

**Consortium of Florida Education Foundations  
2019-2020 ATT STEM@Work Project Abstracts  
Final**

Foundation Name	Project Title	Project Abstract
<b>Baker County Education Foundation</b>	<b>Simple Machines and the Engineering Advantage</b>	J. Franklyn Intermediate School serves over 750 students in the fourth and fifth grades. Students in this age group are truly intermediate, in between elementary and middle school. They still enjoy hands-on tinkering, yet are eager to be challenged with more complex design elements. By exposing this age group to critical components associated with force and motion through the use of simple machine concepts, students will be more engaged in order to recognize mechanical engineering designs related to more complex machines and their applications. By bridging the gap of conceptual understanding of these fundamental skills, students will build background knowledge essential to learning adaptations in future grades as well as be able to recognize simple concepts in complex machines. Students will be exposed to physical science through the use of simple and powered machine kits.
<b>Bradford County Education Foundation</b>	<b>Engineering a Passion for STEM</b>	Students in the 3rd through 5th grade gifted program, from five elementary schools in Bradford County, will be immersed in STEM projects and activities to make them aware of the possibilities for their lives in this rapidly growing field. The students in this program need to be challenged in a way that encourages creative problem solving, resulting in authentic learning. The science kit bundles and books will provide STEM experiences that are engaging, challenging, and thought provoking. The kits, along with business partner interactions, and the field trip to a STEM museum, will increase students awareness and excitement about their future endeavors.
<b>Brevard Schools Foundation</b>	<b>Sensing &amp; Seeing the World of Work through Robotics</b>	The goal of this project is to teach advanced robotics hardware and software skills to Robotics students. By purchasing Vex V5 microcontrollers, students will be able to work in teams and creatively problem-solve using gyroscopes, color sensors, potentiometers, limit and bumper switches so that they can accurately and mathematically build and program their robots to interact with their environment.
<b>Broward Education Foundation</b>	<b>Greased Lightning Robotics - Let's ROLL: Robotics and Outreach for the Love of Learning</b>	Let's ROLL will support hands-on robotics projects and competitions, expanding the number of students who can directly participate in the design and programming of robots and increasing the representation of girls and Hispanic students. It will also provide student-led science outreach activities to elementary and middle students. Expected outcomes include increased student appreciation of the sciences and increased participation of girls and Hispanics in taking a STEM class in high school. We also hope to increase interest and engagement of younger students as reported by elementary and middle school teachers in relationship with high school student mentoring; and increased implementation of student-led projects including participation in robotics competitions. Students will increase their knowledge of sensor-oriented programming by the use of the Minds-I robotics system sublimated by a mentor-ship of a Motorola Solutions engineer.
<b>Broward Education Foundation</b>	<b>Harness the power of the SUN!</b>	The students will learn how to harness the power of the sun by installing a solar panel and taking the classroom off the grid, thus reducing our carbon footprint. Cutler Bay Solar Solutions will partner with us and will provide extensive knowledge of solar power. The owner will lead lectures and invite various industry professionals to the classroom to share knowledge and experience. Students will learn about solar power and possible career opportunities associated with it.
<b>Broward Education Foundation</b>	<b>Young Engineers-City Shapers</b>	Through the Young Engineers-City Shapers project students will learn to use the Engineering Design Process to solve a real-life issue using science and engineering. Specifically, students will research, design and build model cities that will address social, environmental, economic and safety concerns of the world of tomorrow. Students will build important critical thinking, collaboration and STEM skills though this project. Local business partners and mentors will also provide regular input and feedback. This project will ultimately teach students how to: problem-solve an issue; accept constructive criticism and multiple points of view; and reframe failure as a learning tool.

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<b>Clay County Education Foundation</b>	<b>Chief Science Officers</b>	It is critically important to support activities that will support our students as they move towards the careers of the future. One critical element for student success is the empowerment of students to have a voice in their school and in our STEM learning ecosystem. Students will join an existing program founded in Arizona known as the Chief Science Officer program. The program has four goals, which are to 1) Create a pipeline of diverse STEM leaders; 2) Foster communication and collaboration among the CSOs; 3) Enrich school STEM culture and career awareness; and 4) Increase student voice in STEM conversations in the community.
