STEM (Science, Technology, Engineering & Math)

Robotics – Alvord EA
2013-14 Impact Grant- $17,500
This grant would prepare students for programming robots and to enter a yearly robotics competition. We are looking to begin a robotics team/club after school at Hillcrest High School. Robotics involves a particular group of students that are overlooked more and more often because of the absence of industrial tech classes. For Inspiration and Recognition of Science and Technology (FIRST) hosts robotics competitions around the country. Students get to work on something that is interesting to them and that has a purpose. Students work on a team that assembles, programs, experiments, and decorates a robot. 3 teachers from the backgrounds of math, science, and computer technology coach the students as they learn to build. 4 additional community experts in design and robotics will assist students.

High Performance Mathematics – Association of Colton Educators
2015-16 Impact Grant- $ 15,928
Common Core asks teachers to prepare students using real life applications and problem solving abilities. Using a research based program called HiPerMath, Ruth Harris Middle School students will work in teams using science and math on simulators to build car engines and race cars on a virtual race track. This activity demonstrates the importance of math and develops collaborative skills. This program would directly support, grow and sustain interest in STEM activities in underrepresented populations and prepare students for High School Engineering pathways. This project addresses 4 critical areas that are needed in the 21st century educational movement: Critical Thinking, Communication, Creativity and Collaboration.

Classroom Technology Assistants and Programmers (CTAP) – Butte County TA
2015-16 Educator Grant- $5,000
Middle School girls in grades 6-8 at Four Winds School will learn and apply different technology skills. Thematic projects and activities will be planned using the Problem Based Learning model for each quarter. Quarter #1 will teach how to write and publish eBooks for younger students to use as STEM textbooks and interactive readers on the school iPads. Quarter #2 will focus on coding and web design, where the students will each create a website or game. Quarter #3 students will create and maintain a blog. Quarter #4 will include a robotics class where students will build and program robots for a competition.

Good Heart Chicana/o and Native Science Project –CSU Northridge, CFA
2015-16 Impact Grant- $ 20,000
Good Heart Chicana/o and Native Science is an interdisciplinary project designed to inspire low-income Latina/o and Native American student populations towards STEAM disciplines through the subject of climate change. Over the course of the project, third through fifth graders at San Fernando Elementary will study the use of the local land base in the past (social studies, environmental science), perform hands-on projects that reflect the current reality (science, technology) and, with mentored guidance, actively plan a local, impactful project (technology, engineering, art) that takes into account the needs of their families, fellow students and community.

Teacher Driven Community-based Conservation Science Education Partnership – CSU San Marcos, CFA
2012-13 Impact Grant- $20,000
2013-14 Impact Grant- $20,000
The purpose of this grant is to establish a community partnership between K-12 schools and The San Elijo Lagoon Conservancy, a local science research center. The partnership will involve students participating in inquiry-based science learning and understanding with the potential for developing empathy for the local ecosystems through a variety of modalities and teaching strategies. The program provides for multiple ways for students to work in science-related activities and engages a broad spectrum of players across the community.

Camarena Life Science Center – Chula Vista Educators
2014-15 Educator Grant- $5,000
The Life Sciences Center (LCS) at Camarena Elementary is a commitment to real-life learning by having different animal habitats in the classroom. After its first year, the LSC already has an aquatic turtle habitat, a marine life habitat, and a leopard gecko habitat, as well as birds, tadpoles, and a rabbit. The project involves having students observe and learn what different living things need to survive, how to manage those needs in an indoor, controlled habitat, and how their needs interact with other species, plant life, the water cycle, and our larger environment. In addition to obvious opportunities for science lessons, the LSC will provide opportunities to connect our school to the neighborhood communities.
Robotics and Engineering – Covina Unified EA  
2015-16 Impact Grant- $20,000  
The Robotics and Engineering grant would support a wide range of students from Traweek Middle School and Covina High School. Robotics supplies are cost-prohibitive to the point that few school sites maintain an active robotics club or class. This grant would ensure that a robotics club would exist on both campuses and would pay for robotics supplies and competition fees. Many of these costs are one-time fees that would get the ball rolling toward establishing annual support for robotics by our district administration.

