

**2020-21 ATT STEM@Work
Project Summaries**

County	Organization Name	Name	Project Abstract
Baker	Baker County Education Foundation	Full STEAM Ahead	The plan for this project is to create lessons based on Science, Technology, Engineering, Art and Math. Through exploration and hands-on learning, students will gain knowledge and an increased interest in taking STEAM classes in the future, or an increased interest in pursuing a STEAM field. Lessons are designed to be completed at school in the resource classroom, however, if the school or students are sent home to pursue a virtual learning option, lessons can be packaged and sent home. The lessons include five different areas relating to STEAM. The areas include Aviation, Space, 3-D Shapes, Nanotechnology and Water.
Broward	Broward Education Foundation	Archaeological Tales from the Crypt	The Archaeological Tales from the Crypt Project will allow students to learn about the scientific aspects of historical archaeology, learn local history and contribute to the preservation of a valuable historic site. Students will collect and analyze data from veteran markers at a historic cemetery in Fort Lauderdale, analyze archival data to learn the stories of these veterans and they will write an analytical report about the veterans they researched. Students will be guided through this research project by staff from History Fort Lauderdale. The desired outcomes of this project are increased interest in taking STEAM classes in the future, interest in pursuing a STEM major, interest in pursuing a STEM career and demonstrated grade improvement in their STEM classes.
Broward	Broward Education Foundation	Learning is More than a Hobby	Students at the Cross Creek Center School have emotional/behavioral disabilities that significantly impact their academic experiences. They have difficulty making connections between concepts presented in class and real-life application. In response, the Learning is More than a Hobby project will expose students to engineering concepts and careers as they learn how to and design model drones, rockets, cars and simple machines. Students will also receive mentoring and work exposure from staff and technicians at a local hobby store who use engineering concepts in their work. The use of drones and other mechanical navigation devices are quickly becoming mainstays in 21st Century and this skill set is embedded in many industries. Due to the nature of the disabilities of the students participating, careers that involve technical competencies are both realistic and viable.
Citrus	Citrus County Education Foundation	Underwater Feels Like School	Only 1% of 1% of the world's population is a certified SCUBA Diver. We believe ocean conservation lacks exposure because people lack the ability to be exposed to it. By working to SCUBA certify high school students we catch their interest at a formative age and set them on a course of lifelong passion for what is underneath the water. Not every student who earns their certification will become a Marine Biologist or an Oceanographer, but the hair salon they run, or the power plant they operate will be run by someone who is wired with conservation in their DNA. Our goal is to set forth the next generation of societal leaders scientifically literate and mindful about conservation. To date we have certified over 100 student divers utilizing the non-profit NAUI SCUBA certification program. We are the only program we can find in the country that has embedded SCUBA diving in the curriculum. Through this project, we can more than double that number.
Clay	Clay County Education Foundation	Project C.A.I.D. (Cybersecurity, Artificial Intelligence, and Drones) at Orange Park Junior High.	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. Using Woz Education Curriculum and Materials, Orange Park Junior High features the first program of its kind in Clay County, preparing students for a career in nearly every industry through artificial intelligence, cybersecurity, and drone technology hands-on learning. The career pathways are designed to teach students the skills that correspond with the CompTIA A+ Certificate, Google AI certification, FAA 107 license, as well as increase student interest in STEM fields and STEM content area achievement.
Clay	Clay County Education Foundation	Project C.A.I.D. (Cybersecurity, Artificial Intelligence, and Drones) at Keystone Heights Elementary	Project C.A.I.D. (Cybersecurity, Artificial Intelligence, and Drones) at Keystone Heights Elementary is the first program of its kind in a rural Clay County school, preparing students for a career in nearly every industry through artificial intelligence, cybersecurity, and drone technology hands-on learning. The career pathways are designed to teach students the skills that correspond with the CompTIA A+ Certificate, Google AI certification, FAA 107 license, as well as increase student interest in STEM fields and STEM content area achievement.