<b>Clay County Education Foundation</b>	<b>Grow it Green</b>	The Clay Education Foundation realizes that career ready students possess a strong foundation in problem solving, critical and design thinking, as well as exposure to STEM skills that will help them to be future-ready and competitive for college and career options. We will utilize an existing Project Based Curriculum, to infuse the use of technology and sensors into the curriculum. Through this project, students will be exposed to workforce skills needed to prepare them to work in the 21st century. Students will be exposed to how drones can impact the agriscience, as well as how sensor driven data collection will open a pathway to solving the world's food shortage. By working with the sensor technology, the data that are collected, and building presentation skills, students will also receive foundation understanding of technology driven data science, which is a skillset that will also transcend any career or field.
<b>Columbia Public Schools Foundation</b>	<b>Preparing Students for the 21st Century Workplace</b>	Students in the STEM program will learn the application of STEM concepts through problem based learning activities conducted with workplace partners. With the support of Lake City Medical Center, students will participate in hands-on activities in the STEM arena, that support the growing need for high-quality engineers, scientist, and information technology technicians in Florida's workforce. They will have the opportunity to learn about STEM based careers, gain industry certification, vocational skills, become proficient at coding, become good digital citizens, and build and program robots. Activates will take place during the STEM class, during after school STEM clubs, and at family engagement activities.
<b>Jacksonville Public Education Fund</b>	<b>Panther Robotics - Lone Star Elementary School</b>	This will be an engaging after--school club for students in grades K--4. They will learn and build their skills in robotics to ultimately form two teams and compete in the First Lego League Jr. Expo. This engaging and hands--on opportunity to learn beyond the school day is intended to generate an interest in robotics such that participants will show a propensity toward math-- and science-related subjects.
<b>Escambia County Public Schools Foundation</b>	<b>Python Cybersecurity Coder Academy</b>	The goal of this project is to improve the knowledge, skills and abilities of participating students in fundamental cybersecurity concepts and inspire them to pursue a career path in the cybersecurity field. The students will wrestle with coding challenges when learning the Raspberry Pi Python software which is the core of this project. This knowledge will be applied to tasks such as drawing a turtle or playing a game of cat-and-mouse. Furthermore, they will explore how software and hardware works together to put the "smart" in our smart devices.
<b>Flagler County Education Foundation</b>	<b>Bulldogs to F.I.R.S.T.</b>	To date, there is no competitive outlet on the Flagler Palm Coast High School (FPC) campus that allows our students to learn and grow skills in the areas of robotics and computer sciences. This grant will allow for the formation of two separate competition teams, a FIRST Robotics Team focusing on the FIRST Tech Challenge, and a FIRST Robotics Competition Team which will build a robotic that serves the purpose/focus of the year. Our students will learn, build, test and prepare both their robot and team for competition against other middle and high school teams from across the state of Florida/South Georgia. These competitions allow for our students to work in teams to solve the very real problems that they are presented with and use the problem-solving and academic skills learned in the classrooms to construct their robotics project in order to address the specific challenge offered by the FIRST Competition. These teams will also give our students interested in STEM that competitive outlet they are looking for.

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<b>The Education Foundation of Gulf County</b>	<b>Port St. Joe High School: Drone UAV Moving STEM ABOVE AND BEYOND</b>	The PSJHS Drone Program supports the career readiness of our students. The PSJHS Drone Program will have an impact locally and will create a return on investment in both human capital and in increased educational opportunities for our students. The program will prepare students for employment in the field of UAS Unmanned Aviation Systems as a Pilot, Operations Technician, and a Line-of-Sight Observer. The curriculum will place emphasis on broad, transferable skills and stress the understanding of all aspects of the UAS growing industry applications. The program will be rigorous and challenging with development of relevant technical knowledge and skills needed to prepare for employment, future STEM study, and STEM careers. Drone aviation is currently being used in science, energy, law enforcement, military, journalism and media, entertainment, and in the private corporate sector. Due to the emerging applications of drone technology, the appeal to a broader base of students offers the potential to provide STEM learning to students in under-represented demographics and opportunities to complete internships with our STEM mentors and business and community partners.