Edison High School Robotics – Fresno TA  
2015-16 Educator Grant- $5,000  
The Edison High School Robotics team is a rapidly growing part of the school’s academic section. Receiving exponential growth in the past two years, the team is expected to receive an influx of new members in the 2016 school year. The team is applying for this grant in order to be able to expand our outreach to attract more and more students to the STEM related fields of education in the coming years. Currently supporting 30 members, the team will use funds to support a larger team, and also to expand and develop our community outreach efforts.

Prepare/Care/Share: Using Engineering to Make Global Connections! – Garden Grove EA  
2015-16 Educator Grant- $5,000  
This program will use engineering activities to empower 5th grade students at Murdy Elementary, to create, design and improve technologies. 5th grade teachers will partner with parents and after school Kids Club, to give students real life, hands on, experiences using Engineering is Elementary curriculum. Engineering is an important component of STEM education. More importantly, through helping students become engaged, motivated, and excited about the learning process, it can act as a catalyst for global awareness as students extend their engineering projects to help others!

Promoting a Positive Global Future through Dual Immersion and Global Studies – Grass Valley TA  
2012-13 Impact Grant- $20,000
The Global Studies Program will focus on preparing students at Bell Hill Academy to participate more responsibly and fully in their world. The program promotes respect for other cultures, the environment, and an interest to continue learning. Through the use of Skype, students will establish relationships with students at a sister school in a targeted area of study. A school wide project will be chosen to support their needs. Using a monthly calendar of school/community meetings will allow students and parents to experience music, dance, art and storytelling to enhance the students’ global perspective.

A Coastal Community Network – Huntington Beach UHSD EA  
2014-15 Educator Grant- $4,520  
This project offers the opportunity for AP Environmental Science students at Ocean View High School to engage with the parents and students of our local elementary school. Focusing on their passions and strengths, this program connects the students and parents at Oak View Elementary School around shared interests in nature and science. In doing so, our project promotes a positive connection from the high school to the larger community. Planning field excursions, trainings, and lessons enhances students’ opportunities to share knowledge and become more involved in school activities, the larger community, and helps to create life-long learners.

Imperial Valley Discovery Zone – Imperial Valley TA  
2015-16 Impact Grant- $20,000  
The Imperial Valley Discovery Zone (IVDZ) will utilize high school students to facilitate teacher generated NGSS-aligned lessons for elementary-aged students in the Imperial Valley Unified School District. Instructional days will be whole days of STEM learning. IVDZ instruction will include field trips to local sites of science learning. In addition, IVDZ will support STEM literacy in our region by organizing engineering challenges, maintaining a Makerspace, and attending community events with informal STEM exhibits. Our mission is to tap into our region’s natural curiosity to bolster their knowledge and interest in STEM learning. We plan a complete shift in the way science is taught in favor of a more student-centered approach, making learning enjoyable.

iEngage – Lennox TA  
2012-13 Educator Grant- $5,000  
This grant will support the iEngage Learning Center and will allow students the opportunity to make progress in language arts and math while enriching their use of technology. In addition to the students taking part in the learning center, parent volunteers will also be trained to support student learning.
WeatherBug Weather Station – Martinez EA
2015-16 Impact Grant- $16,240
The instructional shifts required for quality teaching and learning with the Common Core State Standards in English Language Arts and Math, along with the Next Generation Science Standards, emphasize the 4 Cs - creativity, creative thinking, communication and collaboration. Teachers are motivated to integrate math, science, and ELA into meaningful experiences for our students. At John Swett Elementary, we would like to bring the dynamic and interactive WeatherBug program to our district. This includes a standards-based curriculum, professional development, as well as a scientific-grade weather station that can be integrated with our existing technology.

