



Educational Foundation of Lake County



2018-19 Duke Energy Foundation STEM Grant

DEADLINE October 18, 2018 4:00 pm Foundation Office via Jackrabbit or Email

- This Classroom Grant is for 2018-2019 school year.
- Funds must be used to address a STEM related project.
- All funds must be used by May 1, 2019. A final program evaluation must be submitted by May 15, 2019.

Contact Information	
Applicant Name: Christine Palmer	Position: Visual Arts Teacher
School: Triangle Elementary	
Address: 1707 Eudora Road, Mount Dora, 32757	
Phone: 352-383-6176	Fax: 352-383-6674
Email Address: palmerc1@lake.k12.fl.us	

Detailed Project Information
Project Title: S.T.E.M. is Everywhere!
What priority area(s) will your project address: Science, Technology, Engineering, and Math
What is your estimated start date: December 1 st , 2018
Estimated number of teachers who will participate in this project: 4
Estimated Number of Total Students Impacted by project: 760
Grade Levels to be Addressed: Pre-K to 5th

Program Background:

"I hate science, but I love P.E." "I despise math, but I love music." Teachers hear words similar to this frequently. What if we taught that P.E. involves science and math? What if we taught that music involves math and science? What if we educated our students that art and reading can and does involve all core subjects? The purpose of this proposal is to change the mindset of many students about their core subjects by understanding that the enrichment subjects they love use science, technology, engineering, and math on a daily basis.

One of Triangle Elementary's collective agreements for the 2018-2019 school year is that all teachers integrate science into all their lessons on Wednesdays. We call them Science Wednesdays. The other enrichment teachers and I were brainstorming some effective ways to implement science, technology, engineering, and math into our regular physical education, music, media, and art classes. S.T.E.M. is everywhere, and we plan on emphasizing that in our enrichment classes. This will affect all students at Triangle as we teach every class on a seven day rotation schedule.

Project Summary:

Mrs. Moore, our Media Specialist, would like to integrate makerspaces.

A [makerspace](#) is a collaborative work space inside a school, library or separate public/private facility for making, learning, exploring, and sharing that uses high tech to low tech tools. The intent for these spaces is for students to explore, experiment, and create to help foster those 21st century skills. The number of students who enjoy reading, but state that they do not care for math or science is astonishing. Mrs. Moore would have a wonderful opportunity to tie these subject areas together. This would also benefit those students who struggle in reading, but enjoy technology, engineering, math, and science. Imagine their excitement to go to the media center when they know they are going to create or build something!

Mr. Leland, our physical education, coach, would like to integrate physics lessons by using a variety of sports equipment. Playground balls, hula hoops, jump ropes, and even safety mats can absolutely be part of lessons that include: forms of energy, motions of objects, changes in motion, properties of matter, and/or changes in matter. One example of a lesson Mr. Leland plans to teach is [Free Shot Physics](#). Students who love attending physical education classes but struggle in science will have an open-mind to learning these standards through their physical education teacher.

Mr. Anderson, our music teacher, would like to integrate math and science lessons by using 3 steel drums to complete the school's steel drum set. These 3 steel drums will be used to teach sound energy, energy of motion, fractions (1/2 beat, etc.) Student who love attending music, but struggle in [science](#) and [math](#) will understand that science and math are involved in their favorite class!

While I maintain that visual artists have to integrate at least some S.T.E.M concepts into their works to be successful, I can be more strategic tying these concepts together by making [motor made art](#), [water and oil painting](#), [spin art](#), and much more. This will support the concept that science, technology, engineering, and math are everywhere.

When we as enrichment teachers tie our lessons into S.T.E.M., students will have more of an appreciation for S.T.E.M. and hopefully learn to love science, technology, engineering, and math. Please click on the links above for more information.

