC, we have had a lot of supplies and seedlings donated. Other classes have come out to see it, staff has donated off time to tend to it, and a dad volunteered to cook the kale that the students planted and harvested. Hilton Garden Inn in Palmdale provides chefs to judge the Iron Chef Lake Los Angeles School competition that recently included a solar oven category."

Ms. Bolton added that; "MEEC has changed my focus in teaching, provided educational and monetary resources to improve the education I provide in the classroom and has introduced me to a community of like-minded educators that recharge my batteries."

EE/STEM Mini Grant Application Period Now Open

Got a great idea for an environmental school project? Need supplies for an EE lesson you're planning for your class? Thinking about a renewable energy project for your school? How about solar oven materials for the Cook-Off Competition or start up supplies for a Maker Space? MEEC's EE Mini Grant Program may be able to help!

For a limited time, MEEC is accepting proposals for environmental and STEM education school project and material mini-grants. Interested teachers are encouraged to submit an application that details their project's desired materials, the project's environmental/STEM component and how the project will address educational standards. Eligible projects must demonstrate the following:

- A. An environmental and/or STEM connection/correlation
- B. Correspond with current Common Core and/or Next Generation Science Standards

The application must also detail a timeline for project implementation and a budget or cost breakout based on the applicant's research of actual material costs, including shipping and handling, if applicable. Labor costs are not eligible for funding. Projects must be implemented/materials must be used in classrooms located in the High Desert portion of San Bernardino County, the Antelope Valley or the Palo Verde Valley of Riverside County. Applicants must also teach within these same jurisdictions.

Funded projects must be completed/purchased by May 26, 2018. Average grant amount will vary from \$100 to \$500, but may be higher. Individual award amounts to be determined by MEEC. Only one EE Mini Grant will be awarded per teacher per school year.

Applications are available for download from our website at

<http://meeconline.com/teachers/scholarships-grants/>.

To be considered for funding, your application must be received by 5:00 PM October 31, 2017. For questions, contact Samantha Murray at (760) 245-1661 ext. 6717

School Garden Grant Applications Now Available

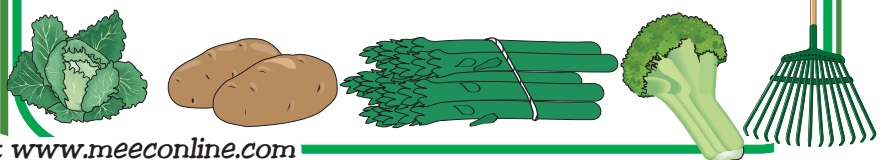
For the tenth year, MEEC is offering High Desert schools within its boundaries an exciting program and funding opportunity via its popular "A Garden in Every School" Program.

Through generous support from MEEC partner, The Mojave Water Agency (MWA) and support from MEEC's sponsors, schools may apply for a grant to provide them with the basic tools necessary to start or sustain a school garden.

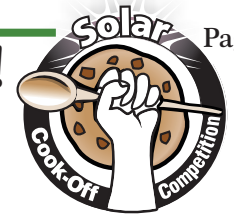
Interested teachers must submit a completed application form that details the proposed project, desired materials, a budget cost breakout based on actual material costs, including shipping and handling, if applicable (labor costs and prepared food items are not eligible for funding) and how the project will address educational standards. Recipients will be notified in mid-November and grants will be awarded in early December. Applications are available on MEEC's website at www.meeconline.com.

Maximum grant amount is \$500.00. Individual award amounts will be determined by MEEC. Only one grant will be awarded per school per school year. To date, MEEC has awarded school garden grants to over 30 schools in the High Desert.

Application deadline is 5:00 PM October 31, 2017. Completed applications may be mailed to MEEC/School Garden Program, 14306 Park Avenue, Victorville, CA 92392 or faxed to (760) 241-6271. For questions, contact MEEC Program Specialist Samantha Murray at (760) 245-1661 ext. 6717.



Visit www.meeconline.com



Fifth Annual Solar Oven Cook-Off a Sizzlin' Success!

More than 80 students and their advisors gathered on Saturday, May 13th at the Victor Valley Museum in Apple Valley to face off in the 5th annual "Solar Cook-Off" Competition. Armed with materials such as cardboard, plexiglass, aluminum foil and recycled materials, the fourth-through twelfth-graders from across the High Desert participated in the event. The competition was hosted by the Mojave Desert Air Quality Management District and the Mojave Environmental Education Consortium, and organizers say it's the only one of its kind in Southern California. Teams of two-to-five students from schools throughout the High Desert designed and constructed creative solar cookers and developed original recipes for the cooker and recipe competitions. Each team built their own solar ovens which had no size requirement but could not weight more than 15 pounds.