Agriculture Literacy – Marysville Unified TA
2013-14 Impact Grant- $13,880
2015-16 Impact Grant- $12,195
In today's society, many students have lost or have never acquired the knowledge of our country's important agrarian roots. It's essential for students to know where their food and fiber comes from and that the process is more than going to the clothing or grocery store. The Marysville High School Agriculture Department (280 students) would like to continue their role as educators of Agriculture Literacy to over 2,800 K-8 students within the Marysville Joint Unified School District. Agriculture Literacy integrates Agriculture Education into the common core standards of K-8 curriculum and covers all disciplines including science, math, language arts and social studies. The CTA-IFT grant received in 2013 for Agriculture Literacy provided tremendous growth in our district in the area of agriculture education. This past year we have taught NGSS at three other elementary schools and have participated in a nutrition fair with two educational booths. Principals are starting to recruit the high school students to teach a science unit at their individual elementary schools.

Integrating Technology, Curriculum, Common Core – Marysville TA
2013-14 Educator Grant- $5,000
Our grant provides a framework and an opportunity to organize, synthesize, plan, and create a set of educational experiences that integrate our curriculum with the Common Core standards by tapping into the unique strengths of our teachers and students while utilizing the various technology tools that we already have at our fingertips. The one thing missing from the Common Core implementation plan is the opportunity for teachers to take part in planning and creating learning experiences and units of instruction that will bring these potentials to fruition. Walter Kynoch Elementary has been building a strong infrastructure of technology hardware and software, opening a myriad of opportunities for incorporating these powerful and dynamic devices and programs with our curriculum to build learning experiences that will excite and engage our students.

The Scholar Digital Evolution – Merced Union High School District TA
2012-13 Impact Grant- $20,000
This project is to support the conversion of the Merced High School student newspaper, The Scholar, into an online publication. The paper, which was brought back last year after a long absence, will be expanded to include multimedia videos, blogs, podcasts, webcasts, and forums for discussion about current issues facing the students. An online presence will give even more students a voice and allow the newspaper to reach a larger, more diverse audience. In addition, partnerships will be established with the local Merced paper, the Sun-Star, and with the UC Merced paper, The Prodigy.

Moreno Valley Math League – Moreno Valley EA
2013-14 Impact Grant- $17,000
2014-15 Impact Grant- $20,000
2015-16 Impact Grant- $20,000
Teacher leaders at Moreno Valley Unified School District (MVUSD) are pleased to continue the Moreno Valley Math League (MVML) program for 8,000 middle school students and expand it to all 34,000 families of MVUSD during the 2015-16 school year. In 2015-16, MVML intends to transform traditional classrooms into vibrant learning communities by broadening the goal of mathematics education from mere mastery of algorithms to development of critical thinking and problem solving skills. We look forward to another year of successful partnership with IFT to expand this holistic mathematical program that transforms students who were technology consumers into technology creators and innovators.
Full STEAM Ahead – Oakdale TA  
2014-15 Educator Grant- $4,990
This grant project is a fully interactive hands-on day for students in 3-6th grades. All activities are geared to encourage students to explore science, technology, engineering, arts and mathematics. The events, which will take place at Sierra View Elementary School, begin with an introduction to STEAM. Then groups of students will rotate to various stations where they will have a mini lesson with an identified objective, a hands-on activity and a reflection piece. Community volunteers, parents, teachers and students will be involved in creating this learning-rich environment.

Empowering Parents and Students to Support Academics & College Readiness through Technology – Oakland EA  
2013-14 Educator Grant- $5,000
Our goal is to empower families to navigate the school system and support college readiness through technology. Many of our families are low-income, first-generation immigrants; nearly all our students will be the first in their families to attend college. A core group of families at Bridges Academy at Melrose will learn introductory computer skills to access educational websites that support critical academic skills and to research colleges. This workshop series will culminate with presentations by students and college admissions officers and a field trip to local universities. Families who participate in 80% of the workshops will receive refurbished computers to continue refining their technology skills.

Informed Parents Ensure Success – Palm Springs TA  
2012-13 Impact Grant- $9,000
This grant will support a project that will focus on parents with children in the Early Childhood program with Palm Springs Unified. Using the CABE Project 2-Inspire training, teachers will assist parents to sustain and improve their child’s learning experience in the classroom and at home. When schools work together with families to support learning, children tend to succeed not just in school, but throughout life.

