

Education Foundation of Indian River County

2020-2021 School Year. Letter of Idea

High Impact Grant Proposal

Name of Project: **Stingrays Full STEAM Ahead!** with Science, Technology, Engineering, Arts and Math through the **Stingray STEAM Maker Space**

Project Information: Storm Grove Middle School is beginning its inaugural year of our STEAM initiative, which will prepare our students for the real -world by immersing them in project-based science, technology, engineering, and technology instruction, with a focus on the environment.

Project Alignment with School District Achievement Plan and Storm Grove Middle School Improvement Plan: The School District of Indian River County's Strategic Plan provides Guiding Principles which serve as the foundation for quality, excellent instruction for all SDIRC students. This project supports the following principles:

- Provide equitable access to high-quality, rigorous instruction
- Engage in innovative practices to optimize outcomes

By providing students with this innovative "Maker Space," we are advocating for all students to engage in a creative, high-interest experiences, which align with both science and math standards.

Amount of funds requested: \$6611.55

Total Project Cost: \$6611.55 plus additional materials supplied by the school as needed

Targeted Population: Storm Grove's entire student population will be served in this project. The project is designed to engage students from the struggling learner to the highest achiever.

Number of Children to Be Served and Grade Levels: Approximately 1050 students will be served in 6th, 7th and 8th grade.

Succinct Summary: Storm Grove Middle School has been designated a "C" school by the Florida Department of Education for the past four years. With a goal to be an "A" school by prior to 2025, which is the District's target year for all schools to have "A" status, it is paramount that student achievement improve in all areas, including math and science. This project will address improvement in science and math in all grade levels and all sub-populations by encouraging students by infusing innovative technology into lessons, which require math and science skills. Students will create projects such as Geometry Connectors, a customizable Archimedes Trammel and a Rocket Car Chassis and Wheels and a Mini Windmill and Turbine, along with other projects teachers believe to be high interest. The Maker Space will be used to create these projects through use of a 3D printer, scanner, software and the other necessary components to complete projects.

- **The Issue:** Storm Grove students must improve achievement in science and math. Our math and science scores have declined in the past two years, which must be remedied. The focus of our new STEAM program is to ignite excitement and student engagement in both of these areas, with an emphasis on the environment and the arts.
- **The Change:** This project will provide students with an opportunity to engage in high-interest, hands on projects which will encourage them to learn more about the practical application of math, science, engineering and technology, which will also align with career interests.
- **The Action:** Once all materials and equipment have been ordered and received the Maker Space will be assembled in a space provided at Storm Grove Middle School. Several stations will be included, and each will allow students to engage in creating projects, which will be address each individual student's math and science level.

Grant Oversight: STEAM Committee Chairperson Joan Martinelli, Media Specialist Danyelle Sessoms and ELA teacher Margaret Neely will provide oversight of this grant, along with STEAM committee members. Principal Anne Bieber will also provide additional oversight.

Monitoring Project and Results: The STEAM Committee, in addition with individual teachers, will monitor the results of math and science standardized tests, which include the Unify test, which is administered in all core subjects several times throughout the school year. Likewise, teachers in science and math classes will assess student interest in the projects through the use of surveys using surveys from Microsoft 365 Forms, then reviewing the results and making adjustments as necessary.

Volunteers: Storm Grove’s active and highly involved PTA members will be involved in this project. Local experts in the field of technology will be sought out to visit classes and share their real-world knowledge and passion regarding science and technology. Likewise, volunteers in the field will be recruited to work with students after school in the Maker Space lab.

Itemized Budget:

Product	Price	Distributor
Lulzbot Mini 2	\$1495	Lulzbot
PolyLite PLA Filament	\$24.99 each spool (\$499.80 for 20 spools colors)	Lulzbot
Sphero SPRK +Stem Robot	\$101.99 each (10 units for 1,019.90)	Amazon
Makey Makey Stem Pack	\$699.95	Amazon
LEDs Lights DiCuno 450 pieces set	\$11.99	Amazon
JUNPOWER CR2032 batteries	\$6.99 set of 20 (5 sets for \$34.95)	Amazon
LittleBits Steam Student Set	\$299.95 for three students (5 sets for \$1499.75)	Sphero
Matter and Form 3D Scanner V2 + Quickscan	\$749.99	Matter and Form
HP DeskJet 2622 All-in-One Compact Printer (Blue) (V1N07A)	\$199.00	Amazon
HP 65xl ink cartridge color	\$35.89 (6 for \$215.88)	Amazon
HP 65xl ink cartridge black	\$30.89 (6 for \$185.34)	Amazon