



Indian River School District ExCELS

BY EMILY RILEY

THIRTY YEARS AGO, educators in the Indian River School District began to lay the groundwork for what is now one of the fastest-growing Science, Technology, Engineering and Mathematics (STEM) programs in the state. The district's Exceptional Cognitive Enrichment Learning (ExCEL) program challenges elementary-aged gifted and talented students' critical and creative thinking skills today, so they can become the ingénues that tomorrow's job force requires. Components of this program include engineering design processes, the scientific method, forensics, robotics and so much more. Participants are granted a stimulating educational experience alongside their peers in an environment that promotes

both intellectual growth and creative problem-solving.

Long term, investment in STEM education is the first step to a career trajectory in rapidly growing fields. Data from the U.S. Bureau of Labor Statistics predicts that employment in occupations related to STEM is projected to expand to the tune of more than 9 million jobs between 2012 and 2022. With this in mind, the ExCEL program has adapted to the demands of this evolving workforce. The tailored curriculum is designed to suit the district's gifted and talented students, with the goal of fostering development of higher mental processes, creativity and critical thinking skills, while maintaining a fun and engaging learning environment.

Superstars in Education

"Our students have shown marked improvement in core STEM areas each year, and we continue to see growth in these numbers as we develop our curriculum," says ExCEL instructor Cindy Isaacs, referring to the baseline testing that's completed at the start of each school year. Most students demonstrate anywhere from 33 to 68 percent proficiency across STEM disciplines by relying on their previous knowledge base. Nine months of experiential learning under the tutelage of STEM-certified instructors bumps those statistics to average scores of 90 percent or greater.

Notable among the student population is the lack of correlation between intellectual potential and socioeconomic background. Indian River School District has four elementary schools where 80 percent or more of its students receive free and reduced lunches, three schools operating at 67 percent and above, another at 55 percent and the last at 44 percent. Isaacs acknowledges that while academic success is not commonly associated with lower household income, it has not deterred Indian River School District students from demonstrating academic aptitude. The ExCEL program not only incorporates a large number of these students into their roster, it simultaneously makes

excellence in the classroom an attainable goal for all, she says.

What's even more impressive is that the ExCEL program has been able to evolve while operating on the same budget it started with – nothing.

"We do not have provisional spending in place for this program," Isaacs says, "Our teachers and administrators find ways to make this entire curriculum work for their students and for the schools by 'thinking outside of the trashcan.'" This concept involves repurposing materials like cardboard, plastics and other multi-use products for STEM-focused classrooms projects, allowing one person's debris to become an eco-friendly, cost-beneficial treasure. Grants supplement the program's

stock of needed materials, but ExCEL's growth and development is firmly grounded in its commitment to ingenuity and creativity, and is evidenced by students' evolving proficiency in STEM fields.

At the end of the day, the students benefiting from ExCEL leadership are still kids with summer break on the brain and various interests outside of school. But at the end of another 30 years, the American workforce will have a strong batch of entrepreneurs, scientists, engineers and physicists thanks to Indian River's foresight and investment in its students' potential. ■



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