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Name: Carolyn Ellis Name of Project: "Calculating Our Success"

Position: teacher/department chair/academy director School: Gainesville High School

Email: ellisce@gm.sbac.edu Phone: 352-727-8505

Project Title: "Calculating Our Success"

Amount requested: \$4,219.00

1. What category fits your project? (Items marked with an asterisk * below receive priority scoring points.)

<input type="checkbox"/> Career/Technical Education	<input checked="" type="checkbox"/> Low Performing Students * (+2 points)
<input checked="" type="checkbox"/> Increased Graduation Rates	<input checked="" type="checkbox"/> STEM Education
<input type="checkbox"/> Literacy	<input type="checkbox"/> Teacher Quality
2. Is your school a "Low Performing" (ratings of D or F) School* (+ 2 points)? No
3. Estimate of how many total students would be impacted by your project: 300 students/year
4. What percentage of the students served would be low performing (working or performing below grade level on standardized tests)? * (+ 2 points if over 60%): 72%
5. Grade level(s) to be addressed: 10th-12th
6. Does this proposal fund multiple classrooms (i.e., teachers)? Yes If so, indicate below how many, etc. * (+ 4 points)?
3 classrooms

Please respond to the following in narrative format. Use 12 pt. type, single spaced.

7. **Project Abstract (5 pts):** *Provide a brief (200 words or less) overview of the project proposal including problems to be addressed and outcomes to be measured.*
At Gainesville High School, Carolyn Ellis teaches struggling students Geometry. Most are 11th graders who have had little success in math. 90% are low performing students. Many are third year high school students with zero math credits. To meet the objective of lowering the number of students that are credit deficient in math from 90% to 25% action must be taken. The applicant's passion is to daily challenge her students both apply themselves and see math in a new light. Sadly, much of what her students struggle with is foundational math that has previously passed them by. The purpose of this grant is to fund a class set of graphing calculators for Mrs. Ellis to use with her students during class. This learning tool would allow for both exploration and remediation (two keys to becoming a successful math student). With the defining shift of the Florida Standards Assessment toward evaluating geometric concepts graphically, these calculators are essential to demonstrate the usefulness and dynamic capabilities of geometric graphs firsthand. Current department funding is less than half the cost of one class set of calculators, making this grant critical for the success of these students who need the most help.
8. **Need (10 pts):** *Describe, in 350 words or less, the need for your proposed project. If multiple needs are to be addressed, describe and document each need. Use data whenever possible.*
The epicenter of the need for this technology is Mrs. Ellis's low-performing students. The math department at Gainesville High School spends its funds on the necessities of everyday classroom supplies. After the bare

essentials, there is little money left for beneficial learning tools like these calculators. Asking a group of academically, and often socioeconomically, depressed students to spend \$120 each on their own TI-84 calculator is at best impractical and at worst spirit-crushing. The applicant's low-performing classes are in need of inspiration, technology, and structure. Inspiration is needed to capture the attention of struggling students. Only 8% have ever earned an "A" in a high school math class. Many have given up hope of passing at all. The potential of each of these calculators will give students hope as they are empowered to approach mathematical concepts previously thought too complex to master are unlimited. Technology, specifically in an interactive and tactile application, sparks curiosity and interest in the learning of math. Structure comes as students learn to follow directions and use tools appropriately, e.g., translating points along a coordinate plane where each term has to be changed exactly the same way. These students are in desperate need of developing the patience and persistence necessary to follow a complicated problem to its conclusion. Graphing calculators will help with this. Unfortunately, Gainesville High School's existing inventory of TI-84 graphing calculators is already in dominated by the Calculus, Precalculus, Statistics and Algebra classes. The availability of an additional set would allow for more student engagement and success among our low performing students.