With gusting winds whipping throughout the High Desert the day before, anxious teams began descending upon the Solar Cook-Off early Saturday morning. Despite their concerns, the weather remained calm, and cooking time began promptly at 9:30, ending at 2:30 sharp. Most of the teams successfully completed the competition, with only a few of the teams having partial dishes disqualified from their menu for failing to reach acceptable cooking temperature, as required by San Bernardino County Health & Safety regulations.

During the day-long cooking process, teams were judged on the creativity and design of their solar cookers by a panel of three judges. Tony Penna, MEEC Executive Board Member and General Manager, Liberty Utilities, Omar Martinez, Branch Manager, Alaska USA, and Tony Malone of Lucerne Valley, rounded out the panel. The recipe judges were Johnny Sabogal, Branch Manager II, Alaska USA, James Martin, CEMEX, and Ivan Rosillo, CEMEX. Dave Rib, MEEC Executive Board Member and Environmental Manager, Mitsubishi Cement Corporation, and Tony Penna presented awards and certificates to each of the winning teams.

Winning recipes included Asian Meatballs with Rice, Shrimp Pineapple Kabobs, New York Cheesecake, Spinach Enchiladas, Minestrone Soup, Brownies, Apple Crumble, and Chicken Enchiladas to name just a few.

"The Solar Oven Competition sponsored by MEEC is one of the best programs for students in the High Desert and surrounding communities to practice their engineering skills, in a lively and fun environment. Students have the opportunity to work collaboratively toward a mutual goal, with time constraints, regulations,



2017 Solar Cook-Off Participants

and following developed plans (in this case their recipes.) What better way to prepare them for real life experiences and career readiness," stated team advisors Valerie Kimmel and Julie Manker, Desert Knolls Elementary School, Apple Valley.

First place teams in three age groups took home \$250 and \$200 cash prizes.

The first-place winners for Design were: Desert Knolls Elementary School (Solar Eagles-Omega), Apple Valley, grades (4-6); Daisy Gibson School (CARN), Palmdale, grades (7-9); and Silverado High School, (S.H.S. Green Rangers), Victorville, grades (10-12). Second place winners were Desert Knolls Elementary (Solar Eagles-Alpha), Apple Valley, grades (4-6); and Twentynine Palms Junior High School (Sizzlin Siracha) Twentynine Palms, grades (7-9). Third place winners included; Daisy Gibson Elementary (Team Gryffindor), Palmdale, grades (4-6); and Twentynine Palms Junior High School (The Nerd Squad), Twentynine Palms, grades (7-9).

Winning first-place in the Recipe category, Daisy Gibson School (Team Gryffindor), Palmdale, grades (4-6); Daisy Gibson School (CARN), Palmdale, grades (7-9); and Silverado High School (S.H.S. Green Rangers), Victorville, grades (10-12). Second place winners were Desert Knolls Elementary School (Solar Eagles-Omega), Apple Valley, grades (4-6); and Twentynine Palms Junior High School (The Puppet Noodles), Twentynine Palms, grades (7-9). Third place winners were George Visual & Performing Arts (The Apollo Ravens), Adelanto, grades (4-6); and Twentynine Palms Junior High School (Sizzlin Siracha), Twentynine Palms, grades (7-9).

The annual competition is aimed at helping students sharpen their STEM (Science, Technology, Engineering and Math) skills while introducing them to zero-emission technologies, such as solar cooking.



Above: Desert Knolls Elementary team members show off their winning entry.

STUDENTS HONORED FOR OUTSTANDING ENVIRONMENTAL ESSAYS

On March 8, 2017, winners of the Mojave Environmental Education Consortium's (MEEC's) and the High Desert Power Project's "Steward Squad" essay contest, along with their families and friends, were invited to an awards ceremony at the High Desert Power Project in Victorville.

The "Steward Squad" essay contest presented by MEEC and sponsored by Diamond Level Sponsor HDPP allowed students in grades K-12 to share the many ways that they help protect and conserve the unique environment of the Mojave Desert. Winners of the 1,000 word essay contest received a special certificate and a gift card for their achievements in creatively writing about the topic. After the awards were presented, winners and their guests were treated to a private tour of the Victorville facility.