<b>The Education Foundation of Gulf County</b>	<b>Wewahitchka Elementary School: Makerspace STEM Learning</b>	The goal of this project at the Wewahitchka Elementary School Library Media Center is for students in first grade through sixth grade, have the opportunity to engage in an interactive learning environment where they gain confidence in their ability to create, invent, and innovate through their access to STEM related tools provided in the Maker Space. Our STEM mentors will plant a seed of curiosity in STEM related careers for our students to grow their interest in becoming lifelong learners of Science, Technology, Engineering, and Math. Using the knowledge gained through this project, our students will become proficient in problem solving, logic, and higher order thinking.
<b>Hernando County Education Foundation</b>	<b>Algebraic Aptitude</b>	Our project will introduce the students to a series of classroom activities designed to provide an in-depth understanding of abstract concepts that are difficult to teach using lecture base methods. Activities include the use of experimental apparatus such as a "car & ramp lab" using photogate timers to accurately measure rate, time and distance; apparatus for a pendulum lab to measure the periodic motion, materials to measure buoyancy of a helium balloon in air, and apparatus to simulate and measure the conservation of angular momentum. Our expected outcome includes learning depth and retention of concepts that are often difficult to teach using non experience based methods and improved student perceptions of physical science and mathematics.
<b>Hernando County Education Foundation</b>	<b>Engineering Educational Enhancement</b>	Our proposal is based on infusing excitement into STEM learning through increased hands-on activities combined with conventional (textbook) learning. In doing so, we aim to increase student knowledge that is specific to the area of Engineering fundamentals. The measure of success will be conducted by using a Pre-Engineering industry certification from the Robotics Education & Competition Foundation. We will administer the RECF Foundations of Engineering exam to students at the start of this project, then administer it again near the end of the project in order to compare test results for measured gains.  In the course of this project, we anticipate that students will be subjected to problem-solving using the Engineering Design Process. These problems, or challenges, involve many activities including 3D Printing and robotics. These activities provide opportunity for fundamental learning of computer-aided-drafting, 3D printing software, and robot programming (likely block coding). If time allows at the end of the project, we hope that we can offer students the opportunity to take additional module tests that will allow them to complete the above-mentioned Pre-Engineering certification.
<b>Hillsborough Education Foundation</b>	<b>Mission: Tampa Bay V-Middle and High School</b>	Mission: Tampa Bay is an immersive, experiential program for female students primarily from Title I schools in grades 6-12 who demonstrate academic aptitude and an interest in STEM careers. During the four day camp, the students design, build and pilot underwater drones in the Port of Tampa and Tampa Bay. At the conclusion of the camp, the girls must lead the design of research projects in their classrooms back at school. Underwater drones are currently utilized in a variety a ways by port personnel, cruise lines, maintenance companies, government agencies and research organizations in Tampa Bay and beyond. Skills developed through the program are transferrable to other areas, such as programing/coding, above ground drone piloting and marine science. Careers that will be focused upon during the program include, but are not limited to: Computer Scientist, Drone Pilot, Marine Scientist, Submarine Pilot, Captain, and Museum Curator.

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<b>Education Foundation of Lake County</b>	<b>Biomass to Bioenergy</b>	The purpose of this project is to engage teenagers about how we can use plants to power machines instead of using fossil fuels. The idea is to provide hands-on STEM lab experience where students can use that algae that is in all Florida water systems and learn how to process that algae into biofuel. Students will explore algae bioenergy technologies at USF's Patel College of Global Sustainability. They will learn and see how algae converts into biofuel and other bioproducts. Once students learn to cultivate, harvest and convert the algae to biofuel that will test the integrity of their fuel using a small diesel engine RC racecar. Students will measure their efficiency by the distance and speed of their racecar. During this entire project, students will be collecting and analyzing data, measuring their knowledge with pre/posttest on biofuel and STEM career majors/interest. The hope is that students will be interested in pursuing a STEM career in global sustainability or bioengineering.