Need:

For the Makerspaces in the media center:

Vendor		Item		Price
Maker Maven		A-Buddha Board Buddha Board	4	\$139.80
Maker Maven		Ozobot Dual Pack	2	\$239.98
Maker Maven		Ozobot Markers	4	\$24.00
Maker Maven		Strawbees STEAM School Kit	1	\$295.00
Maker Maven		Phoenix Kit	1	\$219

Maker Maven		Wikki Stix STEM Pack	4	\$67.80
Maker Maven		Paper Circuits Classroom Kit	3	\$300.00
Maker Maven		Bristlebots (25 Pack)	1	\$100.00
Maker Maven		Circuit Scribe Basic kit	1	\$59.99
Maker Maven		Circuit Scribe Conductive Ink Pen (10 Pack)	1	\$89.00
Maker Maven		Cubelets Twelve Kit	1	\$279.95
Maker Maven		Makedo Toolset	1	\$125.00
		Shipping		\$59.47
		Total		\$1,999.98
		Click here for original quote		

For the sports equipment for physical education/physics:

Vendor		Item		Price
US Games		Bonded Foam Mat Pkg.		\$1,100
US Games		Jump Rope/Hoop Package		\$550
US Games		Rainbow 48 pack Playground Balls		\$270
US Games		6' Color My Class Pugg Goal (set of 6)		\$290
US Games		Jumping Activities Pack (45 pcs.)		\$204
		total		\$2,414

For the steel drums for music/science/math:

Vendor		Item		Price
Tropical Hammer Steel Drum Crafters		Steel drum, Stand, Mallet, and Delivery	3	\$3,000
		Click here for original quote		

For the added STEAM lessons in art:

Vendor		Item	Quantity	Price
Amazon		Liquid Watercolor	36	\$611.64
Amazon		Sax Sulphite Drawing Paper, 90 lb, 9 x 12 Inches, Extra-White, Pack of 500	20	\$453.20
Amazon		Learning Resources Eye Droppers, Set of 12	2	\$17.32
Amazon		Crisco Cooking oil, 32 ounces	2	\$9.84
Amazon		Aluminum Pans (30-Pack)	1	\$18.99
Amazon		Salad spinners	12	\$143.00
Amazon		Gallon yellow tempera paint	2	\$31.18

Amazon		Gallon red tempera paint	2	\$31.18
Amazon		Gallon blue tempera paint	2	\$31.18
Amazon		Coffee filters, 200	10	\$17.10
Amazon		Bamboo skewers (for design lesson)	10	\$84.50
Amazon		Modeling Clay(for design lesson)	1	\$26.95
Amazon		Electronic toothbrush (for robot lesson)	30	\$119.70
Amazon		Paper cups (for robot lesson)	7	\$111.93
Amazon		Rubberbands (for robot lesson)	7	\$34.86
Amazon		Classpack Crayola markers	2	\$103.58
Amazon		Chromebooks (Legobuilding, graphic design)	3	\$747.00
		Total		\$2481.25

Project Goals and Objectives:

By ensuring all enrichment teachers are equipped with supplies to teach how S.T.E.M. relates to each of our subjects, students will understand that science, technology, engineering, and math are a part of every aspect of life. Instead of hearing, "I don't like math" or "I don't like science," we want to hear things like, "I didn't realize that was science too, and now I love science!"

Evaluation Plan: At the end of the year, we will have randomly selected students take a survey regarding our enrichment lesson on Wednesdays. The survey will be as follows:

1. I didn't realize science was a part of media, art, physical education, or music; but now I do.
A) agree B) disagree
2. One thing I learned during enrichment about math, science, technology, or music is:
3. Comments:

Budget			
Category of Expenditure		Dollar Amount	Related Activity
Computer Hardware		747.00	Lego Design, graphic art, architecture design
Computer Software		N/A	

Competition (not supplies)	\$5,696.80	Highlighted above in blue
Competition Registration Fees	N/A	
Program supplies	\$3,451.43	Highlighted above in yellow
TOTALS	\$9,895.23	

Program Approved By: _____

Principal

Funds Payable to: _____

Address: _____

Phone: 352-383-6176 Email: 8traughan@lake.k12.fl.us

Requesting party has read and agrees with the funding policies of the Educational Foundation.

Signed _____

Date _____

To be completed by foundation staff/board

Program meets Duke Energy Foundation's Mission/ Funding Policy _____ Y _____ N

Director Recommendation: _____

Executive Board Recommendation: _____