SoCal Gas challenged High Desert students to put pen to paper with their essay contest "Natural Gas: Part of the Solution."

Winners of the 1,000 word writing contest, along with families and friends gathered on May 9, 2017 for the awards ceremony at the Mojave Desert Air Quality Management District's Offices in Victorville. Each winner was recognized with special certificates from both SoCal Gas and MEEC in addition to gift cards for the outstanding research and writing that they did on all the different and innovative ways that natural gas is used and how its use as a clean burning fuel is benefitting the environment.



Left: MEEC/High Desert Power Project contest winners: Back Row L-R: Nour Rajha, Oak Hills High School, Oak Hills; Julianna Stewart, Westwind Elementary, Lancaster; Ruben Gonzalez, Gibson School, Palmdale; Christopher Lang, Oak Hills High School, Oak Hills; Alexis Suttle-Chermock, Academy of Academic Excellence, Apple Valley. Front Row L-R: Gabriela Moya, George Visual and Performing Arts, Adelanto; Isaac Lucatero, Desert Knolls Elementary, Apple Valley; Tessa Guerra, George Visual and Performing Arts, Adelanto; Izabella Compean; George Visual and Performing Arts, Adelanto.

Right: "Natural Gas: Part of the Solution" Essay Winners. Front Row: Eduardo Gudino, George Visual and Performing Arts, Adelanto; Marisol Novoa, George Visual and Performing Arts, Adelanto; Tessa Guerra, George Visual and Performing Arts, Adelanto; Mikayla Luna, Phoenix Academy, Apple Valley. Back Row: Isaiah Nando Amador, Phoenix Academy, Apple Valley; Monique Bodle, Granite Hills High School Apple Valley; Alessia Johnson, Desert Knolls Elementary School, Apple Valley; Jasmine Sedillo, Granite Hills High School Apple Valley; Sarah Eller, Granite Hills High School, Apple Valley; Ruben Santiago, Knight Preparatory Academy, Palmdale.



Maple Elementary Selected to Pilot MDAQMD School Flag Program

Maple Elementary School in Hesperia is raising a brightly colored flag to help teachers, coaches, students, and members of the community be aware of daily air quality conditions. The Mojave Desert Air Quality Management District has selected Maple Elementary School in Hesperia to pilot its first local School Flag Program, which is also being instituted through the U.S. Environmental Protection Agency at schools nationwide.



Above: AQ School Flag Program Coordinator Terri Eddy and her students raise the green AQ flag each morning at the start of school.

Maple Elementary was selected due to the school's proximity to the Cajon Pass, a major corridor for transporting air pollution from the South Coast Basin into the High Desert during smog season, which officially begins on May 1st and runs through the end of October. Maple Elementary is also located between the San Bernardino Mountains and the San Gabriel Mountains, and can be directly impacted by smoke during forest fires.

"We are very proud to have been selected as the pilot school for this program. The Air Quality Flag Program is aligned to our belief that our school can make a positive difference in our community. Providing our community with information regarding air quality on a daily basis not only helps to minimize health risks, but it also reminds us of our responsibility to make our society a better place for everyone," stated Maple Elementary School Principal Alex Cristales.

Each day, students at Maple Elementary School will raise a flag based on the color of the Air Quality Index

(AQI) to show how polluted the air is expected to be. By comparing the colored flags to the AQI, teachers and coaches will determine what actions to take to protect the health of their students. Green signals good air quality, yellow is moderate, orange means unhealthy for sensitive groups (like children and people with asthma), and red signals unhealthy air for everyone. A purple flag means that air quality is very unhealthy and sensitive groups should avoid all outdoor exertion, while everyone else should limit outdoor exertion.

Children are particularly susceptible to air pollution, which can harm their lungs and trigger asthma attacks. The flags can help students with asthma track their

symptoms when air pollution levels are in an unhealthy range. Flags may help teachers know when to modify outdoor activities which could include shortening exercise or moving exercise indoors when necessary to protect students' health.

The Air Quality Flag Program is free to all schools within the Mojave Desert AQMD jurisdiction (which includes the High Desert portion of San Bernardino County and the Palo Verde Valley of Riverside County) and is accompanied by a full air quality curriculum to further educate K-12 students on the science of air quality and its health effects.