<b>Education Foundation of Lake County</b>	<b>Imagine, Design and Prototype</b>	This project will empower students to be able to bring ideas to a prototype stage with feedback from industry experts and will guide them in developing key STEM skills and communication that are necessary for success. Students will take on the role of a business owner and an engineer to go through the engineer process of identifying a problem, designing a solution and bringing that solution to life in a prototype. When students have completed the project they will have a business plan, a prototype, skills of how to apply math and science standards to CAD designs and refined communication skills.
<b>Education Foundation of Lake County</b>	<b>Designing Solutions in Lake County</b>	The children we are educating today are going to be asked to do jobs that haven't been invented yet. As 21st century educators, it is our responsibility to teach our students how to problem solve, work cooperatively, think creatively, and plan effectively. Designing Solutions in Lake County is an integrated STEM unit in which teams will design and build a prototype of an environmentally friendly car while learning about STEM careers through a partnership with a local manufacturing company. The purpose of this project is for our fourth graders to see the real world application of the engineering design process. Students will interview and brainstorm with employees of Senniger Irrigation to learn about the many STEM related jobs available in that industry, before going to the facility to see first-hand about how the design and production process works. They will meet with employees from many Senniger Departments including design, manufacturing, finance, production, promotions, and shipping to learn how many jobs are involved in one business and what they need to learn to be ready to enter the work force in the future.
<b>The Foundation for Lee County Public Schools, Inc.</b>	<b>STEM@Work</b>	Through immersion tours and interactive field trips, Lee County high school students will experience on-the-job learning in several local Science, Technology, Engineering, and Math industries. Participating businesses will guide a group of 25-30 students through hands-on exploration of the diverse roles and responsibilities of several STEM-related careers. Participating students have the opportunity to build critical thinking skills, demonstrate creativity and innovation, and work cooperatively as a group through business engagement and year-end presentations. A STEM Committee, comprised of several business leaders, will assign a year-end project for students to demonstrate the skills they have gained through their STEM@Work experiences. These presentations offer students a unique opportunity to engage business partners, practice public speaking, and exhibit creativity as they are evaluated and ranked by committee members.
<b>Foundation for Leon County Schools</b>	<b>Bobcats Building Better Bots</b>	STEM education has increasingly become a priority for educators because of the practical problem-solving collaboration that STEM opportunities provide. However, the numbers of female students entering STEM programs remains low. Our goal is to include our entire 5th grade each year in STEM opportunities through robotics. In addition we would be using the kits in after school robotics clubs during the rest of the year. We want to create a population of positive thinking problem solvers for the future. The new LEGO SPIKE Prime robot has been specially designed to attract greater interest in robotics for girls based on its colors and configurations. In addition, we will partner with local architects, engineers, as well as FAMU/FSU's College of Engineering and FSU's College of Communication and Information to mentor our students.

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<b>Foundation for Leon County Schools</b>	<b>Panthers Researching Ideas with Dimensional Engineering (Panther PRIDE)</b>	Chaires TAG and STEAM Club students have the opportunity to research real-world needs of their school community and have an impact on their own learning and of those around them. These students would like to research school needs for STEM-based learning and develop solutions using three-dimensional technology. In order to do this, these students will collaborate with their groups and survey students and teachers to determine needs. They will work with our community partner, FCR-STEM (FSU), to learn about three-dimensional engineering and My STEM Kits. In culmination of this project, TAG and STEAM Club students will work to create solutions for the school needs using our school 3-D printer and the MY STEM Kits. This project will have a lasting impact on these students and their classmates by increasing their STEM-based knowledge and will show an increased interest in pursuing STEM-based classes and careers in the future.
<b>Panhandle Area Community Outreach</b>	<b>STEM Work and Energy</b>	The purpose of this project to connect with the community and prepare students to use less energy in the work place. Students felt the loss of energy during 2018 Michael Hurricane. Through this study we can show students the need for reusable energy and how important it is during times of energy loss. This project will show students how inventing or developing a new procedure can be better, faster, or cheaper than what is already out there by using difference source of energy like timber and wind. Students will identify today's misuse of energy by solving a hypothesis or investigate with hands on training with our business partners in our community.