Next Generation Kindergarten Scientists – Palm Springs TA  
2014-15 Educator Grant- $5,000
This project will allow the kindergarten team at Della Lindley Elementary to support and expand their science program. It is based on the belief that there are great strengths at all levels of our school community. Next Generation Science Standards (NGSS) are based on the principle that children are born investigators that explore and interact with their world and that scientific concepts are naturally engaging. At the district level, excellent science mentors will provide science trainings. In addition, teachers will participate in science and Project Based Learning trainings to develop strategies to facilitate science instruction. There will be opportunities to include “science buddies” (older students), as well as parent participation with “Science Hikes” and presentations. Our community is also rich with resources from individual organizations and presenters.

NGSS- STEM to STEAM – Palm Springs TA  
2015-16 Impact Grant- $20,000
The kindergarten and first grade teams of Della Lindley Elementary, are submitting this application to continue to support our science program, Including STEM and STEAM concepts. We also want to expand this vertically to include the first grade. NGSS are based on the principle that children are born investigators, who naturally explore and interact with their world. This school year we recruited parents and older students who are enthusiastic about supporting younger students with questioning, recording data and using technology. At the community level, we have businesses and organizations that provide informative and engaging presentations. At the state level, the California Education and Environmental Initiative continues to provide trainings using NGSS lessons at the kinder and first grade level.

Learn by Doing Science Labs – Paso Robles Public Educators  
2012-13 Educator Grant $5,000
This project will allow students of each grade level at Winifred Piper Elementary to participate in Life, Earth, and Physical Sciences. The labs are a student-centered environment that promotes both cooperative learning and individual accountability. It is designed to meet the needs of all learning styles.
Roary's Laboratory – Pleasant Valley EA  
2013-14 Educator Grant- $4,978  
*Camarillo Heights Elementary* has been chosen to pilot a STEM program with the hope of becoming a STEM magnet school. We plan to build on our current strengths, including a motivated staff with a common goal, a supportive principal, collaboration time and an opportunity to visit schools already implementing this exciting program. The grant will be used to develop a well-equipped lab class. This would be a place where students would be transformed from elementary students to a team of budding scientists and engineers. The current space will be improved and be made more user-friendly and inspirational. In addition, will utilize the outside lab/garden area to learn about science, work through the design process, interact and go on virtual field trips, look up information, problem solve and celebrate by showing off the work they have done and progress and growth they have made.

Pre-Engineering & Design Hands-On Unit Development – Redlands TA  
2010-11 Educator Grant- $3,956  
This project will support the Pre-Engineering & Design course at Redlands H.S. by providing materials for four specific engineering units- mechanical, structural, aeronautical and environmental. These units actively engage students in research-based engineering design projects that incorporate problem-based learning, cooperative groups, and measurable outcomes. Student talents and strengths will be emphasized. Students will identify with the relevancy of their work and how it directly relates to a current need in our society.

Build a Space Exploration Vehicle – Rialto EA  
2013-14 Educator Grant- $3,631  
*Eisenhower High School* will be the development site of a long term, student-centered project-based instructional sequence. This sequence will be used to determine the effectiveness of project based learning on student performance, positive peer interaction and appropriate classroom behavior. Students will have the option of predetermined projects, such as creation of a space satellite or planetary rover, with the goal of a final presentation and exhibition. Using proven methods of heterogeneous grouping, team lab work and peer tutoring assignments, students will acquire the technology skills and space science concepts necessary to complete the final project.

ArtTech Program – Riverside TA  
2011-12 Educator Grant- $4,925  
2012-13 Educator Grant- $4,850  
This project is intended to develop an Arts and Technology (ArtTech) strand at Hawthorne Elementary School. The new strand will include at least one classroom in each grade K through 6, as well as four K-6 special education classes. Thirteen teachers are committed to participate next year and will devote one lesson per week to cover the California Standards for the Arts. This work will give 350 students the opportunity to experience art integrated into other curricular areas and to benefit from increased and improved use of the educational technology available at the school. Previous local and federal grants have supported arts education at the school and there is a strong parent and community component built into the program.

