

2014-2015 Educational Grant Application

Submission Date	2014-03-27 15:22:43
Name of Grant	Battle of the Bots
Primary Contact	Tiffany Dudley
Applicant E-mail	tiffany_dudley@allenisd.org
Phone Number	(972) 562-1800
Additional Teachers/Staff who are applying for or will be working with this grant:	Karen Szeryk
Campus	Olson Elementary School
Other Campus	Norton Elementary
Curriculum Area	Gifted & Talented
Grade Level(s)	4-6
Students Impacted	110
Approver Name	Andrew Benesh
Approver E-mail	andrew_benesh@allenisd.org
Project Purpose	<p>This year I implemented a Mindstorms Robotics Program into my 6th grade AIM class with the generous help of my principal and GT Dept. Students began by building and programming basic robots to accomplish a specific function and later moved onto competing in challenges such as tug of war and sumo bot wrestling.</p> <p>To say these kits are contagious is an understatement as many of my students in other classes and around our building have shown an enthusiastic interest. We would like to expand this program with more Mindstorms kits to accomplish the following goals next year:</p> <ul style="list-style-type: none">• Incorporate this program into 4th and 5th grade AIM while continuing to use it as a math/science extension in 6th grade.• Expand the program out into the general population of our campus by pairing 5th and 6th Grade students with younger students in the general classrooms for a given time each week as they build/program a robot together.• Team up with AIM students at Norton to compete in challenges. Our students have paired up for other projects using the available district technology and this would allow for another opportunity to build relationships with students across the district and be challenged beyond our own classroom.
Project Description	The various kits that I am requesting will be integrated into

my AIM curriculum on a weekly basis. Students will be put into teams and assigned a challenge to complete. The great thing about this program is that it is project-based in which the students make the major decisions about the functionality, designing, programming, team roles and more. Each robot takes weeks to build and program and all of the parts are completely reusable each year. The new funds that I am requesting will be used to purchase additional kits in order to accomplish the above mentioned goals.

Please check out the movie trailers my 6th graders have put together as they documented their journey through the robotics program.

<http://www.youtube.com/watch?v=6IKJ8wpwncY>
<http://www.youtube.com/watch?v=E3bn1tRU4YQ>

Additionally, this will prepare our students for opportunities in the robotics program in middle school as well as improving on their skills in problem solving and being a team player.

Allen ISD Goals/TEKS

In the Allen ISD Strategic Planning Objectives and Strategies guide it lists the following top priorities;

- 1) Transforming the traditional classroom into an innovative learning experience that meets the needs of the individual learner.
- 2) Transforming the learning environment by increasing rigor and encouraging innovation so that students become effective problem-solvers.

Measurements

Students will be provided with bi-monthly challenges to complete within a specific timeframe that include designing robots for various tasks or to solve specific problems within the AIM classroom across the campuses of Norton and Olson.

Teaching Methods

Challenges and tasks will be developed and taught to the students by the teacher, however this program is completely student driven. Each team decides on who builds, who documents, who programs and which features should be used on their robots to meet the outlined tasks. Students will rotate roles each class. The Campus wide pilot at Olson will consist of these students teaching other students in the building how to build/program the robots.

Timeline for Project

The vendor for this program is approved with the district and would have supplies delivered within 2 weeks of being ordered. This program would be launched by mid-October and materials would be reused every year

Curriculum/System Support

- 1) Working within a robotics program provides students with opportunities for students to use critical thinking, problem solving and team work skills.
- 2) Incorporating Norton into our challenges will foster relationships among students at another campus as well as further their abilities in working with new people, being part of a team, and providing more of a challenge as students will compete against students with whom they are not familiar.

Additional Comments	This truly is an amazing program that I hope will continue to spread across the elementary schools in our district. I hope to be apart of furthering this program each year by setting new goals that include more AISD students and campuses. The cost of each kit is \$279.95 and ultimately I would love to get 5-7 more kits to support our expansion plan for next year. However, any new kits would help in pursuing our above outlined goals.
Instructional Supplies or Resources	LEGO MINDSTORMS Education NXT Base Set (979797), \$279.95 each Desired amount = 5-7 sets
Supplies Budget	280 Per set
Technology	NA
Technology Budget	0
Staff Training / Staff Development	NA
Training Budget	0
Transportation/Field Trip	NA
Transportation Budget	0
Other	NA
Other Budget	0
Total Budget	280 per set
Additional Funds	This year I have been able to use campus funds, district funds, and will be using some of the profit from our school store (ran by 6th grade AIM students) to purchase at least 1 new kit.