

2014-2015 Educational Grant Application

Submission Date	2014-03-25 10:52:26
Name of Grant	STEM Innovation Station
Primary Contact	Todd Fornadel
Applicant E-mail	todd_fornadel@allensd.org
Phone Number	(972) 727-0550
Campus	Rountree Elementary School
Curriculum Area	Science
Other Curriculum	Technology; Gifted and Talented; STEM (Science Technology Engineering Math) Education
Grade Level(s)	3-6
Students Impacted	200
Approver Name	Daniel Pitcock
Approver E-mail	Daniel_Pitcock@allensd.org
Project Purpose	<p>STEM Innovation Station will be an after-school time for students to be able to explore concepts in science engineering and math through building, testing, experimenting, and free exploring. Title I students do not have the experiences that many other students have in regards to free play exploration of building structures with things like Lego's or K'nex. As a result, these students do not have the opportunity to freely engage in exploration of engineering, math, and science concepts that build the foundation for careers in these fields. Careers in these fields require people who know how to problem-solve on the fly, think freely, and are open to fail often as they move towards success. STEM fields require innovators. It is the project's purpose to help Rountree's students learn how to explore, build, create, and fail in an environment that is free of structured grades, specific products, and penalties for failure.</p>
Project Description	<p>STEM Innovation Station will meet once a month on Tuesdays and be open for students in 3rd - 6th grades from 3:10-4:00. Students will register to attend Innovation Station at the beginning of each month through a sign-up sheet that will go home in the first Tuesday folder of the month and due by the end of the same week. Based on the number of participants, rooms will be assigned for each group. When students attend STEM Innovation Station, they will have the opportunity to use the Lego's that were already purchased through Rountree's Lego Club or use the K'nex purchased through this grant. Students will have the opportunity to build various challenges like bridges, tall buildings, a roller coaster with working car, or other structures that have real</p>

	<p>life connections to engineering. Students may also choose to log into computers and work on programming with MIT's website, scratch. By having these various options, students will be able to freely explore different STEM related fields to spark an interest in a STEM related career. The sponsor will be looking for STEM related professionals to help volunteer and provide some basic mentoring for these students during the Innovation Station time.</p>
<p>Allen ISD Goals/TEKS</p>	<p>Effective Problem Solvers: students will master the skills needed to design innovative solutions within independent and team settings.</p> <p>Responsible and Engaged Citizens: Students will demonstrate ethical and moral decision-making in the context of their local, national and world community. They will also possess an awareness of community resources and understand the value of service to others.</p> <p>Academically Prepared for Future Pursuits: Students will possess the necessary skills to seek educational and career options as they continually pursue and integrate knowledge.</p>
<p>Measurements</p>	<p>We will gather data through the use of 3rd-6th grade benchmark scores, Common Formative Assessment scores, simulation data as well as STAAR scores in math and science. As students participate in the project, their science and math reasoning should increase thereby increasing their scores in the above areas.</p>
<p>Teaching Methods</p>	<p>Mentoring, group work, hands-on application, and experimentation</p>
<p>Timeline for Project</p>	<p>First Tuesday in October: First sign up for Innovation Station First Friday in October: First Innovation Station sign-up due Last Tuesday in October: First Innovation Station First Tuesday of every month thereafter: sign-up for Innovation Station sent home First Friday of every month: sign-ups for Innovation Station due Last Tuesday of every month: Innovation Station Day</p>
<p>Curriculum/System Support</p>	<p>This project supports Allen ISD curriculum by promoting science and math reasoning through play and experimentation. Students will be free to fail and try again without the fear of grades. Students will also see how important science and math are to their lives. This project will also give many students who do not have the opportunity to explore STEM related activities, the exposure to those fields in a fun, engaging safe experience.</p>
<p>Additional Comments</p>	<p>I would be looking for and be open to any foundation board members who have connections to STEM related jobs to help volunteer or provide possible volunteer groups (contacts) that would be available to help provide mentoring for these Innovation Station days.</p>
<p>Instructional Supplies or Resources</p>	<p>Knex Forces Energy And Motion x 2: \$290.00 K'NEX Education Energy, Motion & Aeronautics Kit x 2: \$370.00 K'NEX Education - Intro to Structures: Bridges x 2: \$100.00 K'NEX Education - Roller Coaster Physics: \$230.00 K'NEX Education - Amusement Park Experience: 165.00</p>

	K'NEX Classics 50 Model Building Set x 2: \$90.00
Supplies Budget	\$1245.00
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	\$1245.00
Additional Funds	NA