Flagler	Flagler County Education Foundation	Merging of Technology and Ecological Need: i3 Students use 3D Printers to grow Coral!	For the 2020-2021 school year, our students have an intensive project that they would like to complete to address a combination of these challenges: the growing of coral to be reinstalled within coral reefs in Florida. Our students will work to 3D Design, plan and print 3D starter bases, will work with Marineland of Florida and the UF Whitney Lab to establish salt water tanks in our classroom and grow coral from "seeds" on these bases. Students that are salt water dive certified will work with their dive schools to install these coral starters in reefs throughout the State! This project will allow our students to become the change agents for Florida's Coral Reef Ecosystems and Biomes- areas that are being lost due to human impact and Climate Change.
Franklin	Franklin County School District	Seahawks Soaring with STEM	This project will be used to increase the number of students interested in STEM classes, increase the number of students who would consider a career in a STEM related field, and increase grades for students in our UAS Operations classes. Unmanned Safety Institute personnel will work with the Drone students at Franklin County School students on campus throughout the year and will sponsor an Unmanned Safety Day on campus in the early spring. This safety day will focus on educating students and the community on the topics of drone safety, professionalism, applications, and opportunities in the industry. Attendees will be able to practice flying drones on Zephyr simulators and watch a flight demo hosted by USI and our students.
Franklin	Franklin County School District	Seahawks Using STEM to Save our Sea Creatures	This project will allow our young students to better understand the impact they have over the life of the local waters. The bay was recently closed for oyster harvesting for the next 5 years, having a massive impact on the local economy and on the lives of the students. It is our hope that his project will open the eyes of the students on the impact that STEM related careers and technology will have on their future lives, and plant the seed of thought that maybe they could be the person to create a solution to the revitalization of the local seafood industry. Gulf Specimen Marine Lab will participate in 14 virtual sessions with our students during which they will explore the various ways technology is involved in their lab during the process of saving sea creatures that have been injured, and in the cleaning and restoration of the local bays. This will culminate with the lab's touch tank making a visit to the school for a 6 hour day during which the students will have a "hands on adventure" with various creatures of the sea.

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Franklin	Franklin County School District	Seahawks STEAM Ahead	This project will allow our students to become aware of potential careers in our area that are part of the career clusters they are studying. Our students come from impoverished backgrounds and are often unaware of the possible career opportunities that await them if they simply have the correct training. Our students will participate in virtual or in face discussions (COVID dependent) with local business owners during which they will be made aware of potential careers in the career clusters they are studying.
Hamilton	Hamilton County Public Schools Foundaton, Inc.	Discover Drones	The project will use Discover Drones, where students will experience first-hand the world's fastest-growing technology. Starting with collaborative learning and scaffolded lessons in engineering, iterative design and applied science, students begin by building RubiQ, their modular, open-source training drone. After learning the safety regulations and procedures surrounding unmanned aerial vehicles, they learn the basics of flight, first becoming comfortable on a training simulator before moving onto line-of-sight piloting. After mastering RubiQ's controls, students don their First-Person View (FPV) goggles for multiple extensions, experiencing exactly what super-charged STEM is like. They will have access to Droneology, a fast-paced, interactive online course that prepares pilots of all skill levels for safe and responsible drone entertainment.
Hernando	Hernando County Education Foundation	What is Energy? Physical and Chemical Energy	The purpose of this project is to allow our students to gain a better understanding on how Energy affects everything we do and observe the various stages of Physical and Chemical Energy through various hands-on projects. Mountaineer coffee will help us introduce the Physical and Chemical changes in energy with the use of coffee beans and other items. The students will keep running records of the changes they observe in provided journals. Mountaineer will also virtually walk the students through the process of making coffee (chemical change).
Hernando	Hernando County Education Foundation	Engineering CTE Program	Our project plan includes enrolling our middle school Algebra 1 Honors students in a special challenging CTE program: Foundations of Robotics Course (9410110) This course will introduce each of our advanced mathematics students to the field of engineering using a dynamic curriculum that includes building and programming VEX V5 robots, programming LocoRobo drones, and in-person visits to our local "Monster Transmission" business located in Brooksville. Follow-up visits will be virtual in nature and include interviews with the MT staff to learn about the process of engineering and design resulting in a working custom transmission.