For more information on the District's School Flag Program, go to:

<http://www.mdaqmd.ca.gov/outreach/school-flag-program>

SPONSOR SPOTLIGHT

3M OAK HILLS

3M Oak Hills is a manufacturing plant located in Oak Hills, California. The facility manufactures non-woven abrasive products for use in numerous industries.

As part of 3M's commitment to environmental stewardship and improving lives, the plant continually seeks out ways to reduce their footprint. The Oak Hills facility recently reduced the use of fluorescent lights, moving to an LED lighting system, reducing waste, and cutting the cost of electricity at the plant by 10 percent. The facility is also committed to reducing waste sent to the landfill by reusing and recycling. The facility also has a storm water basin that collects storm water runoff and helps to replenish ground water in the area.

3M Oak Hills is also a proud sponsor of Adopt-A-Highway, located on the US 395 exit from I-15 North. The employees at the facility also donate their time to numerous non-profit charities throughout the Victor Valley. In addition to the local area 3M also donates to numerous schools throughout the country and locally. 3M Oak Hills has been a proud Sponsor of MEEC since 2010.



CORDINATOR'S CORNER

For the past few issues, you've probably heard me talk about the "Maker Movement" and ways to begin incorporating the concept of "making" into your classroom activities. Are you still unsure what it's all about? To put it simply, the Maker Movement is a global technological and creative revolution that emphasizes active learning. It involves people of all ages and backgrounds making custom creations, often using modern technology and collaboration. For students, it's all about using their heads and hands to find and build solutions, collaborate, have fun and stay interested in STEM. To be ready for careers, technologies, problem solving and opportunities of the future, our students need to imagine a new world and also have the knowledge to build it with strength and precision. Allowing your students to tinker, explore and "make" gives them the opportunity to experience first-hand the practical applications of STEM.



A great place to start introducing making with your students is with your current Service Learning Projects. Can your students develop a better watering system for your school garden? Can they design a more efficient wind turbine? "Making" strengthens the understanding of the engineering design process and allows educators to create a fluid connection between real world problem solving skills and classroom curriculum, all while giving your students more ownership of their project and taking it to the next level of greatness!

As the 2017-2018 school year begins to unfold, join in the cross-country movement and "make" it the best one yet!



Samantha Murray
Samantha Murray
MEEC Program Specialist





NOW ACCEPTING ENVIROBUS BUCKS

TRANSPORTATION GRANT APPLICATIONS

MEEC is pleased to announce that 2017-2018 EnviroBus Bucks Transportation Grant applications are now available online!

Each fall, the EBB Grant Program provides transportation funds for school bus excursions to environmentally - relevant sites. During these field trips, students are offered a unique opportunity to learn about environmental education hands-on during visits to host sites which promote environmental stewardship. EBB field trips also provide students with an opportunity to explore environmental issues, science, and green career opportunities with experts in the field, and many sites are perfectly suited for STEM exploration. Eligible educators/schools must be located within the High Desert portion of San Bernardino County, the Palo Verde Valley of Riverside County or the High Desert region of North Los Angeles County, including the cities of Lancaster and Palmdale.

To be considered for funding, completed applications must be received by MEEC no later than 5:00 PM, October 31, 2017.

When completing your application this year, please keep in mind:

- ▶ Transportation costs must be included with each application, but if you are unable to obtain an estimate from your District Transportation Department, you may provide an online printout of roundtrip mileage from your school site to the host site with your District's calculated transportation costs (either per mile or hourly costs).
- ▶ We have made some changes to our list of approved host sites, so please take time to review our current list at <http://meeconline.com/teachers/busbuck/>. Approximate length of tours at host sites are listed under the site description along with any attendance limitations, site dress code and fees associated with that site (entrance and parking fees are not covered by the EBB grant).
- ▶ Applications will be reviewed on first-come basis so you are encouraged to submit your application early.



Applications can be mailed or hand delivered to MEEC at: 14306 Park Ave., Victorville, CA 92392. You may also submit your application by email to smurray@mdaqmd.ca.gov or by fax at 760-241-6271. Awardees will be notified mid-November. Please contact MEEC Program Specialist, Samantha Murray at 760-245-1661 ext. 6717 if you have any questions.

"MAKE" The Environment Rock at YELC 2017!

We are pleased to announce this year's YELC-STEM SL conference on Saturday, October 28, 2017! Once again we will be hosting "STEMFest" in addition to three workshops that the teams will rotate through. "STEMFest" is an opportunity for teams to rotate through the arena, engaging with experts, mentors and other exhibitors to learn more about STEM environmental careers and projects while experimenting with hands-on activities.