9. Project Narrative (25 pts): *Fully describe your grant project in 750 words or less. Describe as it relates to the category of the project: e.g., Career/Tech Education; Increase Graduation Rates; Literacy; Low Performing Students; STEM Education; Teacher Quality. This section should address all components of the project.*

"Calculating Our Success" connects to the Low Performing Students, STEM Education and Increasing Graduation Rates sections of this grant. If selected, these funds will go to the purchase of a set of TI-84 Plus C Silver Edition graphing calculators. This technology will be placed in the classroom of the applicant with the goal of aiding her struggling Geometry students. The calculators would be used in the day-to-day goings on of class as well as on at least one major project during the year. Students will design and built a 3D model of a polyhedron using their TI-84 as a design tool. The final project will be built out of straws to be suspended on display in a school common area. Students will be able to explore concepts ranging from slope, parallelism, and negative space. They will be able to experiment on a trial and error basis to build mathematical endurance and creative thinking and, with this technology; they can built many models digitally without having to do the tedious and menial task of building all of them. They will also write up and explanation of their findings at the conclusion of the project. These calculators would be used to enhance class experience, inspire creativity, and remediate concepts. For example, rather than spending three days remediating graphing lines and points, students can "discover" how this process works in one day by using this exceptional tool. This will save precious instructional time as well as make the math more meaningful to individual students. Remediating these students will improve their credit status. The goal of the project is to reduce deficiency in math credits from 90% to 25% by the end of the 2014-2015 school year (i.e. May 19th deadline). Success of the project will be measured by EOC scores and classroom grades for the participating students. In addition, teacher reflections (from the applicant, Renee Meizius and Detra Long) and administrative observations will be considered.

10. Goals and Objectives (20 pts): *In 500 words or less state your project goal(s) and objectives.) NOTE: Objectives should be **S**pecific, **M**easurable, **A**chievable, **R**ealistic, and **T**ime-specific (SMART). Goal(s) and objectives should directly align with the need for the project and should be an indicator of how successful the project was at addressing the need.*

Specific: The goal of this project is to increase student achievement among low-performing students by providing technological support as a means of learning complex graphical geometric concepts required for successful completion of required courses.

Measurable: Reducing the rate of credit deficiency from 90% to 25% is the primary measurable component to this project. Pass rates for the Algebra 1 End of Course Exam (EOC) will also be considered as many of these students have

yet to pass this test. When the applicant's classes are not using the graphing calculators, they will be used by other Algebra 1 and Algebra 2 classes (Detra Long and Renee Meizius) to prepare for the EOC for that class. Results of this test will also be considered in measuring the success of increased technology on students.

Achievable: Shifting credit deficiency by 65% is an ambitious but attainable goal. Gainesville High School has already experienced noteworthy success when remediating seniors in Geometry so attention is shifting to 11th graders. The goal is to rectify their missing credits earlier to better prepare them for graduation and for college or a career.

Realistic: The applicant is committed to this project and believes in its potential. Technology, in students' hands, has the power to change their perception and spark their imagination. The applicant's students have already been exposed to integrated similar technology into their everyday learning so it is realistic to see them using these calculators as well.

Time Specific: This will be measured by the credit deficiency rate among Mrs. Ellis's students as well as an increase in grades by the end of the 2014-2015 school year, the May 19th deadline.

11. Project Timeline (10 pts): Provide a timeline of significant project milestones from start to completion; may be provided in table or bulleted-list format.

- *grant approved
- *calculators purchased
- *teacher training (online)
- *class incorporation
- *assessment results/teacher reflections

12. Evaluation Plan (10 pts): Describe in 350 words or less how you will evaluate your project.

The success of this project will be measured quantitatively and qualitatively based on the Low Performing Students, STEM Education, and Increased Graduation Rates categories. The math credit deficiency rate for these classes should drop from 90% to 25%, pending EOC results being released by the state before the May 19th deadline. Students overall grade increase will also be taken into consideration. Additionally, the applicant will provide teacher feedback using ongoing reflections. Administrative formal observations will also be considered along with reflections from participating Algebra 1 and Algebra 2 teachers.

Required for all projects: Applicants must indicate, in the tables below, the project category(s) to be served and provide a goal(s) and a final report on at least ONE outcome measure for each priority area served by the stated deadline.

NOTE: Applicants must describe how the outcomes will be measured in the evaluation narrative and will indicate in the following table specific data that will be collected. The table is included in the application so that recipients will know what specific data will be required in the final report.

CAREER/TECHNICAL EDUCATION <i>(Must report on AT LEAST ONE of the measures below for this priority area.)</i>
Report on improvements in student knowledge, behavior and attitudes toward career and technical education and/or number of students completing program (or progress on completing) certification courses.