Introduction to Physics and Engineering using LEGOs (IPEL) – Riverside TA  
2012-13 Educator Grant- $4,999  
Using LEGO to solve problems is a teaching tool that has been used successfully in AP Physics and college classes nationwide because they are easy to assemble and sophisticated enough to allow students to test and analyze. This grant proposal is intended to infuse technology and engineering into a traditional science program and robotics club. Students will develop a deeper understanding, leading to greater hope and optimism in pursuing additional knowledge, as well as science careers.

Equal Access for All –San Diego EA  
2012-13 Educator Grant- $4,171  
Technology tools, when used effectively, can significantly affect the learning-disabled student’s self-image and confidence. Embedded in the iPad technology is student access to voice-to-text, text-to-voice, and visual field trips that foster independence with students who have identified special needs in the areas of visual and auditory processing, as well as visual motor integration. Comprehensive emersion into the use of technology tools can dramatically boost student expectations, hope and optimism about their future.
Out of the Box – San Joaquin County EA
2014-15 Impact Grant- $20,000
The Out of the Box project will place thirty 7th-12th grade SJCOE special education students in collaborative relationships with California Waterfowl Association mentors to establish a sustainable population of Wood Ducks in the riparian oak habitat of Historic Durham Ferry School of Agriculture and Outdoor Education. Located on 290 acres along the San Joaquin River in California’s Central Valley, Duck Boxes placed at Durham Ferry would provide nesting space for over 100 ducklings to hatch from each year. The grant would also fund cameras and a website, providing real time classroom access to the nests from Stockton and Manteca school sites.

Engaging 21st Century Scientists of Tomorrow through Virtual Augmented Reality – San Marcos EA
2010-11 Educator Grant- $5,000
This project is designed to emphasize student engagement and active participation in math and science at Woodland Park Middle School. Putting the school on warp speed toward the twenty-first century, this grant hopes to capitalize on new breakthroughs in augmented reality, which overlays digital images and information on real-world settings. The grant will be used to purchase applicable software that will enable staff to do teacher-driven experiments and demonstrations that captivates adolescent imaginations.

21st Century Intervention – San Ramon Valley EA
2012-13 Educator Grant- $2,000
Using technology to enable meaningful interaction among the Special Education team is the goal of this project. The iPad is a powerful technological tool that benefits the needs of students with special needs or specific interventions. This project uses refurbished iPads in small groups, and individually, to promote student interdependence, foster self-confidence, and help move students forward through the use of technology.

E-Portfolio – San Ramon Valley EA
2012-13 Educator Grant- $5,000
Through the use of electronic portfolios, students are given the opportunity to take ownership of their own learning. Student-managed electronic learning portfolios become part of a persistent learning record and help students develop self-awareness. This enhances their ability to set their own learning goals, express their own views of their strengths, weaknesses, and achievements, and take responsibility.

The Paperless Classroom – San Ramon Valley EA
2012-13 Educator Grant- $4,967
This project creates the first paperless classroom at the school and will show-case the power of technology and the successful direction in which it can take students. It will put technology in each student’s hands on a daily basis, while also pushing them to create, learn, collaborate and produce high quality products in a completely paperless environment. Partnering with students will be the most powerful evaluative tool and will provide critical feedback as the project is fine-tuned during the year.

Boosting Science Mastery with Braincandy and Language Development – Sequoia District TA
2013-14 Impact Grant- $20,000
Our plan is to develop innovative materials in the form of a workbook and online resources to promote the use of Braincandy and Peer Instruction in life science courses, particularly tailored to English Language Learners. This project builds on over three years’ research and practice in developing the Instructional model which has significantly boosted student content knowledge in physics. The new resources will make Braincandy/Peer Instruction easy to use for more teachers. We will also continue our action research and data collection to measure effectiveness. This project will impact an estimated 800 Carlmont High School students in years 1-2, with the potential to scale significantly.