Lake	Education Foundation of Lake County	EKG Technician Industry Certification Launch	The students in the Certified Medical Administrative Assistant (CMAA) program learn a great deal of administrative tasks like billing, scheduling, and insurance which is all very important in the daily workings of a medical office. We are looking to give the students an advantage of having an additional certification in a more patient-hands-on aspect of performing electrocardiographs. This gives the students a higher marketability, and the knowledge of heart rhythms and how to recognize abnormalities and perform an accurate EKG is essential to many jobs. We would like to begin training and instructing students on how to obtain their certification to become an Electrocardiograph Technician. The students will be able to have virtual sessions with a nurse educator from South Lake Hospital to supplement and enhance their instruction from their school instructor.
Lake	Education Foundation of Lake County	Soaring to the Clouds	The Aviation Club currently involves the students from Umatilla High School, but our future efforts are to make this an Aviation Academy available to all Lake County students. The Aviation Club was started to offer students at Umatilla High the opportunity for a STEM based aviation program. This is the beginning of our second year, and we currently provide training in an FAA-certified Flight Simulator, hands-on experience in building a RV-12 aircraft, and aviation ground school instruction. The job opportunities in all aviation related fields are in high demand for the next 25 years with baby boomer retirements. Opportunities exist for aircraft mechanics, pilots, aerospace engineering, Air Traffic Control and a variety of electronic fields. The Aviation Club currently has the support of volunteers from EAA Chapter 1632, who mentor the students in all aspects of the program.
Lake	Education Foundation of Lake County	Lunar Festival	The Lunar Festival is an opportunity for our Leesburg/Lady Lake area schools to come together and STEM/STEAM activities that focus around Earth/Space science and careers. The plan for this project is to bridge families and schools through STEAM by providing with hands-on learning activities that support the instructional goals of STEM with a 21st Century real world application. This event will be held at Venetian Gardens in Leesburg, which is the epicenter of most community events in our area. We will have multiple STEAM stations that will be led by students from Leesburg High School as well as our surrounding elementary and middle schools. Each station will support the NGSS science standards for Earth/Space science. We will be collecting learning data for each station and STEM career data. Our goal is to reach 300 students about STEM careers. Our students will be facilitating stations on Rocketry, solar energy, STEM chemistry demonstrations, and toy design using 3D printer.
Lee	The Foundation for Lee County Public Schools, Inc.	STEM Kits for STEM Cadets	STEM Kits for STEM Cadets, will provide 400 "Do it yourself" STEM kits to elementary students in eighteen (18) classrooms across Lee County schools. These STEM kits, developed by STEM majors at Florida Gulf Coast University, will be used to increase student interest in STEM activities. As one FGCU student describes this project, "As students who are studying to become scientists, we wanted to choose experiments for these STEM kits that we enjoyed as children and recreate that same sense of awe and wonder with future STEM experts." In addition to distributing STEM kits, FGCU STEM majors will provide virtual mentorship opportunities to students that wish to pursue regional STEM competitions, such as Elementary Science Expo in May 2021.
Leon	Foundation for Leon County Schools	RAA STEAM Club and Class	The RAA STEAM Club and Class will be a true multi-disciplinary course where kids will get to learn about everything from geology, engineering, robotics, botany, agriculture, chemistry, art, and more. It will be a chance for kids to improve their reading, writing, math and science skills and discover STEAM fields that interest them. Guest speakers from Florida State University, Coastal Plains Institute and Greenfield Environmental Trust will give the kids a wide variety of interactions with STEM professionals. In addition to hands on learning with manipulatives, and mentoring from guest speakers, two online resources will be utilized. CoSpaces is a software that teaches coding similar to Minecraft that middle school kids love, and Padlet is an online teaching resource that a good replica of hands on activities that require sorting information or group collaboration. Both of these resources are currently not available to LCS teachers and require fees to access.