<input type="checkbox"/>	Percent of project participants who show increased interest in career/technical education
<input type="checkbox"/>	Percent of project participants who completed and passed career/technical education certification (specify type of certifications received) Click here to enter text.
<input type="checkbox"/>	Percent of project participants who made progress toward completing career/technical education certification (specify type of certification progress) Click here to enter text.
<input type="checkbox"/>	Other measure (specify) Click here to enter text.
Describe how the above outcomes will be measured (what tests/surveys/data sources will be used). Click here to enter text.	
What improvements are expected from the project? Click here to enter text.	
LITERACY <i>(Must report on AT LEAST ONE of the measures below for this priority area.)</i>	
Report on improvements in and/or attitudes toward reading/writing skills.	
<input type="checkbox"/>	Percent of project participants who improved in a standardized reading skills test(s)
<input type="checkbox"/>	Percent of project participants who improved in a standardized writing skills test(s)
<input type="checkbox"/>	Percent of project participants who increased their reading/writing grade a letter-grade
<input type="checkbox"/>	Percent of project participants who increased their reading/writing grade a half letter-grade
<input type="checkbox"/>	Other measure (specify): Click here to enter text.
Describe how the above outcomes will be measured (what tests/surveys/data sources will be used). Click here to enter text.	
What improvements are expected from the project? Click here to enter text.	
LOW-PERFORMING STUDENTS <i>(Must report on AT LEAST ONE of the measures below for this priority area.)</i>	
Report on improvements in and/or attitudes around student knowledge.	
<input checked="" type="checkbox"/>	Percent of project participants who improved their grade in specific subject area (specify subject area: Geometry
<input checked="" type="checkbox"/>	Percent of project participants who improved their overall grade(s) in school
<input type="checkbox"/>	Percent of project participants who show increased interest in performing well in school
<input checked="" type="checkbox"/>	Other measure (specify): decrease math credit deficiency
Describe how the above outcomes will be measured (what tests/surveys/data sources will be used). Algebra 1 EOC results, credit-recovery rates, teacher reflections	
What improvements are expected from the project? Credit-deficiency should drop from 90% to 25%, students' Geometry grades should be excellent, Algebra 1 and 2 students should have strong EOC scores.	
STEM EDUCATION <i>(Must report on AT LEAST ONE of the measures below for this priority area.)</i>	

Report on improvements in student knowledge, behaviors and attitudes toward STEM education and career fields.	
<input type="checkbox"/>	Percent of project participants who show increased interest in STEM education
<input type="checkbox"/>	Percent of project participants who show increased interest in pursuing STEM career
<input checked="" type="checkbox"/>	Percent of project participants who improved their grade in STEM subject area (specify subject area): Geometry, Algebra 1 or Algebra 2
<input type="checkbox"/>	Other measure (specify): Click here to enter text.
Describe how the above outcomes will be measured (what tests/surveys/data sources will be used). Algebra 1 EOC results, credit-recovery rates, teacher reflections	
What improvements are expected from the project? Credit-deficiency should drop from 90% to 25%, students' Geometry grades should be excellent, Algebra 1 and 2 students should have strong EOC scores.	
TEACHING QUALITY <i>(Must report on AT LEAST ONE of the measures below for this priority area.)</i>	
Report on improvements in teacher knowledge, behavior and attitudes towards teaching.	
<input type="checkbox"/>	Percent of project participants who show increased knowledge about teaching in general
<input type="checkbox"/>	Percent of project participants who show increased knowledge about teaching in specific subject area (specify subject area): Click here to enter text.
<input type="checkbox"/>	Percent of project participants who show improved attitude toward teaching
<input type="checkbox"/>	Percent of project participants who show changes in behavior in their teaching method
<input type="checkbox"/>	Other measure (specify): Click here to enter text.
Describe how the above outcomes will be measured (what tests/surveys/data sources will be used). Click here to enter text.	
What improvements are expected from the project? Click here to enter text.	

BUDGET (10 pts): Please fill out the following information regarding your budget for this project. All items (#13 and #14 as well as budget table are scored).

13. Please list any additional funding sources applied for to fund this project. To date, have funds been awarded?

Funding Source	Awarded?
Click here to enter text.	Choose an Item.
Click here to enter text.	Choose an item.
Click here to enter text.	Choose an item.

14. Describe how the project would be impacted if this grant is not 100% funded. Indicate how the project will be completed given the reduction in funding.

