

TERRA MINI-GRANT APPLICATION 2015-2016 SCHOOL YEAR

A. SCHOOL AND APPLICANT INFORMATION

Submission Date:	September 28, 2015	School Year: 2015-16
School Name:	Environmental Studies Center	
Type of School:	<input checked="" type="radio"/> Public <input type="radio"/> Private <input type="radio"/> Charter	
Student Enrollment:	N/A We serve all students	Number of Teachers: 4
Range of Grade Levels at School:	K-12	% Eligible for Free/Reduced Lunch: 44%
School Mailing Address:	2900 NE Indian River Drive Jensen Beach, FL 34957	
County:	Martin	
Principal Name:	Marilyn Gavitt	
Principal's Email Address:	gavittm@martin.k12.fl.us	
Applicant Name:	Marilyn Gavitt	
Applicant's Phone #(s):	Schools Main #772-219-1887	Direct # (ext. or cell) 772-209-0343
Applicant's Email Address:	gavittm@martin.k12.fl.us	
Applicant's Affiliation to School/Organization	Employed by Martin County School District	
If Applicant is a Teacher, please list:	Teacher's Grade Level(s):	Teacher's Subject(s) Area:
If Parent/Community Volunteer or Other non-school staff, please list School Contact as a Co-Applicant:	Co-Applicant Name:	Co-Applicant Affiliation to School/Organization:
If Co-Applicant is a Teacher, please list:	Teacher's Grade Level(s):	Teacher's Subject Area(s):

B. PROGRAM INFORMATION

Please list the focus area(s) for this TERRA Mini-Grant request.	Environmental Science	Ecology	Conservation
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C. PROJECT INFORMATION

Project Title: Indian River Lagoon-Our Natural Treasure: Field Investigation	
Project Start Date: December 2015	Project End Date: N/A
# of Students Participating: 1,500 each year	Grade Levels of Students Participating: 6th
Mini-Grant Abstract (300 word max): Briefly describe what your proposed project is about. Abstracts of winning proposal will be viewable at www.terraonline.org Sixth grade students will participate in a field-oriented program of environmental studies designed to provide them with knowledge and appreciation of our Indian River Lagoon. Project includes field investigations on water quality and plankton while onboard our research vessel, the River Scout. Students will spend part of the day in centers on the boat using equipment to measure and record turbidity, salinity, depth, wind speed, and temperature, examine samples of the lagoon bottom, and collect organisms and plankton to assess the health of the lagoon. The rest of their day will be spent at the Environmental Studies Center campus in a lab setting, organizing, graphing, and drawing inferences from their investigations. Students will use tablets to interact with data, which will be uploaded to Map Info Pro Viewer 9.0 for longitudinal study of the environmental health and future of the Indian River Lagoon.	

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Mini-Grant Project Proposal (1500 word max)

Please explain how your proposed project/activity will enhance learning for your students. Include the following:

- 1) How is your project innovative? (25 points)
- 2) How will it fit into your curriculum (include standards)? (10 points)
- 3) How will it encourage long-lasting change in your classroom, school or community? (20 points)
- 4) How will technology be utilized? (20 points)
- 5) What evidence will you collect to show student gain? (10 points)
- 6) How will participants share your project results with the community? (15 points)

1. *Indian River Lagoon-Our Natural Treasure: Field Investigation* emphasizes the study of local issues unique to Martin County and the Treasure Coast. These will be investigated while cruising on our research vessel, *River Scout*, followed by a visit to our Center where students will analyze the data they collect to make inferences about the health of the lagoon. This project is innovative because it is designed to provide students with knowledge and appreciation of the environment through hands-on field work, data collection and analysis, and the use of technology tools to transform their learning. This project is a two week unit of study that every 6th grader in our district will participate in. During their field work, students will work in teams to collect data on temperature, turbidity, wind speed, and salinity. Using a bottom grabber, the sea bottom will be examined for evidence of pollution and the effects of fresh water runoff. Students will collect specimens of plant and animal life to examine and categorize. An introduction to navigation using portable GPS units will allow the students to examine the lagoon in different locations and form hypotheses about the effects of fresh water runoff. Using the software program, *Map Info Pro Viewer 9.0*, students will upload information into a master database for longitudinal study of the environmental health and future of the Indian River Lagoon. Mobile digital devices will ensure student engagement with the newly learned material.

2. All activities and learning experiences are interdisciplinary and aligned with our current Florida Standards and NGSSS. Center teachers collaborate with 6th grade teachers on delivering the instruction and creating the content:

Big Idea: Our local waterways are constantly influenced by man-made and natural factors. Over time, these factors have an effect on the water quality and habitat of marine organisms.