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Leon	Foundation for Leon County Schools	Trojan Geek Squad	The Nims is a Title I School where our students face daunting challenges within and outside the classroom; some are even homeless. Many desire to participate in an innovative program such as Robotics but are hindered because of the financial investment that is required from their families. The implementation of a Robotics program at Nims will not only broaden the horizons of our students but will positively change the trajectory of their families. We seek to provide 75 students with an innovative curriculum that is reflective of a high-quality program that is comparable to ones seen in more affluent areas. 75 Students will be exposed to careers in the various STEM fields, and at least 50% of said students will learn to program a robot, thereby introducing them to the field of Artificial Intelligence (AI). This new program will expose our students to cultural, educational, and STEM opportunities they had no access to before.
Liberty	Panhandle Area Community Outreach	Engineering STEM Design Field Day	"Engineering Design Field day" combines hands-on engineering activities into a culminating school (or multi-school) competition. The activities expose students to various engineering principles across a wide range of fields including aerodynamics (Design and Fly a Kite, Wind-Powered Sail Cars), collaborative problem-solving (Engineering Derby: Tool Ingenuity) and structural stability (Race to the Top! Modeling Skyscrapers, Straw Towers to the Moon). By holding the event in the form of a competition, students become deeply invested in designing and building their projects to beat their competitors' designs. A concluding awards ceremony recognizes the winners of each competition for their achievements, setting an example for all students to excel in engineering.
Marion	Public Education Foundation of Marion County	Every Cloud has a SILVER Lining	This grant involves contextualizing science in the local community and raising awareness of our local environment. The plan is to buy equipment to allow analysis of soil and water samples collected by the students at Silver Springs. Students will measure the quality of the water and the soil and compare that to previous groups' data to see what changes have occurred. Unfortunately, we know that our springs are under threat from the overuse of agricultural chemicals and thus, students will be able to measure and see that for themselves. This interdisciplinary project also develops broader skills like leadership, team working and communication. Importantly it gets students out of the classroom and into the beauty of the park in their community where they are hiking to collect their water and soil samples.
Okaloosa	Okaloosa Public Schools Foundation, Inc	Aviator Flight School	An afterschool Aviation Club will consist of two groups, Junior Aviators in grades 2-3 and Senior Aviators in grades 4-5. The AVKids program developed by the National Business Aviation Association (NBAA) will be used to cover introductory lessons in Forces of Flight, The Main Parts of an Airplane, and Airplane Design. Students will have hands-on activities such as constructing wind turbines to simulate how air affects flight, planning and designing a three dimensional airport, and construction of model planes and stomp rockets to record data of distance and thrust. Senior Aviators will also build and launch model rockets. All groups will participate in flight simulation. We hope to encourage students to pursue classes at the middle school level, and then proceed to continue their growth in STEM by pursuing classes with Embry Riddle Aeronautical University, at Choctawhatchee High School.
Osceola	Education Foundation for Osceola County	1. Solar Centered	Pollution and using non-renewable resources are real issues of today, especially for this generation. Therefore, we intend to use research, the Engineer and design process, and experts to discover, explore, explain, and evaluate how to utilize solar energy. Students will learn from industry professionals about clean energy. They will explore the KUA solar truck with multiple visits via in-person or virtually. Virtual field trips to various Power Plants will occur. Felix the Falcon the school mascot will travel and explore learning about various solar energy sources in Florida. The Expert from KUA will help guide the students in creating their own innovative solar product to bring awareness to the school about solar energy.
Osceola	Education Foundation for Osceola County	3. STEM Road Map project: Recreational STEM: Playground Swing Set Makeover	In this project, students will examine the STEM aspects involved in constructing a new and improved swing set design. Science inquiry activities will allow students to explore the impact of balanced and unbalanced forces on motion and force. Students will gain a conceptual understanding of motion and force when they relate how the body moves to the objects explore, paying close attention to the forces each exerts and the positions maintained to keep balance. Students will identify geometric shapes, collect data using mathematical tools, and record and analyze data using line plots and bar graphs in order to explain and make predictions. Students will be challenged to apply this knowledge in the module's final challenge, the Swing Set Makeover. Students will work collaboratively using the engineering design process (EDP) to sketch and develop a small scale model of their proposed design, using geometric shapes and precise measurements.
