



Foundation For Allen Schools Grant Application

Scholarship Fund Amount: \$0

Application #: AP241601

Applicant First Name: Raul

Applicant Last Name: Castillo

Applicant Email Address: raul.castillo@allenisd.org

Gender:

Cell Phone #:

High School:

Post Secondary School:

Application Status: Submitted

Application Questions and Answer

Question	Answer
Preferred name/name that you go by:	Raul Castillo
Best phone number to reach you at:	+14695693421
Campus	Ereckson Middle School
Grade(s)	7;8
I have co-applicants:	No
Please provide your work-related Facebook contact information.	
Please provide your work-related Twitter contact information.	
Name of Grant	Come on in...the bots are waiting!
Please select the MAIN curriculum area your grant addresses.	Science / STEAM

Does your grant have a technology component?	No
Will other campuses be involved/impacted?	No
Will other grades be involved/impacted?	Yes
How many students will be involved in this grant?	6
Are there any additional funds available for this grant?	No

What is the problem, need or opportunity that this grant will address? Describe the impact of this project on your students.

As part of an ongoing need within our school to provide learning opportunities to our students in the area of STEAM (science, technology, engineering, art, math), a new class offering/elective was added called Intro to Robotics in the 2019-2020 school year. This class offering along with STEM elective classes and BEST Robotics Club has bolstered student engagement in this rapidly growing field. The district's determination in continuing this focus is also evident with the opening of Allen ISD's STEAM Center (2018) providing students an avenue to learn even more about robotics, engineering and technology. In an effort to provide more learning opportunities to our students who are not able to enroll in a class for various reasons (class size limits, fully loaded schedules, or not able to participate in BEST Robotics), Ereckson started a VEX robotics club. Much like BEST robotics which is only able to support maximum 40 students and is a competitive club, VEX robotics club would also provide students with yet another avenue to develop team and group working skill sets, problem solving, programming, and valuable experience in a world that is finding more ways to implement the use of robotics in the fields of medicine, public transportation, and agriculture. Currently, VEX robotics club is able to support up to 18 students (7th and 8th grade, male and female). The purpose of this grant to purchase a new robot to increase access to this STEAM field by another 6 members. The grant will provide funding for a new robot, controllers, batteries, sensors and motors, along with structural components needed to task the robot for specific

	<p>challenges. This particular kit contains a bountiful array of components that will allow for more simultaneous building and continue to feed future groups ready to tap into their STEAM potential!</p>
<p>How will the project or program be implemented? Describe activities and tasks. Who is the target population and in what ways will they benefit?</p>	<p>VEX robotics club is meant to provide students with learning opportunities (much like BEST robotics club) in that students with specific interests students are tasked with an aspect that supports each individual team in the following areas: design (Tinker CAD), building, programming, along with development of driving and control skills of the physical robot (much like drones). Mixed groups of male and female, 7th and 8th grade students can participate.</p>
<p>Provide a brief summary for use on the Foundation's website and social media.</p>	<p>Technology is fun! With the VEX robotics system our students will have fun and will make connections on how the use of technology will improve the lives of people everywhere. As students team-up and collaborate, using the VEX robotics systems, they will develop skill sets necessary to understand the adaptive nature of technology while learning and practicing communication and team building skills. Both skill sets are vital for our students' future employment success.</p>
<p>Which Allen ISD goals/TEKS does this project support? Please provide 2 or 3 examples.</p>	<p>Participation in the VEX robotics club helps promote to students how they can earn a high school diploma from Allen ISD with the recognized endorsement of Science, Technology, Engineering and Math (STEM). This leads students to consider taking robotics related courses in high school (i.e. Engineering Design, Manufacturing Robotics, Applied Engineering, and Scientific Research) Also, participation in VEX robotics helps to meet the criteria set forth in Chapter 130 of the Texas Essential Knowledge and Skills framework under Career and Technical Education (TA1STC) Investigating Careers in STEM allowing students to consider the possibility of pursuing a career in robotics or technology related field.</p>
	<p>We want students to have fun, be engaged, and to look forward to facing today's challenges tomorrow with new tools, new answers, and new discoveries! Building,</p>

<p>What specific measurements will be used to evaluate the effectiveness of the project?</p>	<p>coding, and testing robots is wholly project-based learning with dynamic interactions of peers. As with any type of technology from the simplest eraser to machines that can build islands, the idea is to use technology to solve a problem. If the concept or prototype does not address a solution to a given problem, teams must re-evaluate their methods and adjust their course to achieve a meaningful outcome.</p>
<p>What teaching methods will be used to implement this project?</p>	<p>As a facilitator, I will guide students through the engineering design process, how to use available resources, conservation of materials, and on a more relevant level, teach the social and emotional aspect of working for extended periods of times with different people with various backgrounds.</p>
<p>What is the project timeline and the date of implementation?</p>	<p>VEX robotics is a full year commitment for the 24 students that would be involved. Immediate use in the classroom upon being awarded the grant (2020-2021 school year) will ensure competition dates are secure giving us specific target dates to meet design and challenge requirements.</p>
<p>Explain how this idea or project enhances/supports Allen ISD curriculum or existing systems.</p>	<p>From the curriculum perspective, our middle school students will get a sampling of what high school course offerings in technology could look like and possibly lead to the STEM endorsement in their high school graduation plan. This will also provide a higher focus and understanding in selecting one of seven learning pathways leading to the STEM endorsement, such as Robotics, Electronics Engineering Technology, or Programming/Software Development to name a few. Further, students will have the option to choose from courses that earn high school credit AND college credit, known as dual-credit courses. In short, being able to cultivate a simple curiosity at such an early stage can have huge educational impacts and improve graduating success rates followed up with under- and post- graduate studies.</p>
<p>Total Grant Budget Requested:</p>	<p>1649</p>
	<p><i>new credit</i></p>

Project Budget Set Number 1

Question	Answer
Item Type	Instructional Supplies or Resources
List item to be purchased under item category:	Robot V5 Kit
Unit Cost	1649
Quantity	1
Total cost of items in this category:	1649