Next Generation Sunshine State Standards in Science:

SC.6.E.6.2 Recognize that there are a variety of different landforms on Earth's surface such as coastlines, dunes, rivers, mountains, glaciers, deltas, and lakes and relate these landforms as they apply to Florida. (Cognitive Complexity: Level 2, Basic Application of Skills & Concepts)

SC.6.N.1.2 Explain why scientific investigations should be replicable. (Cognitive Complexity: Level 3, Strategic Thinking & Complex Reasoning)

SC.6.N.1.4 Discuss, compare, and negotiate methods used, results obtained, and explanations among groups of students conducting the same investigation. (Cognitive Complexity: Level 3, Strategic Thinking & Complex Reasoning)

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Florida Standards:

LAFS.6.W.1.1 Write arguments to support claims with clear reasons and relevant evidence. (Cognitive Complexity: Level 3: Strategic Thinking & Complex Reasoning)

LAFS.6.W.1.2 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. (Cognitive Complexity: Level 4: Extended Thinking & Complex Reasoning)

3. This project encourages long-lasting change by teaching our children to appreciate the biodiversity in the natural ecosystems that exist in our community and the negative impact rapid growth has imposed, compromising water quality in the process. Through education, we will build awareness surrounding the issues and their causes. We will also focus on actions and solutions and how each one of us can make a difference. Our area has been in the news lately as polluted Lake Okeechobee water is drained into our estuary through the man-made St. Lucie Canal. This has caused damage to our oyster beds, led to algae blooms, lesions on fish, as well as many other negative outcomes. Students will have the opportunity to investigate the causes, personalize their learning, and develop a plan to ensure the continued health and productivity of the Indian River Lagoon. Our goal is to raise responsible citizens. This is a program that will be repeated year after year.
4. Technology plays a critical role in this project, allowing students to take their learning to a whole new level! The Environmental Studies Center has always capitalized on its proximity to the lagoon for hands-on exploration. With technology, students can participate in authentic learning activities using data collection from the field to interpret and infer cause and effect. We were fortunate to receive an ActivTouch panel last school year, which has transformed our classroom into an interactive learning bonanza. We hope to expand what we've begun to our 6th grade program. Onboard River Scout, students will use science tools to navigate, collect data and record artifacts using a digital camera. Students return to the Center for lab work and data analysis. Students will interact with software on the multi-touch flat panel monitor. Using a microscope, students work in groups to examine and categorize organisms. The teacher will guide the instruction by connecting a digital microscope to the multi-touch flat panel monitor for ease of classroom viewing of organisms magnified to 3000x. Student groups will use spreadsheet software to create charts and graphs to assist with data analysis. When students return to their school, they can choose to create an instructional video or Prezi using photographs taken on the day of their trip to the Center. The project emphasis is on developing solutions to the myriad of negative influences on the lagoon. Technology will truly transform the learning for our students as they create, collaborate, communicate, and use critical thinking skills.
5. Student artifacts and learning objects will be evaluated to determine comprehension. A pre- and post-test will be conducted to show student gain.
6. Our project success will be celebrated and shared with the community through a press release, website update with pictures, and a big thank you to TERRA on our marquis. We will feature the project in our monthly newsletter, Turtle Tracks.

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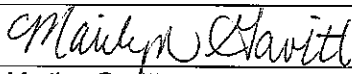
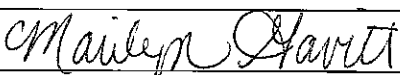
D. BUDGET: Describe all costs associated with your project activity. (*Attach additional pages if necessary*)

Service/Item Description	Cost
Lamotte model J T-1 water sampler	\$194.63
2 charging boxes for tablets, including shipping	\$358.03
Bottom grabber, extra weights, shipping	\$1,023.56
24 Asus Memopad 7 tablets	\$1,993.92
3 LaCrosse Technology EA-30/OU	\$85.41
3 Davis Instruments hand-bearing compasses	\$122.94
2 Garmin Marine 78 portable GPS	\$355.80
30 clipboards	\$38.25
Additional supplies for boat including totes, tape, miscellaneous items	\$75.00
Total Cost of Project	\$4,247.54
Amount requested from TERRA:	\$2,253.62
If matching/additional funds have been identified to help pay for your project, please list →	Source: Donation
	Amount: \$1,993.92
If any goods or services have been donated for this project, please list →	Source:
	Goods/Services:

E. COMMITMENT

By submitting this application and signing below, you agree to the following:

- TERRA is not liable for any injuries or losses that may occur as a result of participation in the proposed project.
- The applicant is responsible for submitting an interim report and a final report using an electronic form provided by TERRA. Schools that do not submit an interim report and a final report will not be eligible for future funding opportunities.
- Equipment purchased using mini-grant funds will become the property of the school receiving funds.

Applicant's Name:	Marilyn Gavitt		
Applicant's Signature:		Date:	9/28/2015
School Administrator/ Principal's Name:	Marilyn Gavitt		
School Administrator/ Principal's Signature		Date:	9/28/2015