Palm Beach	Education Foundation of Palm Beach County	Jupiter Middle Engineering Academy's Rocket Build and Launch	Jupiter Middle School's Engineering Academy Rocket Build and Launch program will engage students in learning through hands-on opportunities in order to build and launch rockets through both the engineering course and before school STEM Club. The project will be designed to increase the student's knowledge of rocketry, procedures, assembly, construction, and flying while incorporating local industry experts in field to further connect the curriculum and concepts being taught to career pathways by focusing on aerospace engineering and how space flight has been achieved from an engineering vantage point. The measurable outcomes will be demonstrated on how well the student scores on the rocketry examinations as well as the rocket technical report and drawing. The rocketry exams and the technical report involves similar topics such as Newton's Laws and principles of aerospace engineering. In addition, student pre and post participation surveys will measure the number of students who show an increase interest in taking STEM courses or pursuing a STEM-related career.
Pasco	Pasco Education Foundation	FRC Robotics Competition - KTECH	The FIRST Robotics Competition (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. The theme of the game will be revealed in January when FACTs Engineering Mentors and the team will meet and discuss possible solutions for this year's challenge. Our project is split into three components: design, prototyping, and troubleshooting. They are to be completed in that order, with the design being conceptual and CAD work on the robot. After this, we'll be using low-cost materials to prototype the mechanisms and work out major flaws/bugs with the program and mechanical design. Past the prototyping, we would be moving the design towards the industrial-grade, final materials; fine-tuning the design. The majority of interactions between the students and our business partner would be done during the finalization where they would assist them in fabricating the components required for the build.

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Pasco	Pasco Education Foundation	Royal Robotics - FIRST Robotics Competition(FRC) Team	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. It provides students with a difficult challenge allowing them to apply the concepts that they have learned. There is no substitute for experience and students willingly choose to spend an additional 10-20 hours per week after school learning and applying engineering concepts. The team has been successful in the past four years of FRC Competition, qualifying for the World Championship three out of the past five years, and bringing additional opportunities to our students.
Pasco	Pasco Education Foundation	Aquaponics / Alternative Farming Methods	Throughout this initiative, our school will be teaching students high-level core content and technical program skills through the intensive exploration of alternative food production methods. Phase 1 of our initiative is the efficient, high volume production of clean fish and plant-based foods through aquaponics. Aquaponics is a water-efficient and environmentally safe method of agriculture that combines raising fish in aquaculture tanks and plants without soil in one system. Plant yield is 10-20 times that of traditional farming, and water use is roughly 1/20th per unit of product. Our 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. Phase 2 will begin when the final system is built and involves the layers of teaching and learning that will take place for students to master the science behind full utilization. This system will be the cornerstone of our science department's lab resources. Phase 3 involves the adoption of three state-approved Agriscience courses. A primary focus of this program will be alternative plant farming and aquaculture.
Polk	Polk Education Foundation	Virtual Reality STEM: Possibilities in the Medical World	By partnering with surgeon Dr. Buck Scott from Lake Wales Medical Center, 3rd-5th graders can learn just how important technology is in the medical industry. We will go on virtual trips to the operating room and see how exciting surgery can be. Because of our limitations due to COVID, Soar plans to teach each classroom how to use the equipment so they too can experience adventure to help them better understand their lessons and spark curiosity. Soar will house and maintain the equipment, but will loan it out to the 3rd-5th grade teachers as the students prepare for rigorous and high stakes testing. This added educational component will be both a learning tool and a reward for a job well done. Like with all our projects, we try to intentionally focus on inspiring our bottom quartile students to help give them the tools they need to succeed.