<b>Public Education Foundation of Marion County</b>	<b>Silver Springs Science Center</b>	The goal of this project is to create a science lab at the Silver River Museum that can be used by all of Marion County's secondary science teachers and their students. During the 2019-2020 school year, materials will be purchased for the lab, lesson plans will be written, teachers will receive professional development and students will begin to have the opportunity for hands-on learning. The lab will increase awareness of the local natural water resource and how it is affected by pollution, both by the students involved and the wider community. With this interdisciplinary, outdoor learning project with a workplace partner (Silver River Museum), it is hoped that students will have increased interest, engagement and attainment in STEM subjects.
<b>Okaloosa Public Schools Foundation, Inc</b>	<b>Bottle Racers and Dragsters</b>	I will perform force and motion experiments with 44 student-built race cars made from 2-liter drink bottles. This project will inspire and motivate students to pursue careers in STEM. I will invite local engineers to help with mentoring students through instruction of the engineering design process, the building and launching of the cars, the data collection, and the project summarization. The business partner support will also help to inspire children to study engineering. I will utilize a pre-post survey with students to gauge the effectiveness of the activity in moving students towards wanting to work and or student in the STEM field. Students will design and launch their bottles with focus
<b>Education Foundation of Palm Beach County</b>	<b>Boynton Beach High School Aerospace Science Academy: Drone Build and Flight</b>	The project is designed to increase Boynton Beach High School's Aerospace Academy students' knowledge of drone regulations, procedures, assembly, construction and flying. The measurable outcomes will be demonstrated on how well the student scores on the drone safety examinations as well as the private pilot written exam. Both the private pilot written and the drone safety examinations involve similar topics, such as regulations and weather. The private pilot course and one of the drone courses (AS-220 – Unmanned Aircraft Systems) are industry certification courses which students will be participating in through this grant by gaining practical hands on experience in applying STEM and course concepts in a hands-on way.
<b>Education Foundation of Palm Beach County</b>	<b>Crosspointe Elementary Skeletal System Anatomy Assembly</b>	This project is designed to increase the student's knowledge of the human anatomy, in particular the skeletal system. They will be able to identify, label, and assemble the basic bone structures of the human skeletal system. Instructors will lead class lessons on skeletal system and students will then assemble dis-articulated skeletal system in class. A physical therapist will visit each grade-level class during the assembling process and complete presentations on the skeletal system while engaging students in physical activities as they learn about their bodies and how the skeletal system works. Through these class visits, students will learn about careers in medicine and how movement and exercise is important for overall health.
<b>Pasco Education Foundation</b>	<b>Royal Robotics - FIRST Robotics Competition(FRC) Team</b>	FRC is the premier STEM competition for high school students. It is well known for its ability to bring together schools and industry sponsors in a challenging engineering competition. Students learn to build and program a human sized robot to complete a given task, announced in January of every year. They then compete against thousands of teams from around the country and the world. Mentors from local technology companies mentor the students through this process, providing guidance and direction.

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Pasco Education Foundation	FRC Robotics Competition	Students will design, manufacture, and build a robot to solve the challenge set forth, allowing them to understand the engineering process from beginning to end. Students will have to learn measurements, electronics, fabrications, coding, programming, failures, teamwork, and leadership. Students will own their learning by taking on this project and meeting specific deadlines. This design process, along with using science, engineering, technology, engineering, and mathematics, will motivate potential students and hopefully engage more females into STEM-related fields.
Pasco Education Foundation	Wendell Krinn Technical High School and Aquaponics / Alternative Farming Methods	High quality, high volume, environmentally responsible food production is one of the world's leading challenges. In this project, students will collaboratively build an aquaponics system, a water-efficient and environmentally safe method of agriculture that combines raising fish in aquaculture tanks and plants without soil in one system. The completed aquaponics system will feature 2,500 gallons of aquaculture reservoirs, clarifiers and biofilters, and planted flood trays, and grow towers collectively filling 700 square feet of floor space. All aspects will be done by students, including raising fish from an egg, to mature fish, to table. Concurrently, crop plants will be taken from seed to table. Students will then learn to master the science behind the system which will become the cornerstone of the science department's lab resources.