The average size of Mrs. Ellis's Geometry classes is 29 students, meaning a "class set" of calculators needs to be at least 30. If this grant is not funded fully, the applicant would be left with two options. First, fewer calculators could be purchased, necessitating students to work in large groups, greatly lessening the benefits of self-pacing and independent exploration the technology provides. Slower performing students would be left behind as the dominant members of the group set the pace, leaving little time for others to apply critical thinking and problem solving to their learning opportunity, and moving hope for success in math further out of reach. The applicant would need to rely heavily on her ability to manage multiple groups of students to give as many students as possible the opportunity for a chance to show themselves they can succeed in mathematics. Second, the lesser model for the TI-84s could be purchased instead. While still a viable piece of technology, these model lacks the distinctive color option. Color is a powerful connections for lower performing students to access math understanding. Without being able to say "the red equation" or "look at the x-coordinate of the green point" students would likely be confused and more class time used up in unraveling the confusion. The goal for these calculators is to help make math more clear and accessible to students and it is the applicant's believe that the TI-84 C Plus Silver Editions will do that the most affectively.

Expenditures: (Please use the table below to indicate expenditures for this grant according to the categories listed. Under "Narrative," explain what the money will be used for—be specific.)

NO ADMINISTRATIVE OR INDIRECT CHARGES MAY BE APPLIED TO THIS GRANT.		
Allowable expenditures include: programmatic staff (beyond contracted workday) salaries and stipends, benefit costs for program staff, training/conferences, professional and technical services, classroom materials, computer software, computer hardware, other equipment, program supplies, in-state travel, and printing. <u>Computer software and hardware must be pre-approved through Uma Shankar 955-6860.</u>		
Non-Allowable expenditures include: Administrative Expenses, Food/Beverage/Entertainment, Support of Interscholastic Athletics, Capital Improvements, Decorative or Promotional Items, Awards/Incentives, Fund Raising, Pre-Award Costs.		
Category of Expenditure	Narrative: Describe the budget items/activities being funded—eg., "supplies, such as copy paper, general office supplies, binders, etc.	Total Amount
Salaries (for district employees only beyond the contracted workday)**		\$0.00
Benefits (all proposed salaries (i.e., stipends) must include the cost for benefits—FICA, etc.)		\$0.00
Professional Contracted Workers (i.e. trainers, etc.)		\$0.00
Classroom materials		\$0.00
Travel (in-state only)		\$0.00
Program supplies		\$0.00
Computer Software*		\$0.00

Computer Hardware*		\$0.00
Other Equipment (not computers)*	30 - TI-84 Plus C Silver Calculators in EZ Spot Yellow with the words "School Property" on each calculator 30 - Yellow slide case covers 3 - Charging Stations 1 - TI Smartview Software for TI-84 1 - Storage case for 30 Graphing Calculators 1 - Advanced Algebra with TI-84 Plus Activity Book 1 - Functions with TI-84 Plus Activity Book 1 - Statistics with TI-84 Plus Activity Book 15 - USB Computer Cables 15 - USB Unit to Unit Link Cables 3 - TI Product CD included with full reference Guidebook and free software Applications 3 - Classroom Poster 120 - AAA Batteries	\$4,219.00
Printing*		\$0.00
Tuition/Training/Conferences	Online free training	\$0.00
Admission Fees		\$0.00
Room Rental Fees		\$0.00
Internet Service*		\$0.00
Telephone Service*		\$0.00
Postage*	Free shipping	\$0.00
TOTALS	(Please double check calculations)	\$4,219.00
*only if these categories are directly related to program implementation and are allowable.		

Checklist:

- Answered all questions and provided budget information.
- Obtained Principal approval:  (principal signature)

Certification:

I, Carolyn Ellis (print), do hereby certify that the facts presented in this report are true and that I my Principal has approved agreed to support this project. All applicable statutes, SBAC policies for fiscal

control and records maintenance will be implemented to ensure proper accountability for funds distributed for this project.

I also acknowledge that I am aware that I will be required to submit a final evaluation no later than May 19, 2014, and that all monies not spent must be returned to The Education Foundation at that time. Lastly, I acknowledge that all items purchased with this grant money are property of the school, not the individual teacher.


Signature of teacher

10/2/14
Date