

2016-2017 Motorola STEM Solutions for Florida's Future

Foundation Name	Project Title	Project Abstract
Education Foundation of Alachua County	Leveling Up: Incorporating Design Thinking into the Classroom	Howard Bishop Middle School is taking their approach to STEM education to the next level. With the Motorola STEM Solutions Grant, we will solve our biggest problem. How can we do it all? Our project's mission is to enable students to take control and innovate by applying their background knowledge in science, technology, engineering, and math to create something new. The grant will provide our school with a MakerBot 3D printer and Digitizer. This winning combination will allow students to become tomorrow's inventors and innovators. In collaboration with our Business Partner, Gator Tech UF, we will give each child the tools they need to take their 21st century skills into the arena. With our focus on critical thinking and collaborative planning, we will fuse curriculums to engage with technology where it is evolving. On the cutting edge, we will balance student success with real life skills that will serve them in days to come. Students, teachers, and community members will use this technology to build their digital, computer, and information literacy. They will emerge from this experience stronger, smarter, and more excited about STEM than ever before!
Flagler County Education Foundation	Captain Planet: Education Environmental Engineers	The <i>Captain Planet Initiative</i> provides students of varying age and minority an equal opportunity to not only learn about STEM careers but to experience the career's day-to-day responsibilities and positive environmental and economic impact. By allowing students to engineer solar panels, a greenhouse and a community garden, the community can benefit from more availability of organic produce without a carbon footprint. The possibility of powering a portion of FPC's campus (i3 Academy) using an alternative energy source such as solar panels drives home the importance of our future generations being equipped with the knowledge and skill to minimize our impact on the environment. If successfully implemented, Flagler Schools can sell the electricity harvested from the solar panels back to FPL to not only save money in times of economic hardship, but to establish a "Green Account" to further reduce the carbon footprint of Flagler Schools while setting an example for our future generations of the importance of sustainability and environmental protection. Examples of sustainable practices funded by this "Green Account" include but are not limited to: switching from polystyrene lunch trays to recycled paper lunch trays, using low impact light bulbs, and establishing/engineering a greenhouse/garden at every school.
Glades Education Foundation	Now Showing: STEM 3D Dreams	<i>Now Showing: STEM 3D Dreams</i> introduces students to STEM related careers through the use of a 3D printer. 3D printing is the latest technology to impact forensics and the field of medicine. Where once it was CAD printing now, it is 3D printing. Until now, this technology was not universally available to students. Using a 3D printer and a standards based curriculum for physical science and chemistry and partnering with Keiser University, FLDE, and the Glades County Sheriff's Department, students will experience the latest technology that impacts, not only lifelong learning, but also how technology affects organizations, our personal life and future careers. Workforce partners will spark an interest in such technology and the studies required to earn a degree in various STEM areas as well as interest in STEM as a career. Students will be introduced to the requirements for a career involving 3D technology such as forensics, crime scene investigation and possible medical arenas. The plan proposes that students applying the concepts of 3D printing in the classroom by actually using a 3D printer that is pre-loaded with STEM software will help to make dreams come true.
Foundation for Leon County Schools	Let Your Dreams Fly High	"The sky is the limit": a saying teachers have been relaying to students for years. This project will allow students to reach the sky and go beyond. Students will launch high altitude weather balloons and explore the data those balloons recover. The project will inspire students, challenge them, and show them that concepts in a textbook can have real-world applications. The opportunity to design and engineer products and then manage a student led business to sell those products will teach concepts that somehow have become lost in schools. Students will truly have the opportunity to let their dreams fly high.
Manatee Education Foundation	Exploring the Future of Robotics and Animatronics	Braden River High School will engage nearly 300 engineering students in a multi-component program that highlights robotics, manufacturing, and real-world problem solving. Through VEX, students will explore the engineering design process and have a solid introduction to fundamental concepts such as classical mechanics, design, CAD, etc. Students will learn – and become Certified in Solidworks – build robots designed to complete various tasks, and manufacture parts through 3D printing.
Public Education Foundation of Marion County	Be Cool! Stay After School!	Imagine a neighborhood community school that serves as a hub for activities and afterschool programs to help keep students safe, off the streets and learning. A school where students don't want to go home, but actually sign onto a waiting list to engage in math and science activities outdoors! This is Horizon Academy. We have reached over 4,000 students and countless community members. We have taught everything from egg landers to mousetrap racecars to aquaponics. In a normal week we served up to 150 students from 2:30pm until 5:30pm four days a week. Many students and parents even attended weekend sessions and volunteered hundreds of hours to help the school serve the community. This year we face a dire funding crisis and an increased student count. Our waiting list last year, before our program ended, was 67 students and we hoped to be able to pick them up this year. With the loss of all funding, we have no program, however we have seven teachers who are willing to volunteer their time to teach and tutor and we have students who persevere with parents waiting for our program comeback. Motorola can make this happen. Motorola can make our student's dreams a reality.
Education Foundation of Palm Beach County	The STEM Garden	Students in grades 6, 7, and 8 will connect with global issues like water quality, pollution, water conservation, and environmental stewardship through the creation of a STEM garden. Students will design and construct garden and irrigation systems in order to demonstrate their knowledge of these environmental systems and resources. Students will be able to connect these activities to STEM careers in order to increase interest and involvement within STEM fields.