Polk Education Foundation	Robotic Prosthetics	Polk Pre-Collegiate Academy and Hangar, Inc. will work together to teach students about prosthetic design and manufacturing. Students will then use their 3-D design skills and their robotic engineering experience to design and build a powered robotic joint or prosthesis. The final projects will be evaluated by prosthetic engineers.
Polk Education Foundation	Sciencetastic Knights	Bok Academy's Sciencetastic project will bring the STEM/STEAM community and engineering to our students who are underrepresented and at risk. Volunteers will facilitate lessons at no charge and this grant will help us purchase much needed STEM materials. With increased engagement in classroom activities and exposure to STEM careers available, we expect to ignite interest and passion for STEM topics and careers. Students will work to solve real world problems while developing problem solving and critical thinking skills. With the support of this grant, volunteers will work with students to move them forward academically through engagement in STEM. Engaged students will make academic gains, showing progress in science with a potential carryover to all of their courses.
Education Foundation of Sarasota County	STEMSmart Summit 2020	The goal of the STEMSmart Summit is to expose Sarasota County middle and high school students to various STEM applications through project-based learning in a one-day competition that will be held in January 2020. Students assemble in school-based teams to compete in STEM areas such as: Engineering Design, 3-D CAD Design, VEX Robotics, Web Design, Logo Design, Multimedia Math Challenge, Dragster Racing, Digital Art, Unmanned Aerial Vehicles, Model Water Tower, CPR, Health Quiz Bowl, and Spreadsheet Applications. Workplace partners and community members serve as professional mentors for school teams and as volunteer judges to evaluate their problem solving skills, application of STEM skills, and curriculum knowledge. Schools win awards based on Science, Technology, Engineering and Math categories, and the overall school is awarded a cash prize. By applying STEM concepts through hands-on experiential learning that is team-based and in a competitive environment, students engage 21st Century competencies such as critical thinking, collaboration, communication, and creativity. Students are able to transfer their STEM knowledge into application in an environment conducive for engaged learners. The STEMSmart Summit involves more than 80 middle school students and over 200 high school students with direct alignment to curriculum.
Foundation for Seminole County	Career and Creativity Studio at Midway Elementary School	Midway Elementary and local business partners like the National Center for Simulation and the US Air Force have partnered to bring hands-on STEM activities and career-focused speaking engagements directly to our students. This programs asks STEM professionals to show us their skills by working with our educators to develop a hands-on workshop to be delivered in our very own Career and Creativity Studio. By engaging students with STEM professionals and asking them to be active participants in the workshop, we intend to create a positive impact on these children that will increase their interest in STEM careers and fields, and provide experiences that will help them increase their classroom STEM grades.

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Investing In Kids	STEAM DREAMS in the classroom	My goal for this project is to bring multiple business professionals in for each of the focuses that STEM applies to. Biologists from Whitney Labs will assist in our Science focused labs and further highlight a career that is pursuable via the AVID (Advancement Via Individual Determination) philosophy. They will also demonstrate the scientific process during labs, provide examples of what a working scientist does in a lab, and bring samples of their work. Having engineers from Northrop Grumman when we are working on various hands-on, project-based engineering assignments (i.e., balloon rocket cars, force and motion mazes, various solar, wind, water (alternative energy) building projects) will enhance and solidify the practical application of the engineering design process. A representative from Dell will be able to showcase their ability to apply technology in the real world, using coding and mathematics, as well as with various machinery that is used for advancement. Dell's business partner will also educate us about Dell's program on recycling and using recycled materials to build their computers.
