



## Catalyst for Change Grant Final Report Form

***Due electronically by Thursday May 30, 2019***

<b>Contact Information:</b>	
Name:	Mackenzie McNickle
School:	Stephen Foster Elementary School
<b>Basic Project Information:</b>	
Project Title:	PocketLabs for STEM Integration
Grade level(s) addressed:	3-5
What priority area(s) did your project address?	<input type="checkbox"/> Career/Technical Education <input type="checkbox"/> Low-Performing Students <input type="checkbox"/> Increasing Graduation Rates <input checked="" type="checkbox"/> STEM Education <input type="checkbox"/> Literacy <input type="checkbox"/> Teaching Quality
Actual Number of Primary Participants, both students and teachers: <i>(Primary participants are those directly benefiting and/or receiving direct services from program activities.)</i>	<u>37</u> Students <u>12</u> Teachers
Actual Number of Secondary Participants, if any, both students and teachers: <i>(Secondary participants benefit indirectly from program services, for example, in a teacher training program, the teacher is the primary participant and the students are secondary participants)</i>	<input type="checkbox"/> Students <input type="checkbox"/> Teachers
Have substantial changes been made to the original plan/goal of the project? If so, please describe them here.	No
Project Summary <i>(Summarize your grant project and what was accomplished in 1,000 words or less.)</i>	
<p>Before the PocketLab equipment arrived in December, I gave a training for 3-5 teachers on how to use the equipment. The STEM lab teacher, who teaches all grade levels, was particularly excited to use the equipment with her classes. She did experiments and activities with the rocket and car kits.</p> <p>In my classroom, we used the PocketLab equipment in a variety of ways. This year, I mostly implemented the PocketLabs to enhance existing lessons; in the future, I hope to create new lessons that take advantage of the PocketLab technology. First, we do an activity with UV-sensitive beads in which students have to build a structure to protect a UV-sensitive "alien life form" from the Sun. Students used the PocketLabs to test the light intensity inside their structure. We then used the PocketLabs to introduce graphing. As I tossed a</p>	

PocketLab in the air, I displayed the PocketLab application on the LadiBug, so that students could see the change in velocity and how it related to the line graph being created on the screen.

After the PocketLab Air arrived in May, we examined air quality around the school, especially near vents and near the parent pickup area. In the future, I hope to engage a grade level in examining air quality more closely around the school, and understanding how idling vehicles may contribute to lower air quality levels that may be dangerous to students' health.

In the future, I hope to continue to encourage the use of PocketLabs in the STEM classroom by offering trainings and providing lesson ideas to the other teachers. In April, PocketLab began compatibility with Windows, which helps ease implementation greatly. Previously, the PocketLabs were only compatible with iOS devices. I believe that the PocketLabs have already made a positive impact on the students at my school, and I know that the collaboration between teachers at school will only continue to grow year after year. I am so excited about the project's future at the school! The PocketLab company is continuing to offer more support, curriculum options, and equipment variations, so the project will be sustainable for years to come. Next year, I plan to again offer training to teachers on how to use the equipment, and I plan to host the equipment in my classroom in the school MakerSpace. Additionally, I hope to widen the scope of the students receiving benefits from the PocketLab equipment by continuing to train and encourage teachers to use the equipment.

**Please answer the following STEM-related questions**

Please list the number of students who participated in an in-school program
37
Please list the number of students who participated in an out-of-school program
0
Please indicate the number of students who improved their grade in a STEM Subject area. (Please also specify the subject area).
20 - maintained "A" in science 12 - improved from B to A in science 5 - went from A to B in science
In the future, I hope to expand the use of the equipment to a wider variety of students by encouraging teachers of all levels to use PocketLabs in their science instruction.

Please indicate the number of teachers who received any type of STEM training as a part of this project.
12
Please Share a story that illustrates how your program made a concrete and sustainable difference in the life of your beneficiaries
In my classroom, we used the PocketLabs in conjunction with a weather unit. We kept daily data for two weeks on humidity, barometric pressure, and temperature, and we looked at the different types of clouds that accompanied the weather. In this way, we were able to predict the next day's weather with some degree of accuracy. This was really rewarding for the students, as they started to see the connection between the data and a real-world phenomenon. I think that this really helped bring meteorology to life for the students, helped them understand the importance of keeping data, and also helped them understand that weather prediction is not an exact science! They realized that many factors contribute to weather patterns, and better appreciated the role of meteorologists in trying to predict the weather. After working on the project, students felt more comfortable using the technology, better understood temperature and humidity (better understanding of how a particular temperature or humidity level feels, and therefore a better conceptual understanding of both), and understood the importance of consistent data collection.
<b>Please share any other outcomes or outputs associated with this project.</b> As a result of the project, I feel that more STEM opportunities were available to the students. To improve the project outcomes, I will offer more trainings and implementation ideas to all teachers next year. I believe that this project is sustainable and will continue to produce more benefits in the coming years.

**Budget**

Budget Category	Catalyst for Change Amount	Other Grant Amounts	Total Amount	Description of Expenditure
Salaries & Benefits				
Professional Contracted Workers <i>(i.e. stipend workers, trainers, work for fee etc.)</i>				
Travel <i>(out-of-state travel MUST be pre-approved)</i>				

Program Supplies	\$2689		\$2689	1 PocketLab air, 14 silicone protective cases, 5 advanced STEM kits, 7 HotRods + PocketLab Voyagers, 5 rocket kits + PocketLab One , 2 Concussion Project Kits, 5 PocketLab Voyager Tactile Pressure Sensors
Computer Software				
Computer Hardware				
Other Equipment ( <i>not computers</i> )*				
Printing**				
Tuition/Training/Conferences/Admission				
Room Rental Fees				
Food, awards, etc. ( <i>ONLY paid for with Private Match funds</i> )				
Internet & Telephone Service**				
Postage**				
<b>Total:</b>			\$2689	

\*\*Only if these categories are directly related to program implementation

**You are required to submit all receipts associated with expenditures included in the Catalyst for Change Grant Amount Column.**

### Agreements

\_\_\_ I certify that all the above information is accurate and true to the best of my knowledge.

\_\_\_ I certify that I have submitted the proper financial documentation showing the expenditures made pertaining to the Catalyst for Change Grant amount that was awarded by The Education Foundation of Alachua County.

**Due electronically by Thursday May 30, 2019 to:**

Tia Brock

Education Foundation of Alachua County

Director of Programs

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(352) 955-7250 ext. 262