Santa Rosa	Santa Rosa Education Foundation	Simple Machines, Applications and Robotic Technology (SMART)	Simple machines are devices with few or no moving parts that make work easier. Students are introduced to the six types of simple machines – the wedge, wheel and axle, lever, inclined plane, screw, and pulley – in the context of the construction of a pyramid, gaining high-level insights into tools that have been used since ancient times and are still in use today. The same physical principles and mechanical advantages of simple machines used by ancient engineers to build pyramids are employed by today's engineers to construct modern structures such as houses, bridges and skyscrapers. Simple machines give engineers added tools for solving everyday challenges. The project provides reinforcement of simple machines foundations by allowing powered working machines to be designed, constructed and tested by students. The mechanical engineering drive towards faster turnaround of prototyping in the design cycle would be put to work. This project will allow students to design, construct and test reinforcement of simple machines foundations using powered working machines.
Seminole	Foundation for Seminole County Public Schools	Think & Design	Lawton Chiles Middle School's Think and Design Program of Exploration focuses on the core concepts of curiosity, sustainability, social responsibility, and environmental stewardship. Students will explore these concepts within the focal areas of AgriScience, Nutrition/Culinary, Weather, and AgriTechnology. In Think and Design, students will explore and understand the need for sustainability and social responsibility. They will learn and apply the concepts of growing organically in raised bed and hydroponic gardens and the use of associated technology. Then, students will investigate a real-world problem related to food, nutrition, weather, water quality, or related-technology and will develop a solution. Project outcomes will include increased student choice in the number of STEM electives available to students, real-world problem solving as students investigate and problem-solve issues posed by business partners, and increased articulation to the high school feeder programs (Modeling & Simulation at Hagerty HS and Biotechnology at Oviedo HS). By engaging students with STEM professionals and asking them to be active participants in the classroom, LCMS intends to create a positive impact on these students that will increase their interests in STEM careers and fields.
St. Johns	Investing In Kids	ACE Mentor Program at Creekside High School	This program exposes Creekside High School students to disciplines in architecture, construction and engineering, which allows exploration of potential careers in these fields. Mentors from local industry professional firms and related companies meet with students for two hours once a week for 20 weeks. During these sessions, students are presented with an RFP (request for proposal) and work in teams to create hands-on, practical solutions for "real-world" projects. This is an effective way for students to experience the reality of what architects, contractors and engineers do during a typical working day. The program culminates with a year-end event where teams present their projects for judging. It is expected that these presentations will be held in front of industry stakeholders (i.e., future employers), family, friends and the general public. As part of the event, senior students are presented with scholarships to help fund their continued education.
St. Johns	Investing In Kids	ACE Mentor Program at Nease High School	This program exposes Nease High School students to disciplines in architecture, construction and engineering, which allows exploration of potential careers in these fields. Mentors from local industry professional firms and related companies meet with students for two hours once a week for 20 weeks. During these sessions, students are presented with an RFP (request for proposal) and work in teams to create hands-on, practical solutions for "real-world" projects. This is an effective way for students to experience the reality of what architects, contractors and engineers do during a typical working day. The program culminates with a year-end event where teams present their projects for judging. It is expected that these presentations will be held in front of industry stakeholders (i.e., future employers), family, friends and the general public. As part of the event, senior students are presented with scholarships to help fund their continued education.

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Sumter	Sumter Schools Enhancement Foundation	TechnoLogic	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 schoolworking 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..
Volusia	Futures Foundation for Volusia County Schools	Solving a Real-Life Environmental Problem Using STEM	Students will design and engineer a real-life solution to one of three pressing environmental issues: invasive plants, fire, and vandalism. Students will research their chosen project, develop a plan and propose the solution. They will contact local environmentalists and access STEM resources for suggestions. They will test their solutions, present their final findings via TEAMS to the local experts and complete a small-scale project (with potential plans for expansion) on one of three outdoor sites: Spruce Creek Park, Gamble Place, or Tuscawilla Preserve in Volusia County, Florida. Students will be socially distanced and masked while implementing and testing their solutions. All parts except the field trials can be done using technology and presented using TEAMS to share with the student teams, teachers, scientists, environmentalists, and land management engineers. Students will be engaged, enriched and encouraged to interact with their community while solving a real-world local environmental problem.