This year MEEC is pleased to announce the introduction of the Maker Movement to the YELC SL STEM Conference! As a result, the theme of this year's conference is "Make" the Environment Rock!

Maker Movement or Maker Ed, empowers students to create, innovate, tinker, and turn their ideas and solutions into reality. YELC is the perfect venue to learn how to incorporate Maker Ed into your environmental STEM Service-Learning projects and/or to bring into the classroom.

Deadline to submit team application and student forms is September, 29, 2017. YELC 2017 is limited to 30 teams who will be registered on a first-come basis. Teams applications and student forms must be submitted together to complete your registration. Each participating school may send a maximum of two teams.

This year's Key Note speaker, Joel Greene, Host of PBS's Curiosity Quest, will engage students on how they can use the Maker Movement in developing or furthering sustainable environmental STEM Service-Learning projects. Workshops will include Wind Energy, Robotics, and "Makey Makey" (Maker). STEMFest activities include: air quality, water pollution prevention, Solar Race

Car, 3D Printers, and more!

The Youth Environmental Leadership Conference (YELC) is an exciting, hands-on, one-day STEM Service Learning-focused conference designed to introduce students and educators to environmental professionals and potential careers, while encouraging students to develop environmental service learning projects that improve their schools and communities. Teams of two to eight students, from grades 3 through 12, along with an attending teacher/advisor, from schools throughout the High Desert are invited to take part in this unique and FREE Conference.

Attending teams will reunite at the YELC Showcase in Spring 2018 to share their projects and receive recognition.

Teams participating in YELC are eligible to apply for a project grant up to \$250 to implement or expand their environmental service learning project! By applying for and accepting these grant funds, advisors/teams agree to come back and participate in the follow-up Spring 2018 YELC Showcase to share their project (regardless of what stage it's in) with other teams.

This year, MEEC is making attending YELC even easier by providing transportation reimbursement funds upon request for participating teams, from (but not limited to) the Antelope Valley, Barstow and Trona.

Download your application today at www.meeconline.com or call (760) 245-1661 ext. 6101 for more information.

Fantabulous Feedback



Letters from MEEC's "Fans"

"MEEC has provided many wonderful resources for my classroom. I have attended numerous STEM learning classes, where I have been given first-hand knowledge and classroom materials to take back to my students and school site. My students have benefited greatly from the knowledge that I have acquired through MEEC support. My students have gone on wonderful learning field trips that support 21st Century learning. If it wasn't for MEEC, many teachers would not have the support in the classroom that we do with MEEC."

Terry Eddie
Maple Elementary School, Hesperia

"MEEC has supported our students in many ways through the years. We have participated in the YELC conference where our students have made a difference in our school environment with the education they have delivered. MEEC comes to our science fair each year with a special award to honor students who have exceptional environmental projects. The solar oven competition is a favorite as well and our students have placed well each year. My favorite event is the Student of the Year award and the teacher of the year award. MEEC is amazing and we hope they are around for a long time to come."

Mary Eller
Principal - Lucerne Valley Elementary

MEEC Executive Board

Jesse Cain
3M Oak Hills

Cheryl Vermette
Helendale CSD

John Kell
Daisy Gibson School

Martin Maxwell
Boeing

Michelle Lawhead
George Visual & Performing
Arts Magnet School

James Stockdale
Knight High School

Desirea Haggard
CalPortland Company

Tony Penna
Liberty Utilities

Chuck McCall
Granite Hills High School

Violette Roberts
Mojave Desert Air Quality
Management District

Dave Rib
Mitsubishi Cement

Robotics Kits Now Available for Check Out!



MEEC is pleased to offer 5-12th grade educators the opportunity to check-out its Linkbot Robotic Equipment for use in the classroom! The Linkbot Robotic Equipment includes 24 robotic bundles that are Chrome Book compatible to allow your students to gain hands-on experiences with robotics and coding!

Equipment may be checked out for a period of 30 days and is available on a first come basis. Due to the value of the equipment, a valid credit card is required for check out. Your credit card will not be charged unless the kit is kept past 30 days or parts are missing/damaged.

A Robotics Borrowing Agreement Form is available upon request. To receive your agreement form or for more information, please contact MEEC Program Specialist, Samantha Murray at 760-245-1661 ext. 6717 or by email at smurray@mdaqmd.ca.gov.

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