Integrated Computer Science & Technical Studies Curriculum at Sweetwater H.S. – Sweetwater EA
2010-11 Impact Grant- $8,200
This project is designed to develop a comprehensive, district-wide literacy and technology curriculum for all students, modeled on the national Computer Science Teachers Association own K-12 model currently in use throughout the U.S. The grant, which will fund the first year of what is designed as a three-year program, will enable the program coordinator to create a core team of six qualified classroom teachers to determine and drive a grade 7-12 curriculum guide that would allow all district schools to offer a variety of technical courses.
Mentoring Middle School Students in Robotics – TA of Long Beach
2015-16 Impact Grant- $14,020
Collaboration between California Academy of Mathematics and Science (CAMS) and Colin Powell Academy will help develop critical thinking and problem-solving skills by using robotics and the engineering design process. Middle school students will be provided after school bus transportation to CAMS, where the high school students will mentor their younger peers in a series of robotics workshops. These workshops will be designed by students, and will focus on mechanical and electrical systems and computer programming.

Green Jobs Prep School at La Mirada H.S. – TA of Norwalk-La Mirada
2010-11 Impact Grant- $20,000
This project works to create an affirmative career technical education/career pathway “school within a school” program. The program will prepare at risk high school students in grades 9 to 11 to join post secondary programs in environmental majors, which lead to an industry-recognized certificate, licensure, associate or baccalaureate degree and ultimately succeed in the “green economy.” The grant will support the need for teacher in-service, science lab equipment and field trips.

Green Jobs: Zero Emissions Go-Karts – TA of Norwalk-La Mirada
2012-13 Impact Grant-$12,400
This project is based on three years of on-going teacher driven grant-funded activities at La Mirada High. Students will learn and experience the importance of interdependence in a working environment. This project will continue to promote student responsibility and self-reliance. Besides the fabrication of the two go-karts and portable solar power charging station, students, staff and community partners will also take part in the 9th Annual Zero Emissions Bike, Walk to School Day.

Green Jobs: Charge Up with EVs – TA of Norwalk-La Mirada
2013-14 Impact Grant- $20,000
The evolution of the La Mirada High School Green Jobs program will continue with this project. Students will: (1) learn about the history of electric vehicles (EVs) and the career opportunities of the electric transportation industry; (2) promote their environmental and cost effective benefits; (3) experience firsthand electric drive trains by assembling and dis-assembling a fully functioning 3-wheel electric vehicle, produced and manufactured by Electric Auto Shop, that can be fabricated repeatedly on an annual basis; (4) participate in a 16-week EV curriculum. Project students and teachers will participate in both a district-wide competition and a University of Irvine Energy Invitational competition, as well as create and present their design portfolio at the Orange County Expo.

Solar for Success– Temecula Valley EA
2013-14 Educator Grant- $5,000
2014-15 Educator Grant- $5,000
This program of hands-on, real-world, job-oriented learning experiences changes lives! It uses real-world applications in math and science to build a hands-on "school to work" program for at-risk students from Rancho Vista Continuation High School. Through teacher teamwork, math and science instruction is aligned with work applications. These approach makes this knowledge valuable and relevant to students for the first time in many of their school careers and has led to an increased graduation and attendance rates, and higher grades for participants. This project is the natural progression to another aspect of the program--from outside hands-on to "inside," generating sales proposals and learning the permitting process for local governments. This rounds out the program and provides an avenue for students who have slightly different strengths than the installation side of the business, thereby expanding our base of potential students we can help.

Digital Makes a Difference in Art – Travis Unified TA
2013-14 Educator Grant- $5,000
This project will update technology in the classroom at Vanden High School to enhance art projects and bring students into the 21st century. This grant will provide funding for several laptop computers capable of running advanced computer graphic design programs. These programs will give advanced graphic design students the opportunity to experience working with the same advanced technology and materials they will encounter in college and the workplace.
Vertical Collaboration in STEAM – United Teachers of Pasadena
2015-16 Educator Grant- $5,000
This grant will allow our school, Sierra Madre Elementary, with a focus on the primary grades, to participate in a STEAM CCSS NGSS project based vertical collaboration learning experience. Our emphasis will be on Earth Space Sciences. It will be run by teachers, an outside astronomer, artist, and dance teacher, and community scientists. As a performing arts school, we have seen where weaving the arts into all subjects will make students feel more alive. We want to add the “A” to STEM and create STEAM for this project. The collaboration of teachers and outside professionals will create a curriculum that students across grade levels will teach each other. This experience will culminate in a school-wide, community-based Science Star Gazing Night. It will be rich with information about the planets, art, a Jet Propulsion Lab written play, and opportunities to look through telescopes at the evening stars.

