

## Application Score Sheet

Proposed Project: Bay District Schools, Tyndall Academy Thunderbird Tech Program (#244)

Proposed Project/Program County: Bay

Board of County Commission Support:

Total Projected Project Cost: \$232,900

Match Provided: \$85,000

Triumph Funds Requested: \$147,900 (63.5%)

Triumph Funds Recommended by Staff: \$147,900

Score: A

ROI: \$72.3 per dollar of Triumph cost

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### **Economic Impact Analysis and Score**

The Bay County School District is requesting \$147,900 in Triumph funding to be used to establish the Thunderbird Tech Program that will give third through fifth grade students at Tyndall Academy the opportunity to engage in a STEM program to learn digital literacy skills after school and during the summer months of June and July.

The program will provide 140 CAPE certificates in Digital Tools over five years as the program outcome metric. The per-cert cost to Triumph is thus \$1,156. Thematic elements of the program include 1. Engineering/ 3-D printing, 2. Robotics and Coding/Computer Science, 3. Digital Literacy/CyberSecurity, and 4. Drones/Unmanned Aerial Vehicles.

The match committed by the Bay School District includes \$20,000 in Title II and \$65,000 in ESSER II funds to be spent on computer equipment and professional development, for a total of \$85,000 in match. The requested Triumph commitment is thus 63.5 percent of the total project cost and is proposed to be spent on teacher, paraprofessional and administrative salaries and benefits as well as certificate costs. These salaries are for Thunderbird Tech summer program expenditures only and are thus in direct support of Triumph grant activities.

At a reimbursement rate of \$1,156 per net new certification, the cost per certificate attained is very low. The program is offered to third through fifth graders, and thus is well in advance of any labor force participation by the certificate recipients. However, use of the standard certificate ROI calculation would yield a discounted total increase in household incomes expected from the program \$72.3 per dollar of Triumph cost, which is quite high relative to those programs in the Triumph education portfolio. However, the match to be spent on the program is low relative to other Triumph education programs. For these reasons, staff rate this program "A" in terms of economic impact.

## **Project Summary (based on information provided by the applicant)**

Bay District Schools is requesting a \$147,900 grant for Tyndall Academy's Thunderbird Tech Program. The Thunderbird Tech Program will provide third through fifth-graders computer science skills and an introduction to the principles of engineering, unmanned systems, 3-D design and printing, and competitive robotics. The Triumph funds will be used towards personnel, supplies, cert fees and robotics competition fees for after school and summer programs.

Tyndall Academy, located on Tyndall Air Force Base, began transitioning from Tyndall Elementary in the fall of 2020 into Tyndall Academy to become a kindergarten through eighth-grade school. Through this grant students will earn 140 Information and Communication Technology (ICT) CyberSecurity Essentials Digital Tools certificates in 5th grade. The program's focus on digital literacy will create a seamless transition for elementary school students into a middle school digital information and engineering program, at no cost to parents.

Increased Tyndall Academy enrollment is expected following Tyndall Air Force Base's (TAFB) \$5 billion dollar rebuild, including a cutting-edge child development center which sustained a direct hit from Hurricane Michael. Increased enrollment is also anticipated following the rebuild of the base into the Air Force's first 21st Century "Installation of the Future" and the arrival of three new F-35 Lightning II jet squadrons.

This grant will allow third through fifth-grade students at Tyndall Academy to participate in a hands-on STEM and digital literacy skills program after school and during the summer. Mentors and guest speakers will introduce their career field to students including professionals from the computer science industry, Tyndall Air Force Base (MQ-9 Reaper Drone Program), Navy Support Activity Panama City, Gulf Coast State College, and Florida State University-Panama City.

The program will begin as an after-school 'Vex Robotics Club' during the 2023-2024 school year. The summer camp will follow as a structured six-week program, Monday through Thursday, June through July of 2023. Three weeks will be devoted to engineering and 3-D printing, robotics, and coding/Computer Science (cybersecurity), drone safety and operation.

Robotics teams use resources such as the Robotics Education and Competition Foundation Team Guidelines (REC), MakerBot Thingiverse, Codester Coding/Computer Science Platforms, code.org, and the DJI Maverick Mini's to prepare students for competitive robotics. Students will build confidence, higher-order thinking and collaborative team-building skills in elementary school while mastering computer science skills needed for high-demand career fields in a fun and engaging manner. Ceremonies will be held to showcase the students' learning and competitive skills to parents and other stakeholders.

Two teachers will oversee the afterschool program. The enrollment is expected to increase throughout the term of the grant. The teachers will be trained on the VEX GO and VEX IQ SYSTEMS to build their capacity. VEX GO kits will be used in Year 1 to teach the fundamentals of STEM in a fun, engaging manner as it is recommended for students in grades 3-

5. Friendly classroom competitions will be held using VEX GO. New students entering the ‘Vex Robotic Club’ Year 2 will start with the VEX GO before advancing to the programmable VEX IQ kit used in regional, state, and national competitions for Elementary School students. The Robotics Education and Competitive (REC) Foundation Team Guide will provide guidance in helping teams in years 3-5 prepare for the Vex IQ robotic competition.

According to the 2017 Northwest Florida Forward Strategic Report, cyber security is poised to yield high-wage growth due to its unique assets and new supporting programs in the region and as a result, has been recommended as one of the targeted industry clusters to transform the region through business recruitment, retention, expansion, and entrepreneurial support.

Tyndall Academy parents/guardians were surveyed in the 2020-2021 school year to gather their input on the type of after-school or summer technology program they would be interested in for their children. The results were:

- 100% were in favor of a 3-week summer program involving technology
- 100% of the respondents were interested in a 1-day week afterschool program

By expanding Technology and Computer Science initiative to the elementary level, Bay District Schools is preparing students now for high-skill, high-wage, high-demand fields in the workforce.

**Budget and Funding**

A.	Project/Program Costs:	
	Equipment**	\$65,000.00
	Supplies/Materials	\$6,000.00
	Salaries/Benefits	\$120,000.00
	Professional Development**	\$20,000.00
	Licenses/Certifications	\$9,000.00
	Vex Robotic Competition/Reg. Fees	\$3,900.00
	Curriculum	\$9,000.00
	Total Project Costs:	\$232,900.00
B.	Other Project Funding Sources:	
	Other Funding**	
	Bay District Schools - Title II	\$20,000.00
	Federal Grant - ESSER II	\$65,000.00
	Matched Funds Total	\$85,000.00
	Total Amount Requested:	\$147,900.00

The United States Department of Education, Elementary and Secondary School Emergency Relief Fund (ESSER II) is in the amount of \$65,000.00 and Bay District Schools in the amount of \$20,000.00.