Investing In Kids	STEM Farm to Table at Osceola	Osceola Elementary School is a Title I school with approximately 96% of students on free or reduced lunch plan, and many are living in food desert areas or do not having access to healthy, nutritious meals. Too often, family meals consist of ready-made or out of the box food which has little to no nutritional value. STEM Farm to Table is a program that will expose students to all facets of growing healthy foods from seeds, harvesting the foods, then preparing and presenting the foods for consumption. The goal of this project is for the students to learn the science behind growing their foods and giving them a healthy alternative they themselves can fix. Through Urban Asado, students will gain first-hand knowledge on their STEM lessons by growing plants with hydroponic systems, organic soils, using environmentally safe, organic fertilizers, harvesting the plants, and then learn various ways in which the plants can be prepared and eaten. The business partner will meet with the students a minimum of twice a month to provide guidance and in-school field trips experiences.
St. Lucie County Education Foundation	Clean & Safe Water Testing to support Agriculture	This is a unique and amazing opportunity for our students to be able to receive hands on experience researching the levels pf PH, dissolved oxygen, ammonia, etc. that different fish require to survive and flourish. Adams Ranch has a system of canals, ponds and natural wetlands that can be tested. We would identify the types of fish found in each environment and survey the use of the surrounding land. Examples would be for grove use or cattle use. We would assess the impacts of agriculture and cattle presence and help the ranch assess its' stewardship of the land. Adams Ranch is very eco- friendly and has a high interest in sustaining wildlife and mitigating water pollution. Much of their water finds its way into the South Fork of the St Lucie River and eventually into the Everglades or into the ocean. This is an exciting hands on activity that will teach students the future of the agriculture industry and its impact on our environment.
Sumter Schools Enhancement Foundation	Techno Logic	Students will be given a chance to demonstrate their construction and programming skills in a physical, hands-on environment through the use of Lego EV3 and VEX robots. Building and programming the robots involves teamwork and develops problem solving and math skills. Additionally the robots will be incorporated into our science classes where students will experiment with the robots ability to sense colors, light, temperature, sound and motion as well as the data logging features and the ability to be controlled and monitored through Wi-Fi and Bluetooth technology. Schools will be holding a monthly challenge day where classes compete against each other to complete a STEM challenge. We are also part of the First Lego League for the third year and are interested in expanding to other types of robots such as VEX. We will use these funds to buy robots, pay for competition fees, student supplies and transportation and travel costs. Robotics teams practice after school working on our programming skills and preparing for the Lego League competitions. The robotics team and STEM students will also participate in "E Week" at Lockheed Martin.

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<b>Futures Foundation for Volusia County Schools</b>	<b>Fossils, fun and the future of STEM</b>	This project is intended to link STEM curriculum to unpaid student Internships at the Museum of Arts and Sciences, providing an opportunity for highly motivated students to interact and work with community partners in an intentional way to integrate all aspects of STEM education. Students will work with scientists at the Museum of Arts and Sciences to create displays, planetarium shows, and presentations for Natural History Days integrating STEM standards into their projects. Students will select a STEM project related to the environment, fossils, 3D printing or another area of their choice. Once the student project plan is created, the students will work with the scientists for January, February and March to create an integrated STEM project that will be used at the Museum. After completing at least 20 hours of work on their project they will present the projects April 25th for a late Earth Day at the DeLand Water Festival.
<b>Futures Foundation for Volusia County Schools</b>	<b>Mission Possible: Students Developing a STEM Solution to a local issue</b>	Students will design solutions to local issues with the help of Bethune-Cookman and Embry Riddle Aeronautical University student mentors. These projects will relate to the 17 UN Sustainability Goals and are true Environmental STEM projects where the middle and high school student teams will develop a rich understanding of STEM careers, protocols, majors and the value of a STEM education. Students' projects will culminate in participation in the Trepathon Competition in early May at Embry Riddle University. Students will learn the true integration of curriculum standards and STEM skills.
<b>Walton Education Foundation</b>	<b>Seahawks Robotics Competition</b>	Our effort is to entice students to compete in three diverse robotics competitions that include two standard ground competitions, the Seaperch underwater remotely operated vehicle in conjunction with the Aerospace Institute at Embry-Riddle Aeronautical University, and the Aerospace Robotics Competition (ARC) Drone competitions. The outcomes to measured in each area will be the level hours invested by the students along with the number of students impacted by the competitions and their creativity and future impact on the world.