

## **Limitless Ingenuity: Building Capacity**

### **Dear Education Foundation,**

Indian River Academy, School of Aerospace and Robotics needs your fuel to lift off to our next destination! Last year, Limitless Ingenuity: Building a Community of Innovative Learners was chosen as one of the winners of the High Impact Grant. With the grant we were able to implement the beginning stages of our robotics program for second through fifth grade scholars in the Media center. I am proud to share the amazing impact this had with our scholars. Through the pandemic, our academic scores improved, student engagement improved, and our school grade climbed from a C to a B. I would be honored to continue the partnership with the Education Foundation to be able to purchase materials that will extend the use of robotics into our traditional classrooms. I am extremely grateful to your dedication and support in providing an outstanding education for scholars in Indian River County.

### **About the Project:**

Indian River Academy's School of Aerospace and Robotics is on a mission to create a school of excellence, innovation, respect, and responsibility. Our mission is to inspire and educate all students to become tomorrow's leaders in the field of Aerospace and Robotics. Limitless Ingenuity: Building Capacity is our next step in growing our Robotics program from primarily the media center to traditional classrooms, advancing student engagement and academic progress in all curricula as well as vertically across grade levels. Teachers in grades 2-5 will be able to implement a variety of robotics into their standards-based instruction, which will enhance students' learning and engagement in their daily academics while truly deepening their content knowledge. Scholars will continue to progress in becoming confident in collaborating with peers, problem solving, and using computational thinking skills.

### **Targeted Population:**

Limitless Ingenuity: Building Capacity will be available to all students in grades 2-5.

### **The Issue:**

Since 2017, Indian River Academy scholars have not been meeting proficiency or the state average in the areas of reading, science, and math. Student engagement and negative behaviors is a challenge in the traditional classroom. Research shows that lack of student engagement increases negative behaviors, leading to challenges in academic success. The implementation of robotics allows students to apply content knowledge in a meaningful way, providing the opportunity to engage in collaboration and conversation, persevere through challenging tasks, as well as become creative scientists and leaders in addition to classroom curriculum.

### **The Change:**

As a result of the 2020-2021 impact grant, negative behaviors decreased within the media center, and academic success increased in science and reading. Fifth grade science scores increased from an overall 47 points to 57 points, positively impacting our school grade. This grant will allow learners of all levels to have the opportunity to be creative and innovative with hands-on experiences through robotics in their classrooms in addition to the Media center. Participants will sustain connections with peers through partner or group challenges and tasks, applying the experience to real-world challenges. This project also promotes active listening and purposeful speaking to successfully work through higher level tasks. Perseverance and

self-regulation naturally occur in these highly engaging tasks. Extending robotics to the traditional classroom will allow our scholars to advance in their ability to express themselves, listen, and relate to others - gaining valuable lifelong skills.

#### **The Action:**

As the media specialist, it will be my responsibility to train, collaborate, and plan with teachers and instructional coaches to implement integrated lessons with robotics that support the grade level standards. I have a team of classroom teachers who have committed to our vision in grades 2<sup>nd</sup> through 5<sup>th</sup> that are willing and ready to build our capacity of Robotics in the traditional classroom, providing more opportunities for scholars to build their lifelong skills of collaborating, problem solving, and persevering. Second through fifth grade teachers and scholars will experience award winning Ozobots, Spheros, and Dash and Dots utilizing imagination and creativity to bring standards to life. Scholars will research, design, and simulate concepts that support Florida standards while growing their knowledge in the field of robotics.

#### **Grant Oversight, Monitoring, Progress, and Results:**

Progress monitoring of each student's ability and application will happen through problem-solving task completion. District unit assessments in the areas of reading, math, and science will be monitored.

#### **Price:**

##### **24 Ozobots (2 12-pack class sets): \$3,210**

Kit includes: 12 Ozobot Evo robots, Ozobot Classroom license code, Boot Camp training for Educators, 12 Color Code marker sets, charging & storage base, Ozobot poster, and Classroom Kit bin.

##### **1 Sphero Bolt Pack: \$2,649.99**

Includes; Power pack case, 15 Sphero BOLT Robots, 15 Inductive charging cradles with USB cables, 15 Protractors with heading, directions, and clock, 15 Turbo covers, Maze tape and 124 stickers, teacher lessons and activities.

##### **12 Dash and Dots Wonder Pack: 12 packs at \$279.95 each; Total: 3,359.40**

Includes: Dash robot, Dot robot (blue), Launcher for Dash, Xylophone for Dash, Accessories Pack for Dash and Dot, Building Brick Extenders, Set of rabbit ears and tail.

**Total Cost: \$9,219.39**

**Amy D'Albora**

**Media Specialist  
Indian River Academy School of Aerospace and Robotics**