Digital Skills for a Digital Age at Cabrillo Middle School – United Teachers of Santa Clara
2011-12 Educator Grant- $5,000
This project will enable the staff at Cabrillo Middle School to have complete access to the most useful and creative Adobe software tools and to enable students to use these tools for projects in a variety of classes. Teaching students to use this software not only makes their learning experience intrinsically motivating, it also supplies them with useful digital skills for their future. Sixth-graders will be taught through tutorials linked to the school’s website, while seventh-graders will be able to enroll in a semester-long Tech Literacy class. Eighth graders will be able to use these tools to produce the school newspaper, literary magazine and yearbook.

iPad and iMac Integration in the Classroom – United Teachers of Santa Clara
2012-13 Impact Grant- $19,820
Providing a 6th grade class at Cabrillo Middle School with iPads and iMacs will enable students to be able to produce digital books and games that can be shared with classmates, and with family and friends around the world. Twenty percent of the students at Cabrillo Middle School are identified with autistic or Asperger’s symptoms. These students have quickly adapted to technology and this grant will allow the students to have a more positive view of the future as they develop their strengths through the use of iPads and their abundance of educational applications.

Aquaponics – Val Verde TA
2013-14 Educator Grant- $5,000
This grant will help establish an aquaponics system for the Plant and Soil Science class in the CTE Agscience Pathway at Rancho Verde High School. Grant funds would be used to purchase all consumable materials needed to design, build, and create scientific experiments in regards to using aquaponics as a medium for vegetable and crop production. Many of these materials, although listed as "consumables", can be reused several times before their shelf life expires. Not only does this program target students not going to college, it also fuses the development of scientific thinking with the actual production of goods, making it intrinsically motivational. Students will also develop business and marketing skills for their products.

Hydroponics and Aquaponics – Val Verde TA
2014-15 Educator Grant- $5,000
This grant will provide funds for the establishment of a hydroponic system and the continued growth of an aquaponics system for the Plant and Soil Science class in the CTE AgriScience Pathway at Rancho Verde High School. The project allows for the purchase of materials to design, build, and create scientific experiments to determine the efficacy of using aquaponics and hydroponics as a medium for vegetable and crop production. Not only does this program target students immediately entering the career field after high school, it also fuses the development of scientific thinking with the actual production of goods, making it intrinsically motivational. Students will also develop business and marketing skills.

Bio Garden Center – Victor Valley TA
2015-16 Educator Grant- $5,000
In an Adelanto High School biology classroom, life is discussed every day, but rarely do the students encounter actual living things in their study of life; this proposal changes that. Our proposal is to have students learn biology by working with living things throughout the year in cycles, as biology does. The focus will be a student maintained classroom garden center that gets set up the first week of school during the instruction of the scientific method. As the year progresses, the garden’s cycle will begin. As we study each unit during the year we will focus it on building it around building the classroom garden project (since there are several classes there will be many layers going on at any one time for data collection (terraria,
hydroponics, aquaponics, cloning, etc.). As we study genetics, students will be breeding fruit flies, which they will feed to goldfish. The goldfish will then be excreting urine into the water which goes to fertilizing the plants whose roots hang into the water taking in the nitrogen from the urine. The plants then when mature are starter plants for faculty gardens that we can sell to promote the ongoing nature of our cyclic project.

**RBV Robotics – Vista TA**  
*2015-16 Impact Grant - $20,000*  
The Rancho Buena Vista High School Robotics program will expand on the strengths of RBV’s Beginning Robotics course creating more opportunities for students to be team members and team leaders in a variety of robotic and design competitions. Student surveys show that design challenges have ignited interest in engineering design in the classroom, and students have enjoyed learning to code through robotics. The grant will provide materials and robots have student run STEM clinics and robotic competitions in the classroom, school wide, and in local and regional community competitions, increasing teacher, community members, and parent involvement in student learning.